ANNUAL SOLID WASTE MANAGEMENT REPORT
FOR LICENSED LANDFILLS

FACILITY NAME: Dolby Landfill - East Millinocket Report For Year: 2023

DEP LICENSE NUMBER S-000796-WO-AO-N

This report includes information on solid waste handling and disposal per 06-096 C.M.R. ch. 401, § 4(D) and § 7(G)(21), as applicable, for the following facility and/or municipalities, as applicable (please list all users):

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City/Town: _____ Zip Code: _____

Phone: _____ E-mail: _____

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I have examined this report to the best of my knowledge and believe this report is true, accurate and complete.

Signature of person completing this form: _____ Date Signed 4/24/2024

Printed name of person completing this form: Lane Gould

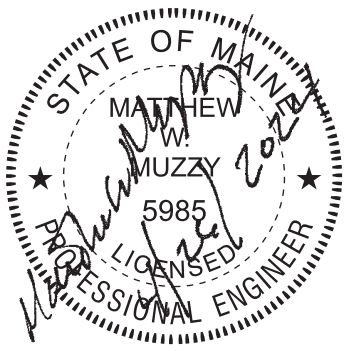
Please return one (1) paper copy and an electronic copy of your completed form with the required annual report fee by April 30th of each year to:

Geraldine Travers
Maine Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

2023 ANNUAL REPORT
DOLBY LANDFILL
EAST MILLINOCKET, MAINE

Prepared for

STATE OF MAINE
DEPARTMENT OF ADMINISTRATION AND FINANCIAL SERVICES
BUREAU OF GENERAL SERVICES
Augusta, Maine



April 2024

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SME
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2023 ANNUAL REPORT
DOLBY LANDFILL
EAST MILLINOCKET, MAINE

1.0 INTRODUCTION

The Dolby Solid Waste Landfill (Dolby Landfill or landfill) is located in the town of East Millinocket, Maine. The State of Maine Department of Administrative and Financial Services (DAFS) owns the landfill and the Bureau of General Services (BGS) operates the landfill. The landfill operates under a license obtained by the former Great Northern Paper Company (GNP) from the Maine Department of Environmental Protection (MEDEP) in 1984. Subsequent to several MEDEP amendment orders GNP transferred the Dolby Landfill license to Katahdin Paper Company (KPC) in April 2003. KPC transferred the landfill license to the State of Maine (September 2011). The Dolby Landfill license requires the landfill owner (i.e., State of Maine) to submit an annual report to the MEDEP describing the previous year's operation of the landfill. This Annual Report has been prepared by Sevee & Maher Engineers, Inc. (SME) to fulfill the annual report requirement and includes discussion of the specific reporting items listed in Chapter 401.4.D of the MEDEP Maine Solid Waste Management Rules (Rules).

1.1 Site History

Dolby Landfill consists of three landfills (known as Dolby I, Dolby II, and Dolby III), which are located on the east side of Route 157, approximately 2-1/2 miles northwest of the town center of East Millinocket, Maine (see Figure 1-1). Two of the landfills (Dolby II and Dolby III) are supported by a lined leachate pond. Leachate is pumped from the pond to the East Millinocket wastewater treatment plant that is located approximately 3.5 miles to the south of the landfill.

The Dolby I Landfill received a license from the MEDEP in 1975. Dolby I occupies about 23 acres and is located southwest of the Dolby II and III Landfills. The principal waste streams to Dolby I were wastewater treatment sludge, woodroom/woodyard waste, wood ash, general rubbish from the former GNP pulp and paper mills in Millinocket and East Millinocket, and municipal solid waste (MSW) from the local communities. Dolby I received waste from 1975 to 1979 and a soil final cover was placed over Dolby I in 1980/1981.

The Dolby II Landfill is located west of the Dolby I Landfill and immediately east and upslope of the Dolby III Landfill. Dolby II was licensed by the MEDEP in 1978 (Board Order # 26-0796-19170) and occupies about 63 acres. The principal waste streams delivered to Dolby II were wastewater treatment sludge, woodroom/woodyard waste, wood ash, general rubbish from the former GNP Millinocket and East Millinocket mills, and municipal solid waste (MSW) from the local communities. Waste placement in Dolby II occurred between 1979 and 1986. A soil final cover was placed over Dolby II in 1987. Over time,

the waste placed in Dolby II settled creating a near flat landfill top area. In 1996, GNP was granted an amendment for a vertical increase on the top of Dolby II (MEDEP Order #S-000796-WD-AC-A). To construct the vertical increase, the final cover for the Dolby II top area was removed and additional waste was placed. The waste placement, regrading, and replacement of the soil final cover occurred between 1996 and 1999.

Construction of Dolby III was initiated in 1984 and a license renewal for the landfill was submitted to MEDEP in 1989 (SME, 1989). Dolby III occupies about 65 acres and consists of 17 waste cells; all of which have been closed.[1] The original waste streams at Dolby III were wastewater treatment sludge, woodroom/woodyard waste, wood ash, general rubbish from the former Millinocket and East Millinocket mills and municipal solid waste (MSW) from the local communities. MSW disposal in Dolby III was stopped in 1993 due to a change in the MEDEP Rules. From 1987 to 1999, Dolby III was licensed to receive wood ash from the Signal Sherman biomass power boiler (MEDEP Order #L-000796-07-A-N). From 1988 to 1993, Dolby III received ash resulting from burning demolition debris and brush piles by the towns of East Millinocket and Millinocket (MEDEP Order #L-000796-7A-L-M). In September 2011, the MEDEP issued a license transfer to the State of Maine (MEDEP Order #S-000796-WR-AJ-T) for operation of the Dolby III Landfill. On December 4, 2012, MEDEP approved a minor license revision (S-000796-WT-AM-N) for a one-time disposal of approximately 1,000 cubic yards (cy) of secondary wastewater treatment plant residuals from the Town of Millinocket. On January 18, 2012, MEDEP approved a minor license revision (S-000796-WU-AL-N) that allowed for the disposal of petroleum-contaminated soils from sources other than GNP.

In April 2016, DAFS applied to MEDEP for a landfill cover upgrade for Dolby III to reduce the volume of leachate generated by that landfill and, MEDEP subsequently issued a minor license revision (#S-000796-WO-AO-N) to allow the cover upgrade. Phase 1 of the landfill cover upgrade project included construction of an upgraded cover system over approximately 25 acres of the Dolby III waste area and was completed during summer 2016. Phase 2 of the cover upgrade (approximately 14.2 acres) was constructed during summer 2022. Phase 3 of the cover upgrade (approximately 18.2 acres) was constructed during summer 2023. As of this annual report approximately 10.6 acres of Dolby III remain to receive the cover upgrade. The upgraded cover system consists of (from top to bottom):

- 4 inches of vegetative soil;
- 14 inches of cover soil;
- A drainage geocomposite and drainage pipes;

[1] The Dolby III Landfill was closed to day-to-day landfilling in 2011. Since that time, provisions have been made to accept very small volumes of ash and debris from the Towns of Millinocket, East Millinocket, and Medway. Small quantities of municipal water treatment sludge from the Town of Millinocket are also occasionally disposed in Dolby III.

- A layer of 40-mil HDPE textured geomembrane; and
- A gas collection and venting system (i.e., 6 inches of sand and gas vent piping) directly above the waste.

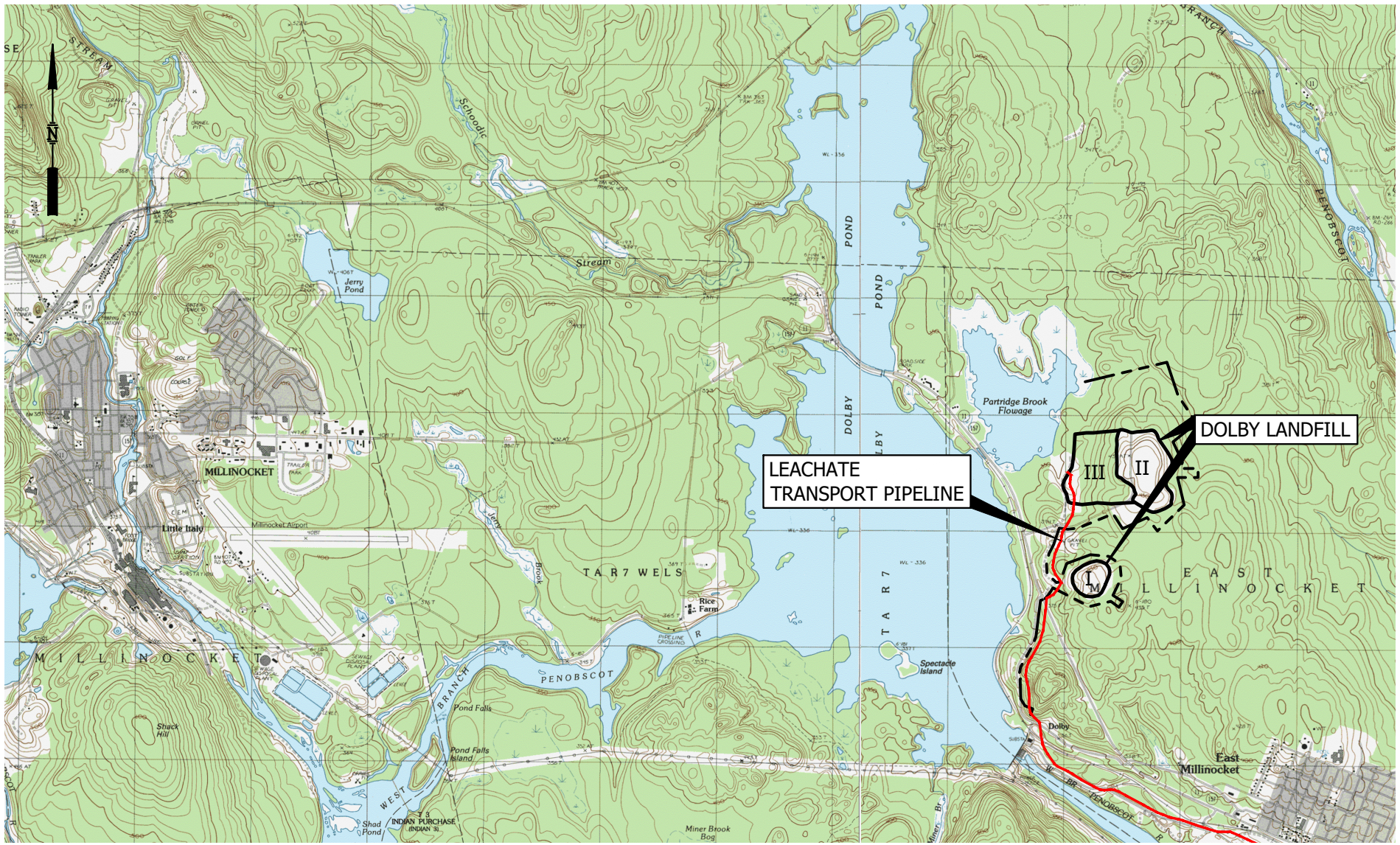
In 2018, approximately 2.5 acres of Dolby III, which had been previously closed with a soil cover, were temporarily opened for disposal of aeration lagoon sludge from the former East Millinocket mill site. This temporary cell remains open and is used for disposal of small volumes of ash and debris delivered from solid waste transfer stations in Millinocket, East Millinocket, and Medway. In 2023, approximately 223 cy of ash/debris was placed in the temporary cell. The temporary cell is to be incorporated into Phase 4 of the Dolby III cover upgrade.

The leachate pond serving Dolby II and Dolby III was constructed in 1984 and was reconstructed in 2007. The current leachate pond uses a double-synthetic geomembrane liner with a leak detection layer sandwiched between the primary (i.e., 60-mil textured HDPE) and secondary (i.e., 60-mil textured HDPE) liners. Leachate is pumped from the pond and flows via pipeline to the Town of East Millinocket's wastewater treatment plant approximately 3.5 miles away. The liner system for the leachate pond is underlain by a granular underdrain layer. Water collected in the underdrain layer is combined with the leachate and pumped to treatment. In 2023, the total leachate volume pumped from the pond was approximately 53.1 million gallons (MG) (2.2 MG from the leachate pond underdrain).

1.2 Hydrogeologic Setting

The Dolby II and Dolby III Landfills are positioned on land downsloping from east to west at grades varying from approximately 2 to 14 percent that are situated between elevations 350 feet (west) and 425 feet (east). Surface water from the landfill site generally flows northwesterly towards Partridge Brook Flowage. Partridge Brook Flowage in turn flows into Dolby Pond, which is a dammed impoundment on the West Branch of the Penobscot River. Subsurface conditions for the landfill site were first investigated in 1975 (E.C. Jordan Co., 1975); with follow-up investigations performed in 1977 and 1978 (E.C. Jordan, 1978); 1980 (E.C. Jordan, 1981); and in 1983 (E.C. Jordan, 1983). The investigations indicated the soil in the Dolby Landfill area consisted of glacial till over bedrock. Moreover, it was determined the site was blanketed with a surficial layer of ablation till ranging in thickness from a few feet to more than 25 feet. In areas where deeper soil was encountered, the ablation till was generally underlain by a layer of basal till, such that the overall thickness of glacial till covering the site generally exceeded 30 feet. Hydraulic conductivity of the glacial till was measured in both laboratory and field settings, and ranged from approximately $1x10^{-4}$ to $1x10^{-7}$ centimeters per second (cm/sec), with the basal till permeability generally exhibiting hydraulic conductivities at the lower end of the range. Bedrock in the form of near-vertically bedded metasiltstone (i.e., shale) underlies the glacial till. Bedrock hydraulic conductivities were measured to generally range from $1x10^{-4}$ to $1x10^{-8}$ cm/sec.

The ground surface topography and geologic setting for the site cause the occurrence of a groundwater divide beneath the Dolby II Landfill. Groundwater beneath the eastern portion of Dolby II generally flows toward the east and groundwater beneath the western portion of Dolby II and all of Dolby III generally flows towards the west. The site setting also causes the occurrence of upward hydraulic gradients (i.e., groundwater discharge) on the eastern side of Dolby II and on the western side of Dolby III as well as beneath a portion of Dolby III. The design for the Dolby III Landfill addressed the groundwater discharge condition by inclusion of an underdrain/leachate collection layer and an interceptor drain in the western portion of the Dolby III Landfill. Figure 1-2 presents an interpretation of the groundwater discharge areas on the eastern side of Dolby II and on the western side of Dolby III. Figure 1-2 includes groundwater levels measured in the monitoring wells near the landfill perimeter in 2023 that are indicative of the upward gradients and groundwater discharge.



BASE MAP ADAPTED FROM 7.5 MIN
USGS TOPOGRAPHIC QUADRANGLES
MILLINOCKET, ME - 1988
EAST MILLINOCKET, ME - 1988

2000 0 4000 FEET

DWG: SITE LMN: SITELOC CTB: SME-STD REV: 4/16/2019

FIGURE 1-1
SITE LOCATION MAP
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER
ENGINEERS

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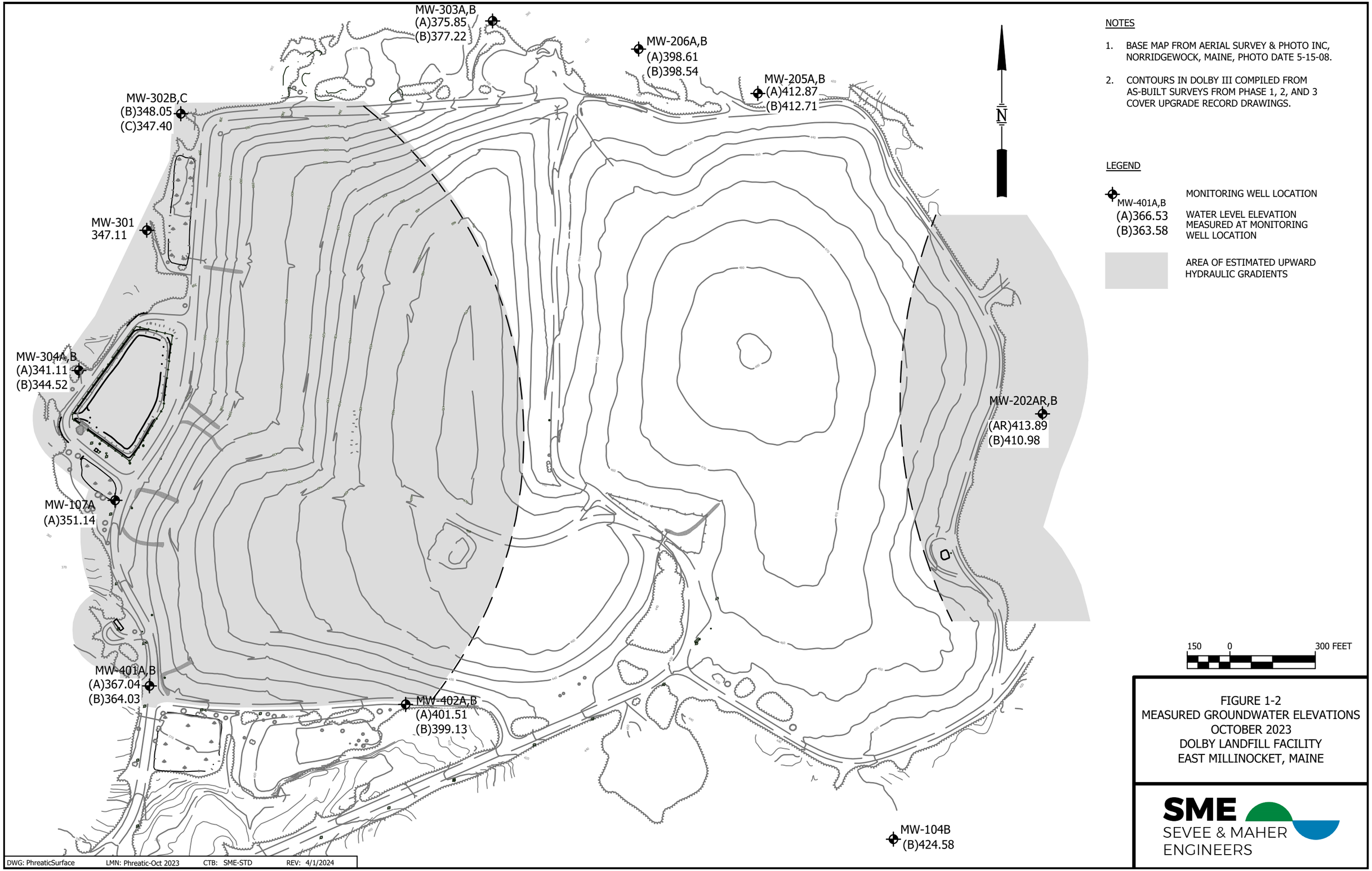


NOTES

1. BASE MAP FROM AERIAL SURVEY & PHOTO INC, NORRIDGEWOCK, MAINE, PHOTO DATE 5-15-08.
2. CONTOURS IN DOLBY III COMPILED FROM AS-BUILT SURVEYS FROM PHASE 1, 2, AND 3 COVER UPGRADE RECORD DRAWINGS.

LEGEND

MW-401A,B
(A)366.53
(B)363.58

MONITORING WELL LOCATION

WATER LEVEL ELEVATION MEASURED AT MONITORING WELL LOCATION

AREA OF ESTIMATED UPWARD HYDRAULIC GRADIENTS

FIGURE 1-2
MEASURED GROUNDWATER ELEVATIONS
OCTOBER 2023
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER ENGINEERS

DWG: PhreaticSurface LMN: Phreatic-Oct 2023 CTB: SME-STD REV: 4/1/2024

\\Server\cfs\Kpc\Dol\ACAD\WaterSamples\Sites\PhreaticSurface.dwg, B_Phreatic-October-2023 (AR FIG 1-2), 4/1/2024 3:55:11 PM, bwb

2.0 2023 LANDFILL ACTIVITY

Activities occurring at the landfill in 2023 consisted of the following:

- Quarterly visual inspections (spring, summer, and fall) of the three landfills were made by SME and occurred in April, August, and October 2023. These inspections also included the leachate pond and associated leachate transport pipeline. The inspection reports are included in Appendix A. Based on the quarterly inspections, all three landfills were found to be in general compliance with the facility's MEDEP license;
- The leachate transport pipeline (connecting the leachate pond to the East Millinocket wastewater treatment plant) was cleaned;
- The force main connecting the leachate pond underdrain to the leachate pond pump station was cleaned;
- The leachate pond was cleaned;
- The entire surface of Dolby II and a portion of Dolby III (i.e., Cover Upgrade Phases 2 and 3 were not mowed) was mowed;
- Phase 3 cover upgrade of Dolby III was completed;
- Low spots located on Dolby II cover system were filled in and graded;
- Annual inspection of the leachate pond pumps was performed;
- Outlet culvert to Sediment Pond #3 was repaired; and
- Work performed on MH-2 to fix force main leak.

2.1 Leachate Pond and Leachate Transport Pipeline

Leachate collected from the Dolby II and III Landfills flows by gravity pipeline to the leachate pond located on the west side of Dolby III. The leachate flows from the leachate pond via a force main and gravity main (often referred to as the leachate transport pipeline) to the Town of East Millinocket's wastewater treatment plant. The leachate pond is supported by a leachate pump station and an underdrain from which groundwater is pumped to the leachate pump station's wet well and combines with the leachate. The liner system for the leachate pond includes a leak detection layer. Liquid accumulated in the leak detection layer is pumped into the leachate pump station's wet well. The volume of liquid removed from the leak detection system is measured by a flow meter with a readout in the leachate pump station. Leachate pond and pipeline work activities completed in 2023 included:

- Continued evaluation of potential leakage into the leachate pond's leak detection layer. Section 3.10 of this Report provides discussion of the leak detection system and the Action Leakage Rate (ALR) for the leak detection system relative to the volume of leachate removed from that system in 2023.
- Leachate pond cleaning was performed from September 25, 2023 to September 29, 2023. Republic Services (operated by ACV Enviro (ACV) of Skowhegan, Maine) was contracted to perform the pond dewatering and cleaning. Sediment and liquid from the pond cleaning was transported to the temporary disposal cell on the Dolby III Landfill. An inspection of the 60-mil textured HDPE primary liner was completed on September 29, 2023 by SME and MEDEP personnel. Appendix B provides information describing the pond cleaning.
- Leachate pipeline cleaning was performed from October 9 to October 13, 2023 and consisted mainly of the leachate force main and several low spots in the gravity main. Republic Services was contracted to perform the pipeline dewatering, disassembly, cleaning, and reassembly. The wet well of the leachate pond pump station was cleaned by removing sediment and pressure washing the well's interior. In addition to cleaning the leachate pipeline, the 2-inch force main connecting the underdrain manhole to the wet well was cleaned. Appendix B provides information describing the pipeline cleaning.

2.2 Leachate Pond Pumps, Underdrain Pumps, and Leak Detection Flow Meter.

Inspection of the leachate pumps was performed on July 17, 2023 by Stevens Electric of Monmouth, Maine (Stevens) indicated the leachate pumps were generally in good working order. Stevens Electric noted the shackle pin on pump #2 had vibrated loose and got sucked into pump #2. This did some damage to the impeller. Appendix C includes information from Stevens relative to the leachate pumps. Note, leachate pump #2 was rebuilt in 2013 and leachate pump #1 was rebuilt in 2021.

A temporary underdrain pump (Goulds model) was installed in March 2022 (in advance of spring thaw and high leachate flows). Two, more durable, (Barnes) pumps (a replacement pump and a backup pump) were received later in 2022. In February 2023, the temporary pump failed and was replaced. Appendix C includes information on the replacement pump and backup pump. The underdrain pump is a critical feature to operation of the leachate pond, and it is standard practice to have a backup pump available.

2.3 Access Road and Other Portions of Site

A section of the access road between the leachate pond and Dolby III was built-up as part of the Phase 3 cover upgrade. Additional road maintenance was performed in 2023 by Gordon Contracting, Inc. to road damage due to the Phases 2 and 3 cover upgrade construction activities.

2.4 Operator Training

No operator training was conducted in 2023. MEDEP has previously agreed that training was not necessary due to the minimal use the landfill receives. With the exception of several limited special disposal projects of very small scale, the landfill is closed and as such no active operation occurs in the waste disposal areas.

2.5 Phase 3 of Dolby III Cover Upgrade

In 2023, Phase 3 of the Dolby III cover upgrade was completed. Phase 3 consisted of approximately 18.2 acres of final cover area. A construction documentation report for the Phase 3 cover upgrade was prepared and submitted to MEDEP via email on January 8, 2024. A copy of that report and a follow-up memo from MEDEP are presented as Appendix D.

2.6 Existing Soil Stockpile Test Pits

On May 3, 2023, exploratory test pits were done on a potential cover soil source consisting of a stockpile previously located on the east side of Sediment Pond #1. These test pits were performed to determine if cover soil was available to aid in the completion of the Phase 3 and Phase 4 cover upgrades for Dolby III. The additional exploratory test pits were completed on May 8, 2023. A memo of the work performed, and results obtained from laboratory testing are presented in Appendix E.

2.7 Sediment Pond #3 Culvert Repair

During a large rain event during the summer 2022, the inlet end of the outlet culvert for Sediment Pond #3 had become disconnected at a joint and surrounding soil was beginning to erode. On June 7, 2023, Adam Qualey (local earth work contractor) was on-site to replace the inlet end of the culvert. SME personnel documented the work completed. A memo describing the work performed is presented in Appendix E.

2.8 Leachate Pond Repair

During the week of September 25, 2023, the leachate pond was cleaned, and the primary liner was visually inspected. During the cleaning, an indentation was discovered in the southwest corner of the leachate liner. On September 29, 2023, SME personnel met with MEDEP, and SME indicated the indentation would be fixed the following week. On October 3, 2023, Integrity Linning Systems, LLC. (liner subcontractor for Dolby Phase 3 Cover Upgrade) fixed the indentation. SME personnel documented the work completed. A memo of the work performed is presented in Appendix E.

2.9 Dolby II Existing Cover Repairs

During the third annual landfill inspection of 2023, SME personnel noted several areas on the Dolby II cover system that showed signs of ponding water. Adam Qualey was contracted to perform work that included filling in and grading the low spots to provide positive drainage. Work began on the low spots on October 4, 2023 and was concluded on October 6, 2023. As part of the regrading effort, it was noted the southeast corner of Dolby II was uneven, making it difficult for mowing. When work began on the southeast corner, waste was encountered approximately 6 inches below the surface. Due to the time of year, it was decided that repairs to the southeast Dolby II corner would be completed in 2024 prior to the annual mowing. SME personnel documented the work completed. A memo of the work performed is presented in Appendix E.

2.10 Manhole MH-2 Repairs

On December 29, 2023, Mid-South Engineers personnel (Jim Goodwin) noted that the leachate piping in manhole MH-2 was leaking. Republic Services was notified about the leak and dispatched a crew to the site on December 30, 2023. The leachate that had leaked into MH-2 was pumped to the wet well and the pipe couplings were readjusted. Republic Services noted the existing couplings had become worn at the bolt connections and the couplings could no longer be tightened sufficiently. SME contacted E.J. Prescott to order new couplings and, on January 8, 2024, Republic Services was on-site to install the new couplings. Due to the rating of the new coupling not being compatible with the rating of the older, existing leachate transport pipe, the new couplings began to leak as well. A new pipe spool piece was installed, and new bolts and gaskets were used with the existing coupling. The pumps were turned on and no apparent leaks were observed. On February 19, 2024, Jim Goodwin noted a leak inside MH-2. On February 22, 2024, Republic Services removed the couplings and replaced the new spool piece with one that was longer, and the couplings were reinstalled. The pumps were turned on and no leaks were observed. On March 13, SME personnel (Trevor Michaud) observed leachate coming out from MH-2 and it was determined that the leaks had returned. Adam Qualey was contacted to install a temporary 2-inch pump inside MH-2 with a float actuator that addresses higher leachate levels in MH-2. The piping in MH-2 is expected to be replaced with a more permanent solution in the summer of 2024.

3.0 2023 LANDFILL OPERATIONS

SME, under contract to DAFS, served as the day-to-day landfill operator for the time period reflected in this Annual Report. SME subcontracted with several entities to perform maintenance and limited operation activities including:

- Mid-South Engineering, Inc. (MSE) of Millinocket, Maine to act as local technical support for the landfill and to perform routine inspections of the landfill, leachate pond, and leachate transport pipeline;
- Republic Services (operated by ACV Enviro of Skowhegan, Maine) to perform leachate pond and leachate transport pipeline cleaning;
- Blaine McLaughlin of Medway, Maine to mow the leachate transport pipeline right-of-way, provide tree removal from the site accessways as deemed necessary, and mow the surface of the Dolby II and Dolby III Landfills;
- Stevens Electric of Monmouth, Maine to inspect the pumps and associated equipment used to pump leachate from the Dolby leachate pond to the wastewater treatment plant in East Millinocket, Maine;
- Qualey Inc. to provide snow removal at the landfill facility and the former GNP mill in East Millinocket (to access the leachate dumping pad) and perform repairs to low spots on the Dolby II existing cover;
- Thornton Construction of Milford, Maine for pumping and trucking leachate from the leachate pond (if required); and
- Katahdin Analytical Services of Scarborough, Maine provided laboratory analysis of groundwater and surface water as required by the facility's Environmental Monitoring Plan (EMP).

An updated Post-Closure Monitoring and Maintenance Plan (PCMMP) was prepared for the Dolby facility in 2022 and was included in the 2021 Annual Report. A revised PCMMP is provided as Appendix G and is meant to serve as the Operating Manual for the Dolby facility during post-closure. Several modifications were made to the PCMMP in 2023 and are reflected in the revised version.

3.1 2023 Waste Received

The monthly waste logs for Dolby III for year 2023 (by waste stream) are attached as Appendix H and are summarized in Table 7-1 of Section 7.0. A total of 270 cy of waste was delivered to the Dolby III Landfill in 2023. The delivered waste was placed in the temporary cell on Dolby III that also contains lagoon sludge from the East Millinocket wastewater treatment plant.

3.2 Capacity Used and Remaining Capacity

There are no day-to-day active filling areas remaining at the Dolby Landfill facility, and most of the landfill has been closed by covering. The temporary cell on the top of Dolby III (approximately 2.5 acres) remains open and in 2023 received approximately 270 cubic yards (cy) of waste (see Section 3.1). No other waste placement is permitted at the Dolby Landfill facility.

3.3 Cover Material Usage

No daily, intermediate, or final cover was placed at the Dolby Landfill facility in 2023. Phase 3 of the cover upgrade was completed in 2023 and involved stripping, stockpiling, and reuse of the cover soil from the Phase 3 area. A total of 9,800 cy of vegetative soil, 34,300 cy of cover soil, and 480 cy of gas layer sand were placed for the Phase 3 cover upgrade. Approximately 150 cy of cover soil and 350 cy of vegetative soil were used to fill in the low spots on Dolby II.

3.4 Operating Manual Revisions

The most recent Operating Manual for the Dolby Landfill was submitted to the MEDEP in April 2012. No changes to the landfill operation or Operating Manual have been made since that time.

A PCMMP for the Dolby Landfill was submitted to MEDEP as part of the 2021 Annual Report for the landfill submitted to MEDEP in 2022. The PCMMP was revised to reflect several changes at the Dolby Landfill facility in 2023 and is included as Appendix G. Since the landfill facility is closed, the PCMMP has replaced the Operations Manual.

3.5 Environmental Monitoring Plan (EMP) Revisions

Changes to the EMP for the Dolby Landfill in 2022 consisted of updating gas monitoring locations due to Dolby III cover upgrade and the PFAS Sampling and Analysis (see Appendix I).

3.6 Spills, Fires, Accidents, and Unusual Events

There were no fires, chemical spills, accidents, or unusual events reported in 2023.

3.7 Cell Development Plans

Essentially, all waste placement at the Dolby Landfill has ceased and most of the landfill areas have received final cover or cover upgrade. No further cell development is expected. The temporary cell in the Phase 4 cover upgrade area will be closed when the Phase 4 cover upgrade is constructed in 2024.

3.8 Hazardous and Special Waste Handling

There was no hazardous or special waste delivered to, or identified at, the Dolby III Landfill in 2023.

3.9 Inspection Summary

Landfill inspections occurred on April 27, 2023, August 8, 2023, and October 5, 2023. The landfill inspection reports are presented in Appendix A. Approximately one-third of the manholes and catch basins at the Dolby II and Dolby III Landfills are visually inspected on a rotating annual basis. The observed condition of the manholes and catch basins are included in the inspection reports. The 2023 manhole inspection report is included in Appendix A.

The leachate pond cleaning was performed from September 25, 2023 to September 29, 2023. Republic Services was contracted to perform the pond dewatering and cleaning. Sediment and liquid from the pond cleaning was transported to the temporary disposal cell on the Dolby III Landfill. An inspection of the 60-mil textured HDPE primary liner was completed on September 29, 2023 by SME and MEDEP personnel. An indentation was noted in the southwest corner of the pond. Integrity Lining Systems LLC. repaired the liner on October 3, 2023. Appendix B provides information describing the pond cleaning. Appendix E provides information describing the leachate pond liner repair.

3.10 System Failures and Repairs

- Stevens Electric performed inspection of the pump/pump controls associated with the leachate pond pump station in 2023. The results of the inspection showed both leachate pumps (i.e., #1 and #2) to be performing satisfactorily. An inspection report supplied by Stevens is presented in Appendix C.
- On July 17, 2023, it was noted that the leachate level inside the leachate pond was higher than normal. Stevens Electric determined that the fuses and relay to the leachate pumps had failed. The fuses and relay were replaced, however, the pumps failed to start. Upon further inspection, it was determined that there had been a voltage spike causing damage to the electrical modules within the floats at the transition station.
- The pump station warning light that is mounted outside the leachate pump station stopped working in fall 2022. Consideration will be given to replacing the light during warm-dry weather in 2024.

3.11 Leachate Management

Leachate collected at the Dolby Landfill is temporarily stored in the lined leachate pond before it is pumped to the Town of East Millinocket's wastewater treatment plant. Approximately 50.9 MG of leachate was pumped from the leachate pond to the treatment plant in 2023. Appendix J presents the leachate pumping data by month for calendar year 2023. The following table presents the volumes of leachate pumped in 2023 as well as the volumes pumped from the leak detection system and underdrain for the leachate pond.

Month (2023)	Volume Pumped from Leachate Pond (gallons)	Volume Pumped from Leak Detection (gallons)	Volume Pumped from Underdrain (gallons)
January	4,531,952	20,653	241,650
February	1,823,730	66,684	39,000
March	3,157,775	1,047	180,750
April	9,811,565	0	235,950
May	2,992,877	1,308	193,800
June	3,187,470	1,161	197,100
July	3,706,445	2,708	180,000
August	4,186,987	2,847	182,700
September	4,266,405	1,111	184,500
October	2,773,420	4,895	158,550
November	1,881,619	3,556	156,300
December	8,546,456	2,032	210,900
TOTAL	**50,866,701**	**108,002**	**2,161,200**

As indicated in the Annual Reports, the Action Leakage Rate (ALR) for the leachate pond is being exceeded. The leachate pond liner was visually inspected in 2023 and no points of leakage (e.g. cuts, tears, or holes) were observed. To help minimize the influence of potential leachate leakage through the leachate pond liner system into the underdrain, the water in the underdrain is maintained at a minimal level by way of a float-controlled pump. The pumping removes potential leaked leachate from the underdrain and pumps it to the leachate pond.

Comparison of the leachate, leak detection, and underdrain water quality does not provide a clear explanation as to which liner is leaking (if not both). The water quality of the leak detection system shows a similar distribution of the same constituents as in the leachate. However, because the leachate pond (and underdrain) are sited in an area immediately downgradient of the unlined Dolby III Landfill, and because upward hydraulic gradients result in groundwater discharge into the underdrain layer, it is reasonable to suspect that the discharging groundwater is also carrying constituents similar to the leachate. Owing to the information above, it has been concluded that one or both of the leachate pond liners are leaking into the leak detection layer and that, in general, the ALR for the leachate pond liner system is being exceeded. It is notable that potential liner system leakage was discussed in the 2010 Annual Report and in subsequent annual reports. A recommendation is made in Section 10 for continued

pumping of the underdrain to mitigate the potential for leachate leaking through the liner system into the underdrain layer.

3.12 Compliance Self-Audit Checklist

Following MEDEP guidance, a compliance self-audit checklist for the Dolby III Landfill is completed by DAFS on an annual basis. The completed checklist for 2023 is provided as Appendix K to this report.

4.0 ENVIRONMENTAL MONITORING

As a condition of the landfill operating permit issued by MEDEP, the quality of the groundwater, surface water, and leachate at the Dolby Landfill is routinely monitored. Gas monitoring for concentrations of explosive gases (i.e., methane (CH_4), and hydrogen sulfide (H_2S)) is also conducted at selected landfill locations where explosive or toxic gases could accumulate. The gas monitoring locations include landfill infrastructure such as at the leachate pond pump station, leachate pond wet well, Conex box, leachate collection manholes, and near the landfill boundary (i.e., headspace in select monitoring wells). In 2023, PFAS sampling and analysis of CB-#3 was conducted as requested by MEDEP. Sections 4.4 and 4.5 provide discussion of the PFAS sampling and analyses.

4.1 Monitoring Locations

Tables 4-1 and 4-2 list the water quality and landfill gas monitoring locations for the Dolby facility, respectively, and Figures 4-1, 4-2, and 4-3 show the monitoring locations relative to the Dolby Landfill(s) and local landmarks. Table 4-3 presents installation information for each of the monitoring wells that are monitored. Water quality monitoring for 2023 was performed during the weeks of June 5, 2023 and October 16, 2023. Landfill gas monitoring was completed at the same time as the water quality sampling. The monitoring parameters, methods, and standards used for the Dolby Landfill environmental monitoring are summarized in the EMP prepared specifically for the Dolby Landfill facility (see Appendix I). The field and laboratory results for the monitoring events, data validation findings, along with a brief data evaluation, were submitted to the MEDEP project manager and the Environmental and Geographic Analysis Database (EGAD) group following SME's receipt of analytical testing results for each monitoring event.

TABLE 4-1

WATER QUALITY MONITORING LOCATIONS
DOLBY LANDFILL -2023

GROUNDWATER MONITORING WELLS

DOLBY III

MW-107A	MW-304A	MW-402A
MW-301	MW-304B	MW-402B
MW-302B	MW-401A	
MW-302C	MW-401B	

DOLBY II

MW-104B	MW-205B	MW-303B
MW-202AR	MW-206A	
MW-202B	MW-206B	
MW-205A	MW-303A	

DOLBY I

MW-103	MW-113

SURFACE WATER SAMPLING LOCATIONS

PBFB	Partridge Brook Flowage – Background
PBFR	Partridge Brook Flowage – Revised location beginning 2012
ND	North Ditch
SPO	Siltation Pond Outlet
SPON	Siltation Pond North
SPOS	Siltation Pond South

LEACHATE SAMPLING LOCATIONS

LP	Leachate Pond West of Dolby III
LPD2	Leachate Pond East of Dolby II
LDS	Leachate Pond Leak Detection Sump
UDLP	Leachate Pond Underdrain Manhole

TABLE 4-2

LANDFILL GAS MONITORING LOCATIONS
DOLBY LANDFILL - 2023

- Conex box by Dolby III leachate pond;
- Dolby III leachate pond pump station control room and sump;
- MW-107B located southeast of Dolby III; and
  Nine catch basins/manholes around the perimeter of Dolby II and Dolby III.

CB #3	CB#39
CB #6A	CB #43
CB #13	CB #45
CB #21	
CB #22	

TABLE 4-3

MONITORING WELL DETAILS
DOLBY LANDFILL

Landfill	Sample Location	Geologic Unit Screened	Screened Interval (ft - BGS)		Well Diameter (inches)	Comments
			TOS	BOS		
Dolby I	MW-103	Bedrock	NA	15	1.5	Upgradient well
	MW-113	Bedrock	NA	21.6	1.5	Downgradient well
Dolby II	MW-104B	Bedrock	NA	37	1.25	Upgradient well
	MW-202AR	Bedrock	71.5	81.5	2	Downgradient well
	MW-202B	Till/Bedrock	5.4	10.4	2	Downgradient shallow companion well to MW-202AR
	MW-205A	Bedrock	26	31	2	Downgradient well
	MW-205B	Glacial Till	10	15	2	Downgradient shallow companion well to MW-205A
	MW-206A	Bedrock	23.3	28.3	2	Downgradient well
	MW-206B	Glacial Till	12	17	2	Downgradient shallow companion well to MW-206A
	MW-303A	Bedrock	32.6	42.6	2	Downgradient well
	MW-303B	Glacial Till	13.3	23.3	2	Downgradient shallow companion well to MW-303A
Dolby III	MW-107A	Bedrock	NA	19.6	1.5	Downgradient well from Cells 1 through 8
	MW-301	Glacial Till	10	15	2	Downgradient well from Cells 9 through 16
	MW-302B	Bedrock	18.8	23.8	2	Downgradient well from Cells 9 through 16
	MW-302C	Glacial Till	6	11	2	Downgradient shallow companion well to MW-302A
	MW-304A	Bedrock	NA	21.5	2	Downgradient well from Dolby III leachate pond
	MW-304B	Glacial Till	NA	8.6	2	Downgradient shallow companion well to MW-304A
	MW-401A	Bedrock	30.5	40.5	2	Downgradient well from Cells 1 through 8
	MW-401B	Glacial Till	12.5	22.5	2	Downgradient shallow companion well to MW-401A
	MW-402A	Bedrock	50.2	60.2	2	Cross-gradient well from Cells 3A and 3B
	MW-402B	Glacial Till	10	20	2	Cross-gradient shallow companion well to MW-402A

Abbreviations:
NA = not available
BOS = bottom of screen
TOS = top of screen
ft -BGS = feet below ground surface

4.2 Monitoring Parameters

4.2.1 Water Quality

The 2023 water quality monitoring parameters are listed in Table 4-4. Specific conductance, temperature, pH, dissolved oxygen (DO), and turbidity were measured in the field and were used as stabilization criteria during low-flow sampling. All remaining parameters listed in Table 4-4 were analyzed by Katahdin Analytical Services of Scarborough, Maine for 2023.

4.2.2 Landfill Gas

The landfill gas monitoring program includes the measurement of methane and hydrogen sulfide concentrations. In 2023, the landfill gas measurements were made using a RKI GX2003 portable gas detector (or equivalent) that was designed specifically to monitor for landfill gas presence.

4.3 Water Quality Monitoring for PFAS

MEDEP requested that monitoring wells MW-202AR and MW-202B be sampled for PFAS as part of the spring 2023 water quality sampling event. The PFAS sampling was not conducted during the spring 2023 monitoring event but was conducted during the fall 2023 monitoring event. The PFAS water quality results were included in the fall 2023 water quality submittal provided to MEDEP on November 27, 2023.

TABLE 4-4

WATER QUALITY MONITORING PARAMETERS
DOLBY LANDFILL

Detection Monitoring Program Test Parameters:

Parameters	Method	Reporting Limit (mg/L)	Groundwater	Surface Water	Leachate
Field Parameters					
Dissolved Oxygen (D.O.)	Field Parameter	NA	X	X	
Field Observations	Field Parameter	NA	X	X	X
Monitoring Well Pump Rate	Field Parameter	NA	X		
pH	Field Parameter	NA	X	X	X
Turbidity	Field Parameter	NA	X	X	
Specific Conductance	Field Parameter	NA	X	X	X
Static Water Elevations	Field Parameter	NA	X		
Surface Water Flow Rates	Field Parameter	NA		X(1)	
Temperature	Filed Parameter	NA	X	X	X
Indicator Parameters					
Alkalinity	SM 2320B	5.0	X	X	X
Bicarbonate	SM 4500 CO2 D	5.0	X	X	X
Chloride	SM 4500 CL E	2.0	X	X	X
Nitrogen, Ammonia	EPA 350.1	2.0	X	X	X
Nitrogen, Nitrate	EPA 9056/353.2	0.05	X	X	X
Phosphorous, Total	EPA 365.4	0.1		X	X
Sulfate	EPA 9056/ASTM 516-02	1.0	X	X	X
Total Dissolved Solids (TDS)	SM 2540C	10.0	X	X	X
Total Organic Carbon (TOC)	SM 5310 B	1.0	X	X	X
Total Suspended Solids (TSS)	SM 2440D	4.0	X	X	X
Inorganic Parameters					
Arsenic (Total)	EPA 200.7/6010	0.008	X	X	X
Calcium (Total)	EPA 6010B	0.1	X	X	X
Hardness (Mg & Ca)	SM 2340-B	0.13	X	X	X
Iron (Total)	EPA 6010B	0.1	X	X	X
Magnesium (Total)	EPA 6010B	0.1	X	X	X
Manganese (Total)	EPA 6010B	0.005	X	X	X
Potassium (Total)	EPA 6010B	1.0	X	X	X
Sodium (Total)	EPA 6010B	1.0	X	X	X
Aluminum (Total)	EPA 6010B	0.3			X(2)
Antimony (Total)	EPA 6010B	0.008			X(2)
Barium (Total)	EPA 6010B	0.005			X(2)
Beryllium (Total)	EPA 6010B	0.005			X(2)
Cadmium (Total)	EPA 6010B	0.005			X(2)
Chromium (Total)	EPA 6010B	0.01			X(2)

TABLE 4-4 (cont'd)

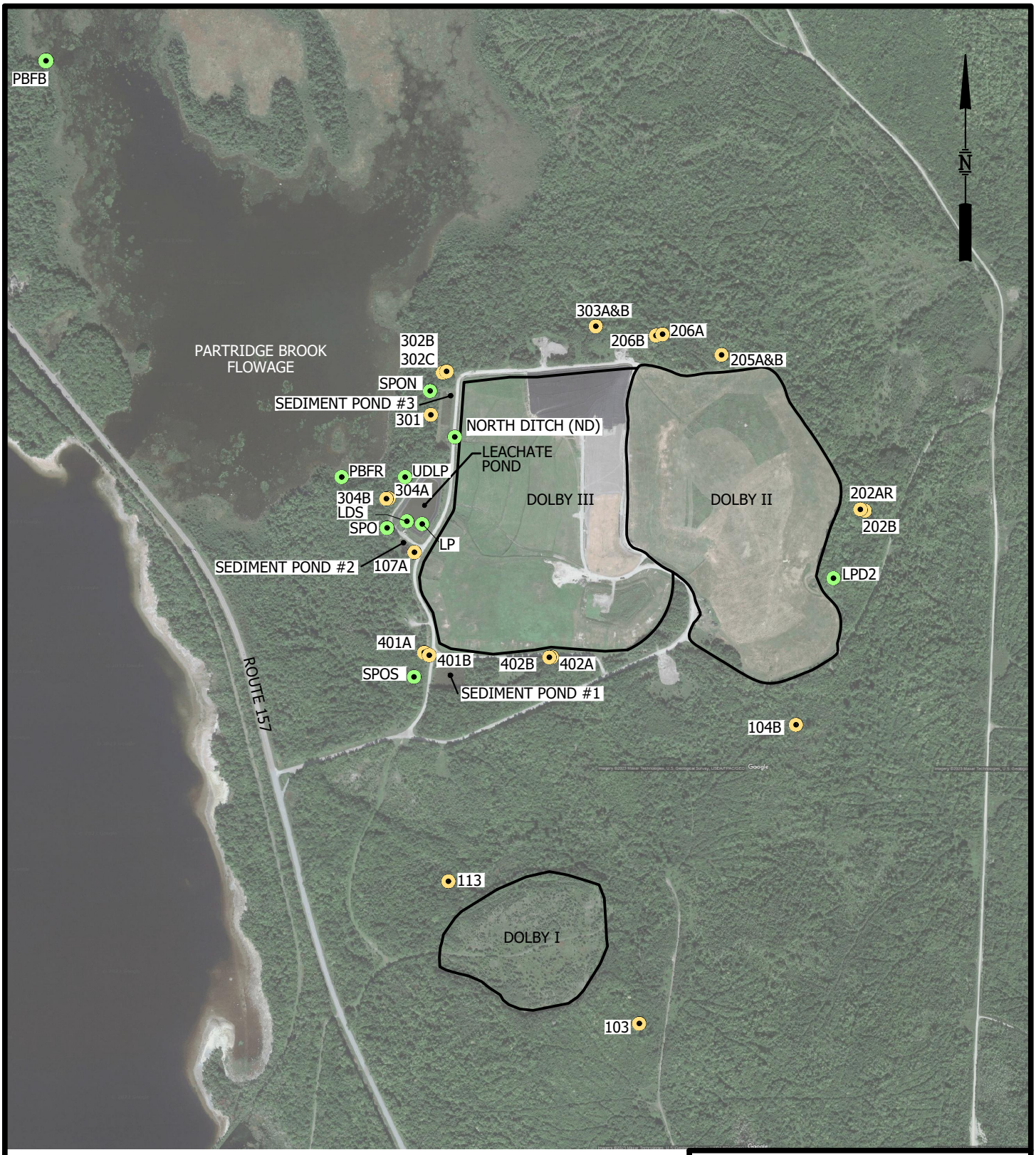
WATER QUALITY MONITORING PARAMETERS
DOLBY LANDFILL

Assessment Monitoring Program Test Parameters:

Parameters	Method	Reporting Limit (mg/L)	Groundwater	Surface Water	Leachate
Inorganic Parameters					
Cobalt (Total)	EPA 6010B	0.01			X(2)
Copper (Total)	EPA 6010B	0.025		X(1)	X(2)
Lead (Total)	EPA 6010B	0.005			X(2)
Nickel (Total)	EPA 6010B	0.01			X(2)
Selenium (Total)	EPA 6010B	0.01			X(2)
Silver (Total)	EPA 6010B	0.01			X(2)
Thallium (Total)	EPA 6010B	0.015			X(2)
Zinc (Total)	EPA 6010B	0.02			X(2)
Organic Parameters					
Volatile Petroleum Hydrocarbons (VPH)	MADEP VPH Method	3.0 to 100 μg/L	X(3)		X(2)
Extractable Petroleum Hydrocarbons (EPH)	MADEP EPH Method	2.0 to 1000 μg/L	X(3)		X(2)

Notes:
1 Only measured at PBFR (Partridge Brook Flowage).
2 The leachate pond (LP) is sampled for the detection monitoring parameters every monitoring event and sampled for assessment parameters once a year (as per Chapter 405 leachate sampling requirements). The leachate pond (LP) was also sampled for VPH and EPH during all three monitoring events in 2023.
3 Monitoring wells MW-301, MW-302B, and MW-302C are sampled for VPH and EPH once a year (fall).

Abbreviations:
NA = Not Applicable



AERIAL PHOTO DATED SEPTEMBER 16, 2022

LEGEND

- GROUNDWATER WELLS
- SURFACE WATER SITES

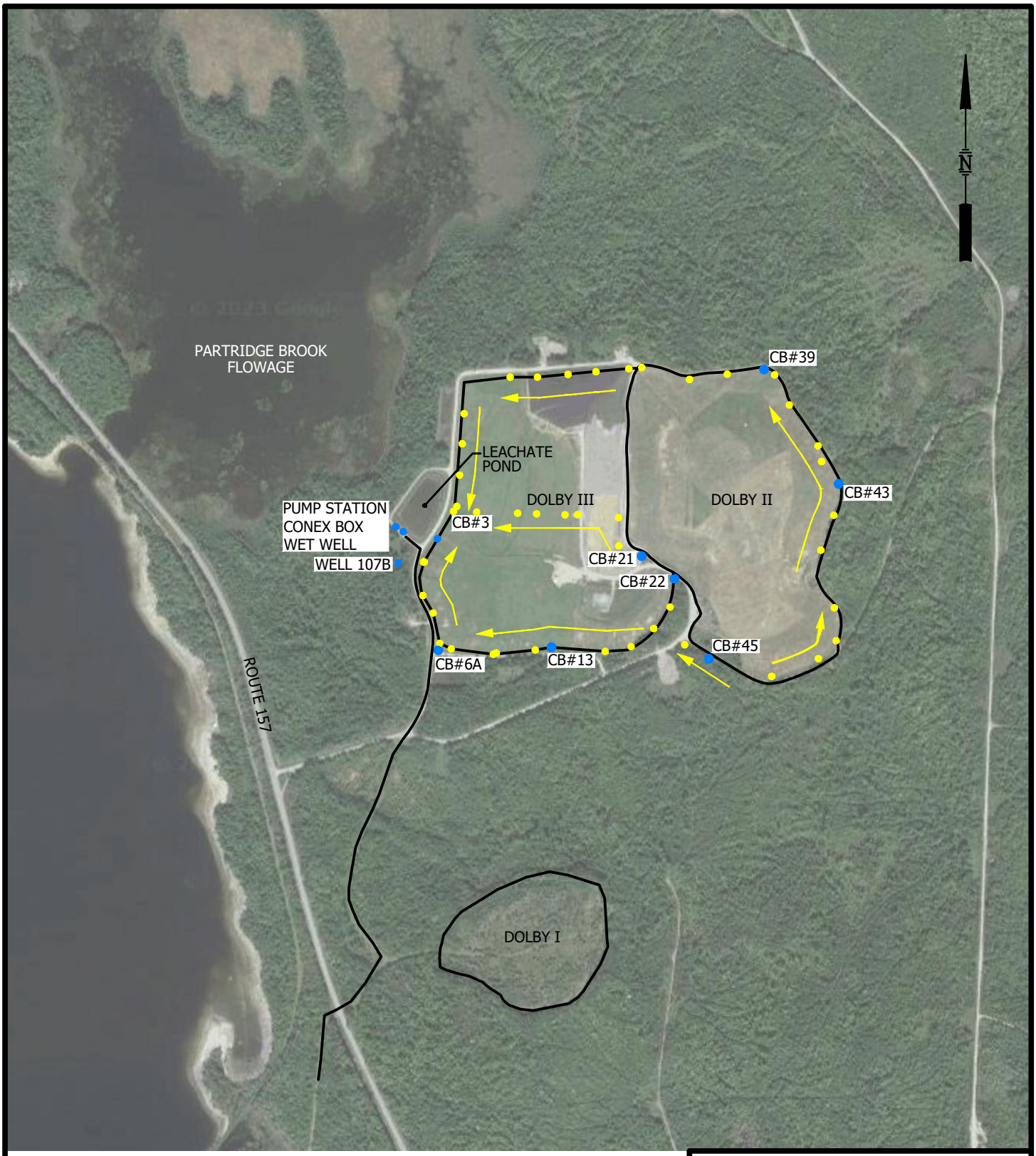
500 0 1000 FEET

DWG: AERIAL-2008 LMN: WAT SAMPL SITES WO CTB: SME-STD.CTB REV: 4/4/2024

FIGURE 4-1
WATER QUALITY
MONITORING LOCATIONS
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER
ENGINEERS

\\Nserver\cfs\Kpc\Dol\ACAD\WaterSampleSites\Aerial-2008.dwg, EMP FIGURE 4-1 W_O, 4/4/2024 4:49:07 PM, bwb



AERIAL IMAGE FROM GOOGLE EARTH,
DATED SEPTEMBER 16, 2022

LEGEND

- SAMPLE LOCATIONS
- EXISTING MANHOLE/CATCH BASIN
- FLOW DIRECTION OF LEACHATE COLLECTION SYSTEM

500 0 1000 FEET

DWG: AERIAL-2008 LMN: CB GAS MONITOR CTB: SME-STD.CTB REV: 4/8/2024

FIGURE 4-2
LANDFILL GAS MONITORING LOCATIONS
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER ENGINEERS

\\Nserver\cfs\Kpc\Dol\ACAD\WaterSampleSites\Aerial-2008.dwg, EMP FIGURE 4-2, 4/8/2024 8:05:40 AM, bwb

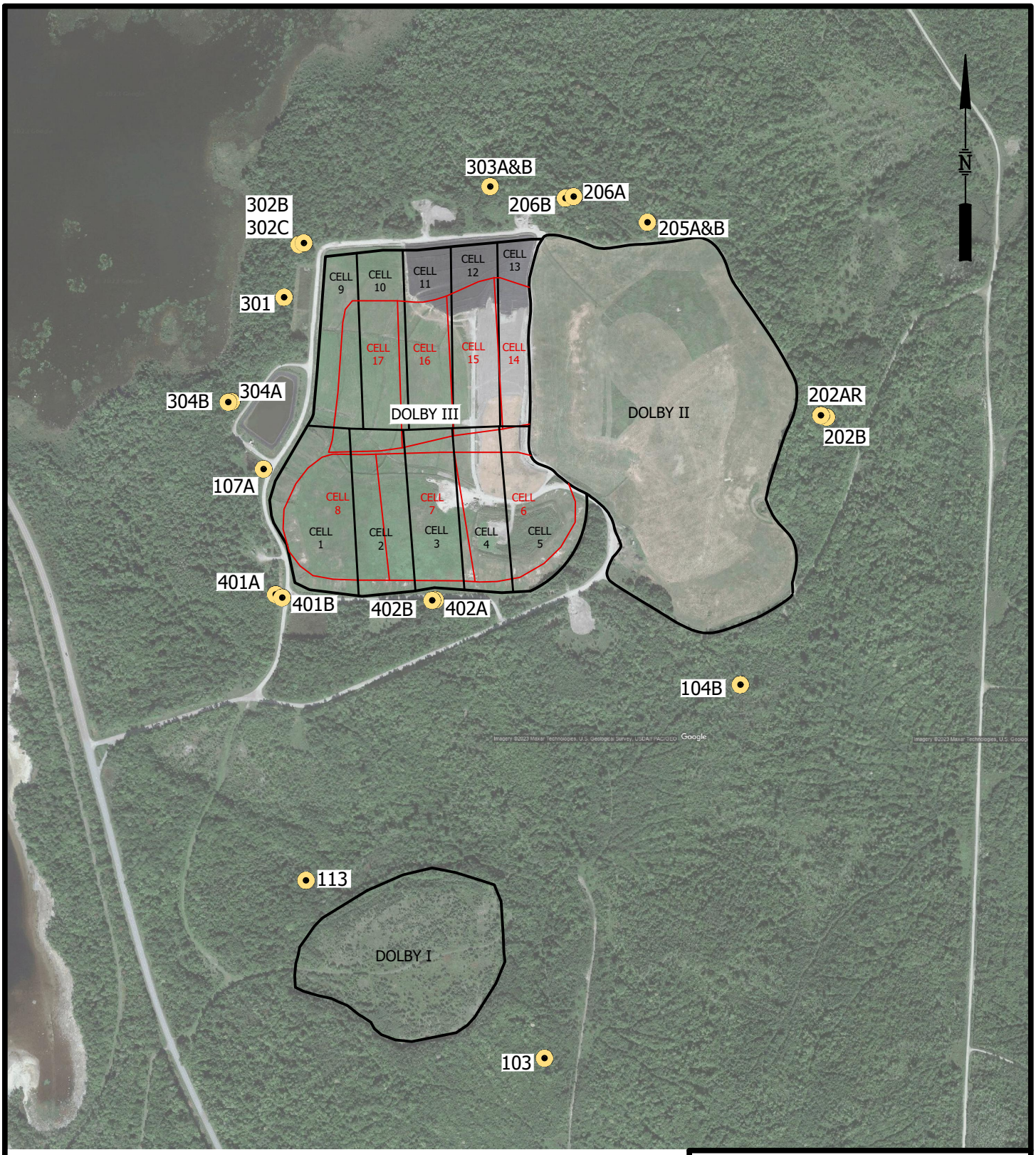


FIGURE 4-3
CELL LAYOUT AND MONITORING WELL LOCATIONS
DOLBY LANDFILL FACLITY
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER ENGINEERS

DWG: AERIAL-2008 LMN: CTB: SME_STD.CTB REV: 4/4/2024

\\Nserver\cfs\Kpc\Dol\ACAD\WaterSampleSites\Aerial-2008.dwg, A_FIGURE 4-3, 4/4/2024 4:52:17 PM, bwb

5.0 WATER QUALITY EVALUATION

Water quality at the Dolby Landfill has been monitored since 1982. Summary tables of the historical water quality, including the 2023 monitoring data, are presented in Appendix L. Figure 4-1 shows the water quality monitoring locations. Detailed summaries of the water quality data by monitoring location are shown on the well evaluation data summary sheets, which are presented as Appendix M. The data summary sheets include measured concentrations for selected water quality parameters analyzed for the 2023 monitoring period. Also identified on the data summary sheets are the 2023 parameter values that exceeded a historical minimum or maximum concentration value, as well as values that exceeded applicable State or Federal water quality guidelines or standards.

The groundwater data for 2023 was evaluated on a well-by-well basis by comparison to MEDEP Remedial Action Guidelines – Groundwater Residential [RAG-GwR]). Surface water results were compared to the State of Maine Freshwater Criterion Continuous Concentration (MFCCC) Standards. Additionally, the 2023 water quality samples were evaluated to determine if there were notable changes in concentrations of chemical parameters when compared to historical data.

As part of the water quality data evaluation, plots were developed for selected parameters at each monitoring point. Appendix M contains the plots used for data analysis and screening for potential trends. These plots provide a useful way to visually identify potential trends in the data over the entire sampling record and over shorter periods of time. When potential trends are visually identified, a more detailed data evaluation can be conducted.

For this data set, a detailed statistical comparison of current versus historical data to evaluate trends was not considered warranted. Mann-Kendall (M-K) trend analyses (using a 95 percent confidence level) were run as needed to provide further analysis when current parameter trends were difficult to verify visually. Appendix N presents the results of the M-K analyses.

An interpretation of the water quality data is presented in Sections 5.1, 5.2, and 5.3. Monitoring locations not specifically discussed in those sections exhibited data that were generally consistent with previous years and showed no apparent degradation trends and no notable occurrences of high, repetitive parameter values. The information presented in the following sections is grouped by well location relative to the general direction of groundwater flow at the landfill site.

5.1 Groundwater Quality

Upgradient Monitoring Well

MW-104B

Monitoring well MW-104B monitors bedrock water quality to the south of the Dolby II Landfill. This monitoring well is located approximately 400 feet from the Dolby II perimeter and is not considered to be influenced by any of the Dolby landfills based on the interpreted direction of groundwater flow.

Water quality data was generally consistent with historical data for this location, with the exception of sulfate which was 19 mg/L, just below the 2022 historical high of 20 mg/L. Magnesium was 1.95 mg/L, just below the 2022 historical high of 2.07 mg/L. Magnesium and manganese appear to be trending slightly upward over the last five years.

Dolby I

Monitoring wells MW-103 and MW-113 monitor bedrock groundwater quality upgradient and downgradient of the Dolby I Landfill, respectively. Dolby I Landfill has been closed for more than 30 years and only field parameters are measured for Dolby I. Notable observations in the 2023 water quality include:

MW-103

- Specific conductance at upgradient well MW-103 which had decreased to pre-2019 levels in 2022, however, began to increase again in 2023.

MW-113

- At downgradient well MW-113, the 2023 specific conductance data suggests a slow improvement since the 1980s.

Dolby II

As shown on Figure 1-2, there is an apparent groundwater divide located beneath the Dolby II Landfill, with groundwater moving to watersheds east and west of both the Dolby II and Dolby III Landfills. Eight monitoring wells (MW-202AR, MW-202B, MW-205A, MW-205B, MW-206A, MW-206B, MW-303A, and MW-303B) positioned around the Dolby II Landfill perimeter were sampled for water quality in 2023. These monitoring wells provide spatially distributed data along the northern and eastern borders of the Dolby II Landfill. The “A” designated wells monitor groundwater quality in the bedrock, while the “B” designated wells monitor groundwater quality in the soil overburden (i.e., glacial till).

- **Sidegradient Monitoring Wells – North of Dolby II**

  Monitoring well pairs MW-205A, MW-205B, MW-206A, and MW-206B, monitor northwesterly groundwater near the northern boundary of the Dolby II Landfill. While these wells appear to be hydraulically sidegradient from the landfill, they exhibit parameter concentrations that are

characteristic of groundwater conditions downgradient of an unlined landfill, suggesting that there is a component of groundwater flow outward from the landfill towards both of these well pairs. Both of the shallow wells show less impact than in the deep wells, suggesting improving groundwater conditions that may, over time, also occur in the deeper groundwater. Notable observations in the 2023 water quality at these locations include:

MW-205A

- Monitoring well MW-205A shows elevated concentrations of specific conductance, several metals, and inorganic parameters as compared to upgradient monitoring well MW-104B. Slightly decreasing trends are apparent in MW-205A for specific conductance, sulfate, alkalinity, hardness, bicarbonate, magnesium, potassium, and chloride.
- Manganese exceeded the RAG-GwR during the fall monitoring event.
- Alkalinity, hardness, bicarbonate, calcium, sodium, chloride, magnesium, potassium, and sulfate have remained generally consistent since 2014.

MW-205B

- At MW-205B, historically decreasing trends for specific conductance, calcium, magnesium, sodium, TDS, hardness, bicarbonate, iron, magnesium, and alkalinity have flattened. The 2023 fall monitoring event indicated a decrease in manganese from previous years to 0.0574 mg/L, which is slightly below the historical low h of 0.065 mg/L from 2010.
- Manganese exceeded the RAG-GwR during the spring monitoring event.

MW-206A

- Monitoring well MW-206A shows elevated concentrations of specific conductance, TDS metals, and inorganic parameters as compared to upgradient monitoring well MW-104B. The increasing concentration trends during 2015 and 2016 for alkalinity, ammonia, arsenic, bicarbonate, calcium, hardness, iron, magnesium, manganese, potassium, specific conductance, sodium, TDS, and total suspended solids (TSS) appear to have been flattening over recent years.
- Chloride and sulfate have lowered since 2009 and remain at the lower levels. A new historical low was observed for chloride.
- Some parameters including specific conductivity, hardness, bicarbonate, calcium, iron, magnesium, manganese, chloride, potassium, and ammonia appear to show a slight decrease in the last several years.
- The RAG-GwR were exceeded for arsenic, manganese, and iron.

MW-206B

- Parameter concentrations measured at this location show minimal landfill influence when compared to the same parameters in the deeper companion well (i.e., MW-206A). No adverse trends in water quality were apparent at MW-206B.
- New historical highs observed for specific conductance and iron.

- **Downgradient Monitoring Wells - East of Dolby II**

  Monitoring wells MW-202AR and MW-202B are interpreted to represent groundwater flow downslope (easterly) of the Dolby II Landfill. Monitoring well MW-202AR replaced former well MW-202A in 1994. Notable observations in the 2023 water quality at these locations include:

  MW-202AR

  - Parameter concentrations at this location are characteristic of groundwater conditions downgradient of an unlined landfill and exhibit elevated concentrations of specific conductance, metals, and inorganic parameters as compared to upgradient well MW-104B.
  - Slightly increasing trends are apparent in MW-202AR for iron, potassium, and specific conductance over the last five years. No other clearly visible trends were identified for MW-202AR in 2023. There has also been a light increase in organic carbon over the last couple of years.
  - Arsenic, manganese, and sodium exceeded the RAG-GwR during both monitoring events in 2023.

  MW-202BR

  - The parameter concentrations historically measured at MW-202B show similar patterns to those apparent at MW-202AR, but at generally lower concentrations and with more time-related variability. MW-202B was replaced with MW-202BR on July 30, 2021. Sampling at MW-202BR began in the fall 2021 water quality monitoring event. Samples were not collected at MW-202B between June 2020 and September 2021 because the well had become damaged by freezing.
  - A new historical low was observed for TDS during the spring monitoring event.

- **Downgradient Monitoring Wells - North of Dolby II and III**

  MW-303A

  - Well pair MW-303A and MW-303B are located sidegradient of the north side of Dolby III and downgradient of Dolby II.

- Comparison of the 2023 water quality data for MW-303A with MW-303B indicates that similar chemical conditions exist in the bedrock and overburden groundwater at those monitoring locations. Parameter concentrations at both MW-303A and MW-303B show elevated concentrations for specific conductance, metals, inorganic and organic parameters, as compared to upgradient monitoring well MW-104B suggesting influence from the landfill.
- Decreasing concentration trends for multiple parameters in MW-303A continued to slow or flatten in 2023. A slight increasing trend can be seen for organic carbon. This trend will continue to be monitored in future water quality reports.
- A dissolved oxygen concentration of 7.1 mg/L was observed in the Fall of 2023 compared to the previous historical high of 4.9 mg/L in 2007. Dissolved oxygen is showing elevated concentrations over the last several years and will continue to be monitored.
- Manganese exceeded the RAG-GwR during both monitoring events and nitrate only exceeded its RAG-GwR during the spring monitoring event.

MW-303B

- More seasonal variation has been observed over the monitoring record for parameters including specific conductance, TDS, calcium, magnesium, hardness, sodium, total organic carbon (TOC), alkalinity, hardness, and bicarbonate at MW-303B as compared to MW-303A or the background well, MW-104B.
- Parameter concentrations at MW-303B during 2023 were generally consistent with historical concentrations. Decreasing concentration trends for multiple parameters continued to slow or flatten in 2023.
- A dissolved oxygen concentration of 5.6 mg/L and 5.1 mg/L was observed in the spring and fall of 2023 both great than the previous historical high of 4.2 mg/L.
- Manganese exceeded the RAG-GwR during both monitoring events while nitrate only exceeded during the fall.

Dolby III

Ten monitoring wells near the perimeter of the Dolby III Landfill were sampled in 2023. Figure 4-3 shows the location of the monitoring wells relative to the adjoining cells that comprise Dolby III. Two monitoring wells (MW-402A and MW-402B) are located sidegradient of the landfill near the southern border of Dolby III. Monitoring wells MW-107A, MW-401A, and MW-401B are positioned downgradient along the western perimeter of the Dolby III Landfill. Three monitoring wells (MW-301, MW-302B, and MW-302C) are located downgradient and adjacent to the northwestern corner of Dolby III. Monitoring wells MW-304A and MW-304B are located near the northwest side of the Dolby III Landfill leachate pond and downgradient of the landfill. Because the Dolby III Landfill is immediately adjacent to, and downslope of

the Dolby II Landfill, monitoring well MW-104B is also considered the background monitoring well for Dolby III.

- **South of Dolby III – Sidegradient Monitoring Wells**

  Monitoring well pair MW-402A and MW-402B monitor bedrock and overburden groundwater quality, respectively, and are sidegradient of Dolby III. Notable observations in the 2023 water quality include:

  MW-402A

  - At MW-402A, upward trends are observable in the testing results for specific conductance, calcium, organic carbon, bicarbonate, sodium, manganese, hardness, alkalinity, and magnesium beginning 2013. Parameter concentrations suggest limited groundwater degradation may be occurring. In 2023, there were six historically high concentrations for various parameters in MW-402A, but the levels were only very slightly higher than the previously measured highs for that well. Chloride, TDS, and sulfate concentrations have leveled off or decreased over the last several years.

  MW-402B

  - In contrast to MW-402A, specific conductance, sodium, total dissolved solids, and chloride have decreased. Increasing trends can be observed for manganese, and potassium while decreasing trends can be observed for bicarbonate, pH, and TDS. Most other parameter concentrations for MW-402B have leveled over the last several years.
  - Manganese exceeded the RAG-GwR during both monitoring events.

- **Downgradient Monitoring Wells**

  Monitoring wells MW-107A, MW-401A, and MW-401B are downgradient wells located near the southwest corner of Dolby III. MW-107A and MW-401A are screened in bedrock, while the MW-401B well is screened in overburden.

- **Southwest of Dolby III**

  MW-107A

  - At MW-107A, parameter concentrations during 2023 were generally consistent with historical concentrations for this location.
  - At MW-107A, parameters including specific conductance, TDS, alkalinity, hardness, bicarbonate, sodium, and magnesium approached historic levels in 2023. Most parameter concentrations remain well below the previous historically high levels, except for dissolved oxygen, that had concentrations slightly above historical limits in 2023. MW-107A is one of the more impacted wells at the site.

- Manganese and sodium exceeded the RAG-GwR during both monitoring events.

MW-401A

- At MW-401A, parameter concentrations were generally consistent with historical data, except for calcium and hardness, which were slightly increased compared to previous historical maximums. The specific conductance was significantly greater than the historical maximum for the spring monitoring event. The measured specific conductance appears to be an anomaly as the data on either side of the spring event does not support this change. Magnesium, calcium, and hardness appear to be trending slightly upward over the last five years. This is corroborated by the 5-year M-K analysis for MW-401A. Chloride and potassium concentrations appear to have leveled off in MW-401A over the last five years. Arsenic was measured above its RAG-GwR for each of the 2023 monitoring events but appears to be generally decreasing. MW-401A shows less impact than the other wells on the west side of Dolby III.

MW-401B

- Calcium and bicarbonate have increased over the last five years at MW-401B. Alkalinity had increased over the last five years, but appears to have leveled in 2023. Chloride and sulfate have steadily decreased at MW-401B over the last fifteen years.
- The RAG-GwR was exceeded for manganese during the spring monitoring event.

- **Northwest of Dolby III**

  Three monitoring wells are positioned downgradient of Dolby III's northeast corner. Monitoring well MW-301 is screened in overburden, while monitoring wells MW-302B and MW-302C are screened in the bedrock and overburden, respectively.

  MW-301

  - At MW-301, new historical highs were observed for dissolved oxygen, manganese, magnesium, alkalinity, bicarbonate, sodium, and organic carbon. With the exception of organic carbon these highs are only slightly above the previous historic highs. Sulfate continues to show decreasing trends which is corroborated by the 5-year M-K analysis for MW-301.
  - The dissolved oxygen was greater than the historical maximum for the spring monitoring event. The measured dissolved oxygen appears to be an anomaly as the data on either side of the spring event does not support this change.
  - The RAG-GwR limit was exceeded for manganese during both monitoring events.
  - Volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH) analyses were performed on samples obtained from MW-301 for the fall 2023 monitoring

event; VPH C5-C8 Aliphatics was detected at 280 µg/L, which does not exceeded the 300 µg/L guideline.

MW-302B AND MW-302C

- At MW-302B and MW-302C, bicarbonate, alkalinity, TDS, magnesium, manganese, potassium, sodium, hardness, and TOC have been increasing since 2000. Specific conductance and chloride increased from 2000 to approximately 2016 to 2019 and specific conductance appears to be gradually flattening and chloride appears to be decreasing.
- Ammonia has increased at MW-302B and MW-302C since 2015. Sulfate concentrations have decreased at MW-302B and MW-302C since 2005 and appear to have leveled off.
- The dissolved oxygen was greater than the historical maximum for the spring monitoring event. The measured dissolved oxygen appears to be an anomaly as the data on either side of the spring event does not support this change in MW-302C.
- The most apparent influence from Dolby III is seen at the MW-302 pair, along with MW-107A and MW-301.
- VPH and EPH analyses were performed on samples obtained from MW-302B and MW-302C during the fall 2023 monitoring event; VPH C5-C8 Aliphatics were detected at 850 µg/L and 100 µg/L for MW-302B and MW-302C, respectively and will continue to be monitored in future water quality reports.

- **<u>West of Dolby III and the Leachate Pond</u>**

  Monitoring well pair MW-304A and MW-304B are screened in the bedrock and overburden, respectively, and are downgradient of the Dolby III leachate pond. Both wells have exhibited similar improving trends in groundwater quality over their monitoring record. The improving trends are likely related to improvements made to the leachate pond. In 2005, the leachate pond underdrain outlet was redirected from discharging to the native ground surface to being collected and pumped to the leachate pond. In 2007, the leachate pond was reconstructed to include a double-geosynthetic liner system with leak detection. The MW-304 well pair is located between MW-301 and MW-107A, but generally shows much lower parameter concentrations by comparison. It is noteworthy, that MW-304A and B are located downgradient of the leachate pond's underdrain system. The underdrain collects groundwater emanating from Dolby II and III, which are upgradient of the leachate pond.

  MW-304A

  - Decreasing trends were observed for several parameters since 2005, including specific conductance, calcium chloride, bicarbonate, and alkalinity, but have begun to level off over the last three years. Slight increasing trends can be observed for alkalinity,

bicarbonate, and magnesium. This increase is corroborated by the Mann-Kendall analysis. MW-304A does show increased parameter concentrations as compared to MW-104B, however, as previously stated the concentrations are significantly lower than MW-301 and MW-107A.

MW-304B

- With the exception of increases in manganese and iron over recent years, most parameter concentrations appear to be leveling off at MW-304B. Several parameters including specific conductance, TDS, calcium, alkalinity, bicarbonate, and magnesium have come back down from 2021 highs. Measured parameter concentrations are lower as compared to MW-304A.

5.2 Surface Water Quality

Surface water quality sample locations are shown on Figure 4-1. Partridge Brook Flowage is sampled at two locations (PBFB and PBFR) as part of the Dolby Landfill EMP. PBFB is the background location for the flowage and is positioned approximately 1,000 feet northwest of the leachate pond, on the opposite side of the flowage. PBFR is located on the landfill side of the flowage and downgradient of the leachate pond. PBFR is a replacement location for the former PBF location, which was sampled for the last time in 2011. PBF was located near the former discharge location for the leachate pond's underdrain.

After flow from the leachate pond underdrain was redirected into the leachate pond pump station, MEDEP requested sampling at PBFR instead of PBF. PBFR is located downstream of the former PBF location and is positioned to reflect potential runoff contributions to the flowage from the landfill's Sediment Pond #2.

Three sediment ponds (Sediment Ponds #1, #2, and #3) are positioned downslope of the Dolby III Landfill (see Figure 4-1). Sediment Ponds #1 and #3 are located near the southwest and northeast corners of the landfill, respectively. Sediment Pond #2 is located immediately south of the leachate pond. Surface water monitoring is performed at the outlet points for each pond. The surface water sample location designations are SPOS (Sediment Pond Outlet South – Sediment Pond #1), SPO (Sediment Pond Outlet – Sediment Pond #2), and SPON (Sediment Pond Outlet North – Sediment Pond #3).

The ditch to the northwest of the landfill (surface water sample point ND) has historically been dry and remained so for the fall monitoring events in 2023. SPO was only sampled during the fall 2023 monitoring event. Surface water at the SPOS and SPON was sampled for both monitoring events.

PBFB

- New historic highs were observed for calcium, hardness, sodium, iron, magnesium, and potassium during the fall monitoring event. Iron was observed to exceed the Maine Freshwater Criterion Continuous Concentration (MFCCC) during the fall sampling event.

PBFR

- As part of the Dolby EMP, copper is analyzed at the PBFR location. Copper was not detected above the laboratory reporting limit for either monitoring event in 2023. Ongoing monitoring for copper occurs only at the PBFR location. The copper monitoring was initiated at the PBF location on August 8, 2002. The PBFR location replaced PBFR on May 14, 2012 and monitoring of copper continued at the PBFR location. Together, PBF and PBFR have been sampled more than 70 times for copper. On only seven occasions, has copper been measured above the laboratory detection limit (i.e., 0.003 to 0.025 mg/l) at PBF and PBFR. The range of the measured concentrations was 0.0031 to 0.012 mg/l, which showed copper, when detected, was only slightly above the laboratory's reported detection limit. The last time copper was detected at PBFR was on August 14, 2012. Chapter 584 of the Maine Solid Waste Management Rules indicates the MFCCC standard for copper is 2.36 μg/l (i.e., 0.00236 mg/l). Because copper, when detected, has never exceeded the associated MFCCC standard, a recommendation is made in Section 10 to remove copper from the water quality monitoring preformed for surface water location PBFR.

SPO

- Surface water sample location SPO has been periodically dry since monitoring began at that location in 1991. As mentioned earlier, SPO was dry during the summer monitoring event and sampled in the fall. The fall sample exceeded the regulatory standard for ammonia and iron, however, there is no apparent increasing trend based on the previous SPO data. Historical highs were observed for specific conductivity, TDS, calcium, magnesium, alkalinity, hardness, bicarbonate, manganese, potassium, sulfate, and ammonia. These spikes may be the result of construction activities during the Phase 3 cover upgrade project that occurred during the summer of 2023.

SPON

- Parameter concentrations for SPON have remained relatively stable since monitoring was initiated at those locations. Potassium and chloride appear to have leveled off over the last few years. There has been a slight increase in sulfate and sodium over the last three years. Iron exceeded the MFCCC during the spring monitoring event.

SPOS

- Water quality data for SPOS was generally consistent with historical data. New historical highs were observed during the fall monitoring event for specific conductivity, TDS, potassium, sulfate, and TSS. These spikes are likely the result of construction activities during the Phase 3 cover

upgrade project that occurred during the summer of 2023, and are expected to return to previous historical values. Iron exceeded the MFCCC regulatory limits during the fall monitoring event.

ND

- New historical highs were observed during the spring monitoring period for 15 parameters. Increases to measured parameters concentrations are likely the result of construction activities during the Phase 2 and Phase 3 cover upgrade projects and are expected to return to previous historical values. Iron exceeded the MFCCC regulatory limits during the spring. ND was dry during the fall monitoring period. ND has had sufficient water to sample during only six sampling events in the last twenty-one years.

5.3 Leachate and Underdrain Quality

Three leachate sources are sampled at the Dolby Landfill: the Dolby II Leachate Pond (LPD2); the Dolby III Leachate Pond (LP); and the Leak Detection Sump (LDS), which is associated with the Dolby III Leachate Pond. Sampling of the leachate pond underdrain started in 2021.

No detectable VPH or EPH compounds were reported for the leachate samples tested.

LDS was not sampled in 2023 due to insufficient water.

The leachate shows a reduction over time in specific conductance, TDS, arsenic, calcium, manganese, alkalinity, hardness, bicarbonate, chloride, sodium, magnesium, potassium, and TOC with many parameters appearing to level off in recent years.

In 2021, water quality monitoring in the leachate pond underdrain manhole was added to the water quality monitoring program. The underdrain designation is UDLP. Overburden monitoring well MW-304B is located close to and downgradient of the leachate pond underdrain, and hydraulic gradients in the groundwater on the west side of Dolby III indicate the groundwater is likely discharging upward into the leachate pond's underdrain system. The proximity of MW-304B to the underdrain suggests water quality at those two locations should be similar. In 2023, specific conductance measured in MW-304B was reported as 87 and 134 µmhos/cm for the summer and fall sampling events, respectively, whereas the specific conductance for UDLP was reported as 679 and 687 µmhos/cm for those same events. Based on comparison of the specific conductance for the two monitoring locations (i.e., MW-304B and UDLP) it appears the underdrain may be influenced by leachate.

Monitoring location LPD2 is representative of the water in the Dolby II leachate pond, which is located on the eastern side of Dolby II. Water quality data from LPD2 in 2023 was generally within the historical

concentration range for that location. Concentrations of most parameters analyzed historically at LPD2 typically show seasonal variations. No increasing or decreasing trends were observed at LPD2 during 2023.

5.4 Data Validation and Quality Control (QC)/Quality Assurance (QA)

Data validation and QC/QA are an integral part of the Dolby Landfill water quality monitoring and are necessary to allow assessment of the adequacy of analytical results for their intended use. Field QC/QA activities associated with the water quality sampling for the Dolby Landfill include utilization of standardized sample collection procedures and data recording, calibration of field instruments, and use of chain-of-custody procedures. Analytical QC/QA involves the use of approved analytical protocols by qualified laboratories. Assessment of analytical data quality is performed through review of method-specified quality control data that is delivered with the analytical results. The EMP for Dolby summarizes the sampling procedures and analytical techniques, as well as the QC/QA methods used for the groundwater and surface water monitoring program at the Dolby Landfill in 2023.

Data validation documentation for the Dolby Landfill in 2023 has been previously submitted to MEDEP as part of the data submittals for each of the 2023 monitoring events. The following data validation protocols, as described in the MEDEP Maine Surface Water Monitoring Rules (SWMRs) Chapter 405, were previously submitted to MEDEP to verify the accuracy and precision of the reported results:

- Verification of continuous chain-of-custody for each sample;
- Verification that sample holding times were met;
- Evaluation of duplicate analysis performance;
- Calculation of the ratio of total dissolved solids to specific conductance;
- Comparison of current data with historical data and identification of anomalous results;
- Identification of any parameter in field equipment blanks; and
- Well depth measurements.

6.0 EVALUATION OF LANDFILL GAS MONITORING DATA

Landfill gas concentrations were measured in 2023 at locations where landfill gas may collect and pose a potential threat to health or safety. The landfill gas monitoring program includes measurement of methane and hydrogen sulfide concentrations in potential gas accumulation areas such as the leachate pond pump station, leachate collection manholes, and beyond the landfill boundary (i.e., in monitoring wells). Two landfill gas monitoring events were performed in 2023 as part of the water quality sampling. The results of the gas monitoring are presented as Appendix O. An RKI GX2003 portable gas detector (or an equivalent instrument) was used to measure methane and hydrogen sulfide concentrations. Existing landfill gas monitoring locations at the landfill include the following:

- The Dolby III leachate pond pump station control room and wet well;
- Conex box located adjacent to the leachate pond pump station;
- Monitoring well MW-107B, which is located southeast of Dolby III; and
- Nine manholes/catch basins located around the perimeter of Dolby II and Dolby III.

The landfill gas monitoring locations are shown on Figure 4-2.

6.1 Conex Box

Landfill gas monitoring inside the Conex box is conducted to check the breathing zone relative to the health and safety of landfill personnel using that space. During 2023, landfill gas concentrations measured inside the Conex box were below the monitoring instrument's detection limits.

6.2 Dolby III Leachate Pond Pump Station

During 2023, landfill gas concentrations measured in the leachate pump station control room and associated wet well were below the monitoring instrument's detection limits. It should be noted that the wet well is designated as a confined space; therefore, all human activities in the wet well must follow confined space entry procedures.

6.3 Monitoring Well MW-107B

Landfill gas readings have been taken in the wellbore at MW-107B since May 2002. During 2023, methane and hydrogen sulfide concentrations in MW-107B were not measured above the monitoring instrument's detection limits.

6.4 Manholes/Catch Basins

During 2023, landfill gas readings were taken at nine manholes/catch basins positioned around the Dolby II and Dolby III Landfills.

The 2023 gas monitoring events provided the following overall maximum methane levels (methane equivalent, percent by volume) and maximum hydrogen sulfide levels (parts per million [ppm]) measurements:

- CB #3 – 20 percent methane and 0 ppm hydrogen sulfide (spring) and 12 percent methane and 0 ppm hydrogen sulfide (fall).

Methane was not detected at detection limits at CB #6A, CB #13, CB #21, CB #22, CB #39, CB #43, and CB #45. Hydrogen sulfide was below detection limits at all the manholes/catch basins unless specifically identified above. CB#6A was not tested during the fall 2023 monitoring event since it was covered as part of the Phase 3 Cover Upgrade and will no longer be tested for landfill gas.

From a health and safety perspective, the manholes/catch basins can only be accessed using confined space entry procedures. If any work is to be completed near or within those structures or similar, air monitoring will be implemented as required by applicable rules/regulations.

7.0 WASTE STREAMS DELIVERED TO LANDFILL

Approximately 270 cy of solid waste were delivered to the Dolby III Landfill in 2023. Table 7-1 summarizes the quantities delivered by waste stream. Appendix H presents the waste tonnage data as recorded for 2023.

TABLE 7-1

2023 WASTE DISPOSAL SUMMARY
DOLBY LANDFILL

Month	Ash[1]	Misc. Waste[2]
January		0
February		0
March		0
April		0
May	~57	0
June		0
July		0
August		0
September		~42
October	~166	<5
November		0
December		0
Total (cy)	~223	~47
CUMULATIVE TOTAL (cy)	~270	

Notes:
1 Ash from Millinocket transfer station, East Millinocket transfer station, and Medway transfer station.
2 Estimate of waste materials from landfill leachate pond and pipeline cleaning (e.g., sediment, gloves, rags, tubing).

8.0 FINANCIAL ASSURANCE

According to 06-096 CMR 400(11), the State of Maine is not required to provide financial assurance for closure and post-closure care of the Dolby Landfill facility. The DAFS-BGS has the authority to seek legislative appropriations, as necessary, to fund anticipated operation and maintenance of the Dolby Landfill facility when needed.

9.0 SUMMARY

Approximately 270 cy of waste were placed in the Dolby III Landfill in 2023.

Approximately 8,100 feet of leachate transport pipeline were cleaned in October 2023. The pumping flow rates before and after the pipeline cleaning were measured and showed restoration to the design pumping flow rate of approximately 600 gpm.

Review of the 2023 water quality data from Dolby I, Dolby II, and Dolby III, indicates that ground and surface water quality at the site remains generally consistent with that reported in previous years with minimal, if any, increased degradation apparent.

The following observations are offered relative to site water quality and landfill operation for 2023:

- Groundwater monitored hydraulically downgradient of the Dolby Landfills to the north, east, and west, generally exhibited higher parameter concentrations than those found at the upgradient groundwater monitoring location for the Dolby Landfill facility.
- Surface water quality downgradient of the leachate pond continues to show general improvement since relining of the leachate pond in 2007 and collection of groundwater resulting from the leachate pond underdrain system.

In 2023, the leachate pond and groundwater from monitoring wells MW-301, MW-302B, and MW-302C were analyzed for VPHs and EPHs. VPH C5-C8 ALIPHATICS were detected in MW-301, MW-302B, AND MW-302C. No EPHs were detected in monitoring wells MW-301, MW-302B, MW-302C, or in the leachate for 2023.

MEDEP water quality standards (i.e., RAGs) were exceeded in several of the groundwater monitoring wells one or more times in 2023. The MFCCC for iron was exceeded for all four surface water locations. The MFCCC for ammonia was exceeded for surface water location SPO. Overall, the impact from the Dolby Landfills on the surrounding water quality is considered to pose a minimal threat to public health.

MEDEP requested that PFAS sampling be conducted on MW-202AR and MW-202B during the Spring 2023 water quality monitoring event. The PFAS sampling was not conducted during the Spring monitoring event but was completed during the Fall monitoring event. PFAS sampling results for the MW-202AR and MW-202B showed (22.9 nanograms per liter – ng/l) and 11.5 ng/l, respectively for the six specific PFAS tied to Maine's interim drinking water standards for PFAS.

Phase 3 of the Dolby III cover upgrade was completed in 2023. The upgrade resulted in adding 18.2 acres of geomembrane to the soil cover layer. As of completion of Phase 3, a total of 57.4 acres out of 68 acres of the Dolby III cover have received the cover upgrade.

The leachate pond continues to have an apparent but undetermined leak in the liner system. The leachate pond underdrain includes a float-controlled pump which protects the liner system from potentially damaging uplift pressures. Water from the underdrain is pumped into the leachate pond and is treated as leachate. Upward hydraulic gradients cause groundwater to discharge into the underdrain. The upward gradients and underdrain pumping help minimize any potential environmental effects caused by leachate leakage through the leachate pond liner system.

10.0 RECOMMENDATIONS FOR 2023

Recommendations for operation and maintenance of the Dolby Landfill facility in 2023 are as follows.

Recommendation 1

Ash brought to the temporary waste cell for disposal located on the surface of Phase 4 of the Dolby III cover upgrade should be completed prior to June 15, 2024. After June 15, 2024, Phase 4 Cover Upgrade project will begin, and ash disposal will no longer be possible.

Recommendation 2

Continue to pump the leachate pond underdrain such that water levels in the underdrain are kept to the lowest levels practical. Maintaining low water levels in the underdrain are critical to avoiding uplift of the leachate pond liner system. Pumping the underdrain also helps mitigate any potential leachate leakage occurring though the leachate pond's liner system.

Recommendation 3

Complete filling and grading low areas on the Dolby II cover that were identified in 2022. The filling and grading should be completed such that the remaining depressions identified on the cover surface will be resistant to water ponding in the future.

Recommendation 4

Smooth, add topsoil, if necessary, and revegetate the area of rough surface on the Dolby II Landfill. The smoothing should focus on providing a surface condition suitable for stable operation of grass mowing equipment.

Recommendation 5

Continue the water quality monitoring program for the Dolby Facility as described in this Report.

Recommendation 6

Remove sediment from the leachate transport pipeline in 2024.

Recommendation 7

Continue the quarterly landfill inspections and annual manhole inspections consistent with the inspections performed in 2023.

Recommendation 8

Continue the daily/weekly general inspections of the leachate pond and landfill. The inspection frequency will be adjusted on an ongoing basis to reflect high leachate inflows to the pond during the spring of year, large rainfall events, mid-winter thaws, and extended periods of freezing weather.

Recommendation 9

Discontinue monitoring for copper at surface water location PBFR. Copper has been monitored at PBFR at least 70 times and most of the associated results were reported as being less than the laboratory reporting limit. When detected, the copper did not exceed its MFCCC standard.

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APPENDIX A

LANDFILL INSPECTION REPORTS

SME
SEVEE & MAHER
ENGINEERS

Closed Landfill Technical Services Inspection Report

Facility: Dolby Landfill
Inspection Date: October 5, 2023

Facility:	Dolby Landfill		
Owner:	State of Maine	License #:	S-000796-WO-AO-N, dated June 30, 2016
Location:	Dolby Landfill Road, East Millinocket	Coordinates:	
Closure Cap:	**Dolby I**: 18" soil. **Dolby II:** Cover 1: 12-24" granular cover soil/waste, 18" screened till, 6" vegetative cover. Cover 2: 12" sand, 24" compacted sludge/till cover soil. Cover Upgrade: 6" sand, 40-mil HDPE geomembrane, drainage geocomposite, 14" cover soil, 4" topsoil. According to the Closure License S-000796-WO-AO-N, approximately 38 acres of the existing Dolby II cover system will not be upgraded. **Dolby III**: Cover 1: 6" grit or sand (top) or 12" sand (side slope), 18" screened till, 3" cover soil, 3" secondary sludge. Cover 2: 12" sand, 18" compacted sludge/till cover soil, 6" manufactured topsoil. Cover 3: 6" sand or grit, 9" compacted sludge/till cover soil, 6" manufactured topsoil layer. Cover Upgrade: 6" sand, 40-mil HDPE geomembrane, drainage geocomposite, 14" cover soil, 4" topsoil.		
Closure Date:	Dolby I: 1981 Dolby II: 1987, followed by vertical increase with cover from 1996 to 1999 Dolby III: 2016	Approx. Size:	Dolby I: 23 acres Dolby II: 63 acres Dolby III: 72 acres
Inspection Date:	October 5, 2023	Weather:	Cloudy, 50s
Personnel Present:	Vera Maheu (MEDEP), Daniel Emerson (MEDEP), and Nick Thompson (Sevee & Maher)		

Vegetation:

Type of growth (check all that apply):	Remarks:
☒ grasses ☐ legumes ☒ herbaceous plants ☒ moss	**Dolby I** –Not inspected during visit. **Dolby II** – A healthy layer of grass has grown around the entirety of Dolby II. Some herbaceous plants were observed. ***See Photo #1*** **Dolby III** – Northern and eastern slopes have good grass growth following 2022's cover upgrade. The southwestern corner and southern slope were seeded and mulched just prior to DEP inspection following the Phase 3 Cover Upgrade project. ***See Photos #2, 3 & 4***

Condition of growth: ☐ Excellent (thick growth) ☒ Good ☐ Poor (thin, bare soil, mosses)	Remarks: **Dolby II** – Excellent growth around entirety of landfill. **Dolby III** – Good growth on the northern and eastern slopes of the landfill from last year's cover upgrade. Southern slope was hayed and seeded prior to inspection. Western slope has begun to grow grass. A small section of the northern slope had been recently reseeded and mulched following maintenance on a nearby stormwater swale developed as part of the Phase 2 Cover Upgrade. ***See Photo #5***
Woody plants present? ☒ Yes ☐ No	Remarks: **Dolby II -** Some woody growth was noted around the Dolby II leachate pond (LPD2). ***See Photo #6***
Invasive plants present? ☐ Yes ☒ No ☐ Japanese knotweed ☐ Common reed (phragmites) ☐ Honeysuckle	Remarks: None noted.
Dead spots present? ☒ Yes ☐ No	Remarks: **Dolby III –** Sections of Dolby III have little to no vegetation yet following the Phase III Cover Upgrade project. Grass has begun to grow in sections completed earlier in the year. ***See Included Photos.***

Final Cover Condition:

Is there subsidence (depressions in the cap)? ☒ Yes ☐ No	Remarks: **Dolby II** – Some slight areas of settlement can be seen on the southeastern slope of Dolby II. A crew was onsite during inspection filling in the depressions noted. ***See Photo #7***
Is there evidence of water ponding on the cap? ☐ Yes ☒ No	Remarks: None noted.
Are there colored leachate seeps through the cap? ☐ Yes ☒ No	Remarks: None noted.
Are there colored leachate seeps at toe slope? ☐ Yes	Remarks: None noted.

☒ No	
Are there signs of burrowing animals? ☐ Yes ☒ No	Remarks: No evidence of burrowing animals observed during inspection.
Is there waste pushing through the cap? ☐ Yes ☒ No	Remarks: None noted.
Is there evidence of erosion? ☒ Yes ☐ No	Remarks: Some slight erosion observed on the western slope of Dolby III where vegetation has yet to grow. ***See Photo #8***
Is there ATV damage to the cap? ☐ Yes ☒ No	Remarks: None noted.

Drainage and Surface Water:

Condition of swales and ditches ☐ Excellent (unobstructed) ☒ Good ☐ Poor (overgrown or sediment filled)	Remarks: **Dolby I** – Not inspected. **Dolby II** – Swales and ditches are performing well. Minimal woody growth will need to be removed. No sedimentation build-up was observed. **Dolby III** – Several new stormwater swales were built over the course of the Dolby III Cover Upgrade project. Phase III added new riprap along the western and southern slopes and perimeter of the landfill. A stormwater swale located on the northern slope of Dolby III was also repaired and adjusted prior to DEP inspection. ***See Included Photos***
Is there evidence of colored leachate in surface waters? ☐ Yes ☒ No	Remarks: None noted.

Groundwater Monitoring Wells:

Condition of monitoring wells (if present) ☐ Excellent ☐ Good	Remarks: Monitoring wells were not inspected during visit. Site hydrogeologist was unable to attend annual inspection.

☐ Poor (missing covers, missing locks, deteriorated seals, frost heaved, etc.)	

Gas Management:

Is there gas ventilation? ☒ Yes ☐ No	Remarks:
Are the gas vents damaged? ☐ Yes ☒ No	Remarks:
Is there any odor of landfill gas? ☒ Yes ☐ No	Remarks: Hydrogen sulfide odors noted on the southern slope of Dolby III. This is likely the cause of the dead spots noted prior to the Phase 3 cover upgrade on Dolby III. Gas vents have been added on this slope.

Other Facility Conditions:

Access road condition: ☐ Excellent ☒ Good ☐ Poor	Remarks: **Dolby I** –The access road overlaying the leachate transport pipe is well maintained. The access road leading to Dolby I has become overgrown, and vegetation is encroaching into the road from both sides. **Dolby II** – Developing ruts. **Dolby III** - Excellent
Gate and fence condition (if present): ☒ Excellent ☐ Good ☐ Poor	Remarks: Fencing looked to be in good condition with no noticeable holes or damage. Gates are generally locked but are currently open during the day for construction vehicle traffic.
Are there manmade structures on the cover? ☒ Yes ☐ No	Remarks: A large, heavy plastic container was found on the northern slope of Dolby II.
Is there litter present? ☐ Yes ☒ No	Remarks: No litter observed during inspection.
Is there evidence of unauthorized dumping? ☐ Yes ☒ No	Remarks: None noted.

Nearby Development:

Has there been new development near the landfill since the last inspection? ☐ Yes ☒ No	Remarks: None noted.
Type: ☐ Residential ☐ Commercial / industrial	Remarks: N/A
Is the development served by public water? ☐ Yes ☐ No	Remarks: N/A

Maintenance:

Is there an ongoing maintenance program? ☒ Yes ☐ No	Remarks: The Dolby III Landfill is currently operating under its 2012 Operation Manual and Environmental Monitoring Plan. Section 9 of the Operations Manual addresses closure maintenance for Dolby III.

Deed Affidavit:

Is there a deed affidavit recorded for the landfill property? ☐ Yes ☐ No	Remarks: Pursuant to Resolve 2011 chapter 90, the Maine legislature authorized the State Planning Office to acquire the Dolby Landfill by donation.

Attach labeled photographs of landfill conditions and any nearby development.



Dolby Landfill, Google Earth Image

Describe any corrective actions needed as a result of conditions noted during the inspection:

1.

Recommended Actions:

1. The woody growth located around the perimeter of LPD2 should be removed.
2. The vegetative growth in the perimeter swales of Dolby III's northwestern corner should be maintained to ensure the channel works as intended.
3. Ruts in the access road around Dolby II should be repaired in order to keep the road passable.

Photograph Number: 1	
Description: Southeastern slope of Dolby II, lush with vegetation.	

Photograph Number: 2	
Description: The western slope of Dolby III. This slope was observed to have good grass growth following the completion of the Phase 3 Cover Upgrade project.	

Photograph Number: 3	
Description: The southwestern corner of Dolby III (looking east). The corner was observed to have good vegetative growth. The southern slope had recently been hayed and seeded. New riprap perimeter swales and downspouts can also be seen.	

Photograph Number: 4	
Description: Southern slope of Dolby III. A good layer of hay and seed can be seen. A new stormwater diversion berm was built as part of the Cover Upgrade project to divert water into the newly developed downspouts.	

Photograph Number: 5	
Description: Northern slope of Dolby III. The stormwater berm's western end had been repaired and angled slightly upslope prior to the inspection. The area around the berm had been hayed and seeded as well.	

Photograph Number: 6	
Description: Dolby II's leachate pond. Lush vegetation and woody plants have taken root around the perimeter of the pond.	

Photograph Number: 7	
Description: A recently filled in depression on the cap of Dolby II. A crew was onsite filling in several areas during the inspection.	

Photograph Number: 8	
Description: An instance of erosion found on the western slope of Dolby III.	

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MEMO TO: Wallace Giakas, State of Maine **(VIA EMAIL)**

CC: William Longfellow, State of Maine
Matt Muzzy, SME

FROM: Nick Thompson, SME

DATE: May 25, 2023

SUBJECT: **LANDFILL INSPECTION**
SPRING 2023
DOLBY I, II, AND III LANDFILLS

The Dolby I, II, and III Landfill inspection (spring quarter) was completed by Nick Thompson and Trevor Michaud of Sevee & Maher Engineers, Inc. (SME) on April 27, 2023. Completed inspection forms and captioned photographs for the inspection are attached.

The inspection identified seven maintenance items that should be addressed before the end of 2023. Many of the items were included in the 2022 reports and appropriate contacts are being made for resolving the items in 2023.

1. Repair two gas vents on the top of the Dolby III Cover Upgrade area. The gas vents were not attached to their bases when viewed for this inspection. It appears the vents were not originally glued to their bases. Repair will include hand excavation (+/- 9" depth) around the base, inserting a 4-inch PVC coupling, and gluing the vent pipe onto its base. The geomembrane boots will need to be reconstructed around the gas vents. Arrangements will be made with the geomembrane installer for Dolby III cover upgrade to assist with this activity in 2023.
2. Remove vegetation and small tree growth from riprap downspouts within the Phase 1 closure area. SME has contacted the landscaper for the Dolby Facility and added the vegetation removal to remaining work for summer 2023.
3. Remove vegetation and small tree growth from the perimeter of the Dolby II holding pond. SME has contacted the landscaper for the Dolby Facility and added the vegetation removal to remaining work for summer 2023.
4. Remove vegetation from the top of the second from upper surface swale on the Dolby Phase 1 Cover Upgrade. SME will contact the landscaper for the Dolby Facility and have them add the vegetation removal to remaining work for summer 2023.
5. Repair low areas in Dolby II to prevent ponding on the cover area. Adam Qualey has been contacted to provide a quote and include in the schedule for summer 2023.
6. During substantial rain events over the years, the corrugated metal outlet culvert on the inlet side of Northwest Sedimentation Basin 3, adjacent to the Phase 1 cover area, has floated, causing a section to come apart at a joint. The culvert is also in poor condition. SME will prepare a scope of services and construction estimate for replacing the culvert with HDPE culvert and anti-floatation rings.

7. A small area at the toe of Dolby II in the valley between Dolby II and Dolby III is showing signs of seepage. There was standing water with discoloration as shown in the photos. In 2022, the liner company for Phase 2 Cover Upgrade veered off the edge of the road with a piece of equipment at this location and became stuck. The seepage could potentially be the result of this. At the time, it was uncertain if damage to the Dolby II cover may have occurred. SME will develop a plan to investigate the seeping water and its management. SME will coordinate with BGS to implement the plan.

The following maintenance items were identified and can be addressed in the future as they are not considered to be currently causing problems with landfill operations:

1. Repair two small "dents" observed in the primary geomembrane of the leachate pond. One dent is located below the emergency outlet and the other is located near the middle of the east side of the pond. Both dents are at high elevations that are seldom below the leachate level in the pond. The dents will be addressed the next time the leachate pond undergoes a complete cleaning.
2. Repair of the leachate pond pump station hatch for Pump 1. The hatch hinges are broken and in need of repairs.
3. Repair animal burrow hole observed on the Phase 1 cover just above the second to upper surface swale as shown on Figure 1 and in the photos. For repair, the hole should be filled with cover soil material. If we continue to observe burrow holes in the final cover, a pest control services provider should be contacted.

Please contact Matt Muzzy or me if you have any questions or require additional information.

Thank you.

Attachments
Attachment 1 – Figure 1 – Site Plan
Attachment 2 – Spring Quarter Site Inspection Forms and Photos

ATTACHMENT 1

FIGURE 1 – SITE PLAN

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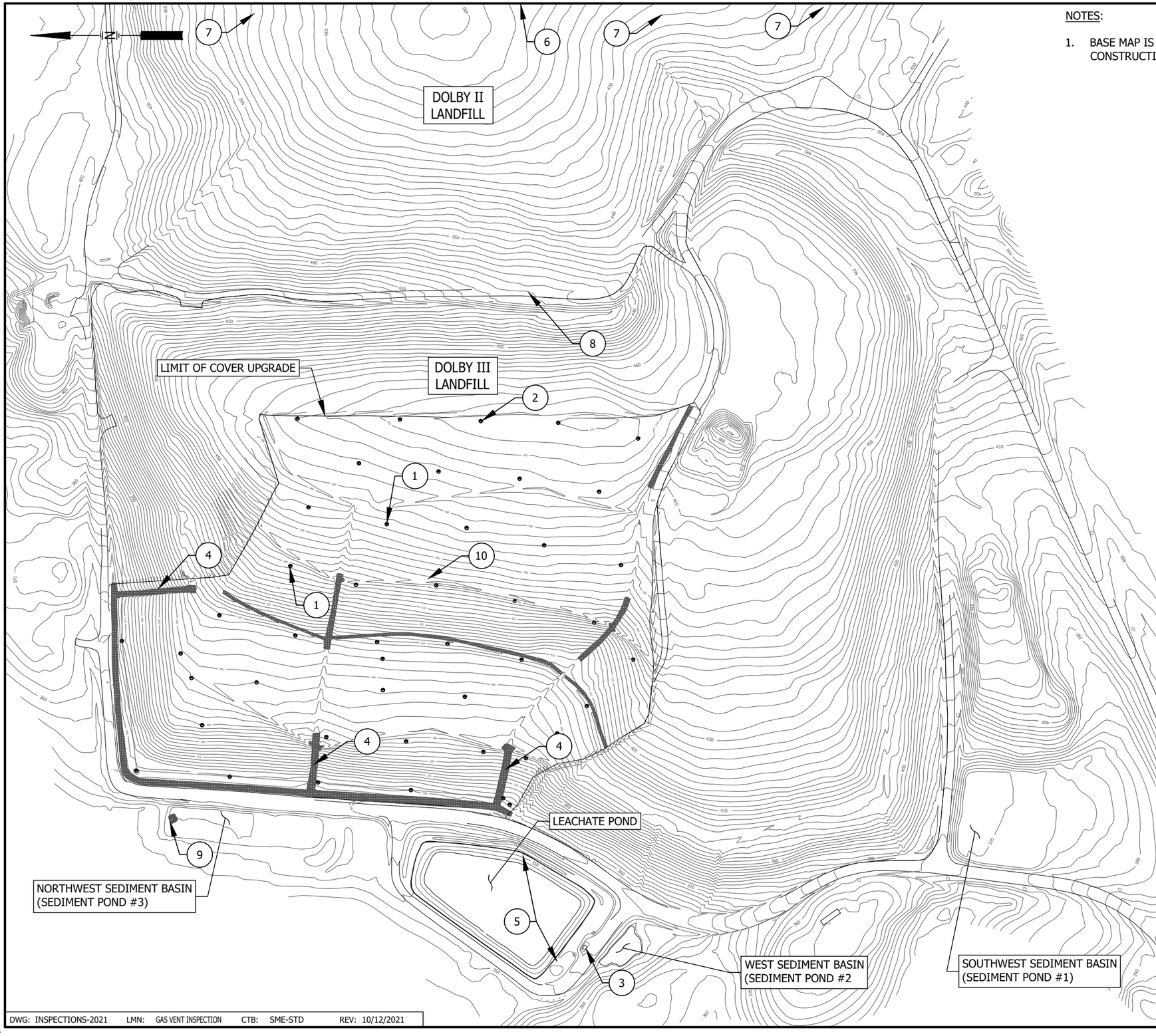

NOTES:

1. BASE MAP IS A COMPILATION OF PREVIOUS SURVEYS AND SHOULD NOT BE USED FOR CONSTRUCTION ESTIMATES..

MAINTENANCE ITEM NO.	DESCRIPTION
1	BROKEN GAS VENT
2	LEANING GAS VENT
3	BROKEN HINGE ON WET WELL COVER
4	VEGETATION AND SMALL TREE GROWTH
5	SMALL DENTS IN LEACHATE POND LINER
6	VEGETATION AND SMALL TREAT GROWTH AROUND HOLDING POND ON THE WEST SIDE OF DOLBY II
7	LOW LYING ARES IN THE DOLBY II COVER
8	LANDFILL TOE OF THE WEST SLOPE OF DOLBY II SEEPAGE.
9	CULVERT FLOATED DURING A RAIN EVENT AND CAUSED A SECTION TO COME APART AT THE JOINT.
10	ANIMAL BURROW HOLE

125 0 250 FEET

FIGURE 1
DOLBY INSPECTION SITE PLAN
DEPARTMENT OF ADMINISTRATION AND FINANCIAL SERVICES
BUREAU OF GENERAL SERVICES
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER ENGINEERS

DWG: INSPECTIONS-2021 LMN: GAS VENT INSPECTION CTB: SME-STD REV: 10/12/2021

ATTACHMENT 2

FORMS AND PHOTOS FOR
APRIL 27, 2022 SITE INSPECTION

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DOLBY LANDFILL
LANDFILL INSPECTION CHECKLIST

Date: April 27, 2023 Time: 10:00 AM – 3:00 PM

Weather: Partly Sunny, 55 degrees Inspected By: NMT/TJM

Item	Condition	
DOLBY I LANDFILL	**Ok**	**Not Ok**
COVER SYSTEM		
Erosion, Channeling, Eruptions	X	
Poor Drainage, Ponding	X (1)	
Excessive Settling, Crack Development	X	
Grass Die-off-Failure to Thrive	X	
Mowing Required	X (2)	
Germination of Trees, Deep Root Vegetation	X (2)	
Animal Burrowing	X	
COLLECTION PONDS		
West End Pond Level (low, medium, or high)	X (Medium)	
East End Pond Level (low, medium, or high)	X (Medium)	
Vegetative Build-up in Ponds (Cat Tails and Trees)	X	
ACCESS GATES		
Gates Secured and Working Properly (Facility Main Gates)	X	
Road Accessible by Vehicle	X (3)	
DOLBY II LANDFILL		
COVER SYSTEM		
Erosion, Channeling, Eruptions	X	
Poor Drainage, Ponding	X (4)	
Excessive Settling, Crack Development	X	
Grass Die-off, Failure to Thrive	X (5)	
Mowing Required (Mowing Should Occur Next Year due to Woody Vegetation)	X	
Germination of Trees, Deep Root Vegetation	X	
Animal Burrowing	X	
PERIMETER DRAIN CATCH BASINS		
Build-up Sediment in Catch Basins	X	
Flow Conditions (low, medium, or high)	X (low)	
Catch Basins Intact and Serviceable	X	
LEACHATE HOLDING POND		
Iron Staining (wooded area east of pond)	X	
Holding Pond Level	X (medium)	
DOLBY III LANDFILL		
COVER SYSTEM		
Erosion, Channeling, Eruptions	X (6)	
Excessive Settling, Crack Development	X	
Grass Die-off-Failure to Thrive	X (5)	
Mowing Required	X	
Germination of Trees, Deep Root Vegetation	X	
Poor Drainage, Ponding	X	
Animal Burrowing	X (7)	
Access Road Condition	X	
Gas Vent Pipes	X (8)	
Active Area Berm	X	
PERIMETER DRAIN AND CATCH BASINS		
Build-up of Sediment in Catch Basins	X	
Valves Functioning Properly (free turning)	X	

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Item	Condition	
LEACHATE COLLECTION POND	**Ok**	**Not OK**
LINER		
Condition of Liner (rips, holes, torn seams)	X	
LEACHATE PUMP STATION	(9)	
Build-up Sediment in Wetwells or Leachate Pond	X	
Pumps Functioning Properly (amps, noises)	X	
Valves Functioning Properly (free turning)	X	
Flow Conditions (low, medium, or high)	X (medium)	
Properly Vented	X	
Electrical Panel Inspection (corrosion, etc.)	X	
Flow Meter Inspection	X	
Transducer	X	
LEAK DETECTION SYSTEM	(9)	
Pump functioning properly (amps, noises)	X	
Flow Conditions (low, medium, high)	X (medium)	
Flow Meter Inspection	X	
Control Panel Inspection	X	
UNDERDRAIN PUMPING SYSTEM	(9)	
Pump functioning properly	X	
Flow Conditions	X (medium)	
SITE SEDIMENTATION STRUCTURES		
NORTHWEST SEDIMENT POND (SEDIMENT POND 3)		
Check Outlet Structure for Condition	X (10)	
Water Level (low, medium, or high)	X (Low)	
WEST SEDIMENT POND (SEDIMENT POND 2)		
Check Outlet Structure for Condition	X	
Water Level (low, medium, or high)	X (low)	
SOUTHWEST SEDIMENT POND (SEDIMENT POND 1)		
Check Outlet Structure for Condition	X	
Water Level (low, medium, or high)	X (Medium)	
SITE ROADWAYS AND DRAINAGE		
Check Catch Basins for Build-up of Sediment	X	
Check Culverts for Blocked Drainage and/or damage	X	
Check Monitoring Wells for Visual Damage	X (11)	
General condition of Perimeter Roadways	X	
LEACHATE PIPELINE		
Check Manhole Exterior Condition	X	
Check Transition Station Exterior Condition	X	
Check Aboveground Utility Line to the Transition Station	X	
General condition of Leachate Pipeline Access Road	X	

COMMENTS:

(1) Growth of Cattails was noted on the south side of the Dolby I cover system; however, no standing water was observed.

(2) Woody Vegetation observed on Dolby I cover system was most significant in downspouts and stormwater ponds. In 2019 MEDEP (Lou Pizzuti) indicated that MEDEP is okay with the tree growth so long as the water quality around this landfill does not degrade and the perimeter of the landfill is walked to assure that no leachate breakouts are occurring. Perimeter of Dolby I will be walked during this spring inspection.

(3) The access road had been cleared in the fall of 2022, but over the winter a tree fell across the beginning of the access road.

(4) Areas on ponding on Dolby II. These areas have been identified and repaired recommended.

(5) Small areas of sparse grass vegetation (failure to thrive) on Dolby II and III landfills. The areas of sparse vegetation may be due to concentrated gas in the areas or topsoil with insufficient nutrients. Regardless of cause the areas are small and do not pose a threat to the overall integrity of the cover systems.

(6) The north end of the Phase 2 cover will need to be reseeded and surface swale repaired.

(7) Animal burrow hole located at the second from top surface swale of Phase 1 Cover Upgrade. Shown on Figure 1

(8) Two gas vent pipes on Dolby III need repair.

(9) The leachate pond, leak detection system, and underdrain system are currently being monitored on a daily basis to determine the source of high flows to the leak detection system. The monitoring plan was approved by the MEDEP.

(10) The outlet pipe for sedimentation pond 3 floated on the inlet side during a heavy rain event in 2022. This caused the pipe to come apart at a joint.

(11) Visual observation of monitoring wells is performed during each environmental monitoring event.

RECOMMENDED ACTIONS:

(1) Repair two gas vents located on the top of Dolby III during upcoming closure operations in 2023.

(2) Remove vegetation and small tree growth from downspouts in the Phase 1 cover.

(3) Remove vegetation from perimeter of Dolby II holding pond.

(4) Remove vegetation from the top of the second from upper surface swale on the Dolby Phase 1 Cover Upgrade.

(5) Repair low areas in the Dolby II to prevent ponding on the cover area. Adam Qualey has been contacted to provide a quote and include in the schedule for summer 2023.

(6) Replace out let culvert at Sedimentation Pond 3.

(7) Repair area of seepage at the toe of the slope on Dolby II in the valley area.

Dolby Landfill Inspection Photographs
East Millinocket, Maine
April 27, 2023



Leachate Pond



Leachate Pump Station Wet Well



Leachate Pond Emergency Outlet



Pump Station Control Panel

Dolby Landfill Inspection Photographs
East Millinocket, Maine
April 27, 2023



Sediment Pond II Outlet Protection and Structure



Leachate Pond Underdrain Pump Station



Sediment Pond III



Sediment Pond III Outlet Protection and Culvert

Dolby Landfill Inspection Photographs
East Millinocket, Maine
April 27, 2023



Sediment Pond III Outlet



Sediment Pond III Inlet Repair Needed



Dolby III Cover Upgrade Ditch Line West Side



Phase I Downspout at Phase 1/2 Connection

Dolby Landfill Inspection Photographs
East Millinocket, Maine
April 27, 2023



Animal Burrow Hole on Phase 1 Cover



Dolby II Leachate Holding Pond



Dolby III Cover Upgrade Damaged Gas Vent



Dolby II Bare Ground West Side

Dolby Landfill Inspection Photographs
East Millinocket, Maine
April 27, 2023



Dolby II Cover System Ponding West Side



Dolby II Seepage Area in Valley



Dolby I Holding Pond



Leachate Transport Pipeline Transition Station

Dolby Landfill Inspection Photographs
East Millinocket, Maine
April 27, 2023



Leachate Transport Pipeline Transition Station



Leachate Transport Pipeline Transition Station



Leachate Transport Pipeline Transition Station

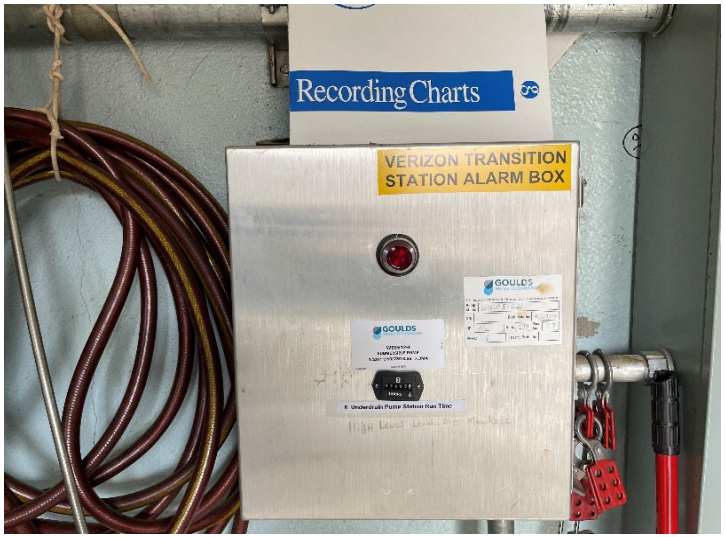


Leachate Pond Pump Station Leak Detection Control Panel

Dolby Landfill Inspection Photographs
East Millinocket, Maine
April 27, 2023



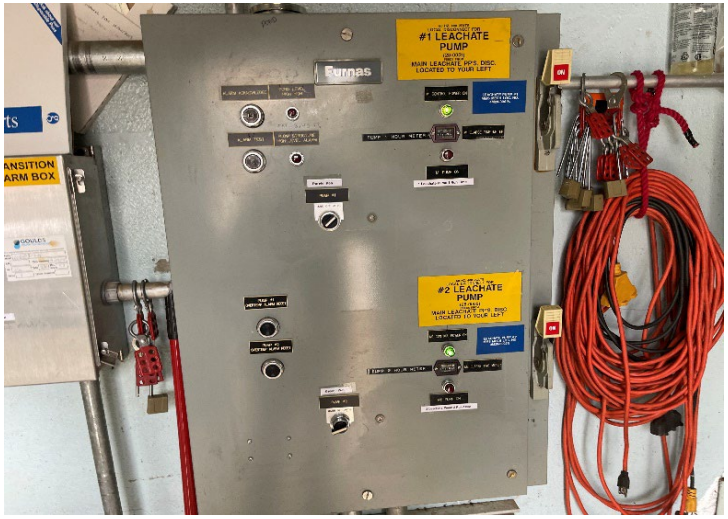
Leachate Pond Leak Detection Flow Transmitter



Leachate Pond Underdrain Run Time Meter



Leachate Pond Pump Flow Meter



Leachate Pond Pump Control Panel

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MEMO TO: William Longfellow, State of Maine **(VIA EMAIL)**

CC: Matt Muzzy, SME

FROM: Nick Thompson, SME

DATE: October 3, 2023

SUBJECT: **LANDFILL INSPECTION**
Summer 2023
DOLBY I, II, AND III LANDFILLS

The Dolby I, II, and III Landfill inspection (summer quarter) was completed by Nick Thompson of Sevee & Maher Engineers, Inc. (SME) on August 3, 2023. Completed inspection forms and captioned photographs for the inspection are attached.

The inspection identified seven maintenance items that should be addressed before the end of 2023. Many of the items were included in the 2022 reports and appropriate contacts are being made for resolving the items in 2023.

1. Remove vegetation and small tree growth from the perimeter of the Dolby II holding pond. SME has contacted the landscaper for the Dolby Facility and added the vegetation removal to remaining work for summer 2023.
2. Repair low areas in Dolby II to prevent ponding on the cover area. Adam Qualey has been contacted and will preform the work week of October 2, 2023

The following maintenance items were identified and can be addressed in the future as they are not considered to be currently causing problems with landfill operations:

1. Repair of the leachate pond pump station hatch for Pump 1. The hatch hinges are broken and in need of repairs.
2. Repair animal burrow hole observed on the Phase 1 cover just above the second to upper surface swale as shown on Figure 1 and in the photos. For repair, the hole should be filled with cover soil material. If we continue to observe burrow holes in the final cover, a pest control services provider should be contacted.
3. Repair three gas vents on the top of the Dolby III Cover Upgrade area. The gas vents were not attached to their bases when viewed for this inspection. It appears the vents were not originally glued to their bases. Repair will include hand excavation (+/- 9" depth) around the base, inserting a 4-inch PVC coupling, and gluing the vent pipe onto its base. The geomembrane boots will need to be reconstructed around the gas vents. The plan will be to include this task as part of the Phase 4 construction project.

4. Remove vegetation and small tree growth from riprap downspouts within the Phase 1 closure area. SME has contacted the landscaper for the Dolby Facility and added the vegetation removal to work for summer 2024.
5. Remove vegetation from the top of the second from upper surface swale on the Dolby Phase 1 Cover Upgrade. SME will contact the landscaper for the Dolby Facility and have them add the vegetation removal to work for summer 2024.

Please contact Matt Muzzy or me if you have any questions or require additional information.

Thank you.

Attachments
Attachment 1 – Figure 1 – Site Plan
Attachment 2 – Summer Quarter Site Inspection Forms and Photos

ATTACHMENT 1

FIGURE 1 – SITE PLAN

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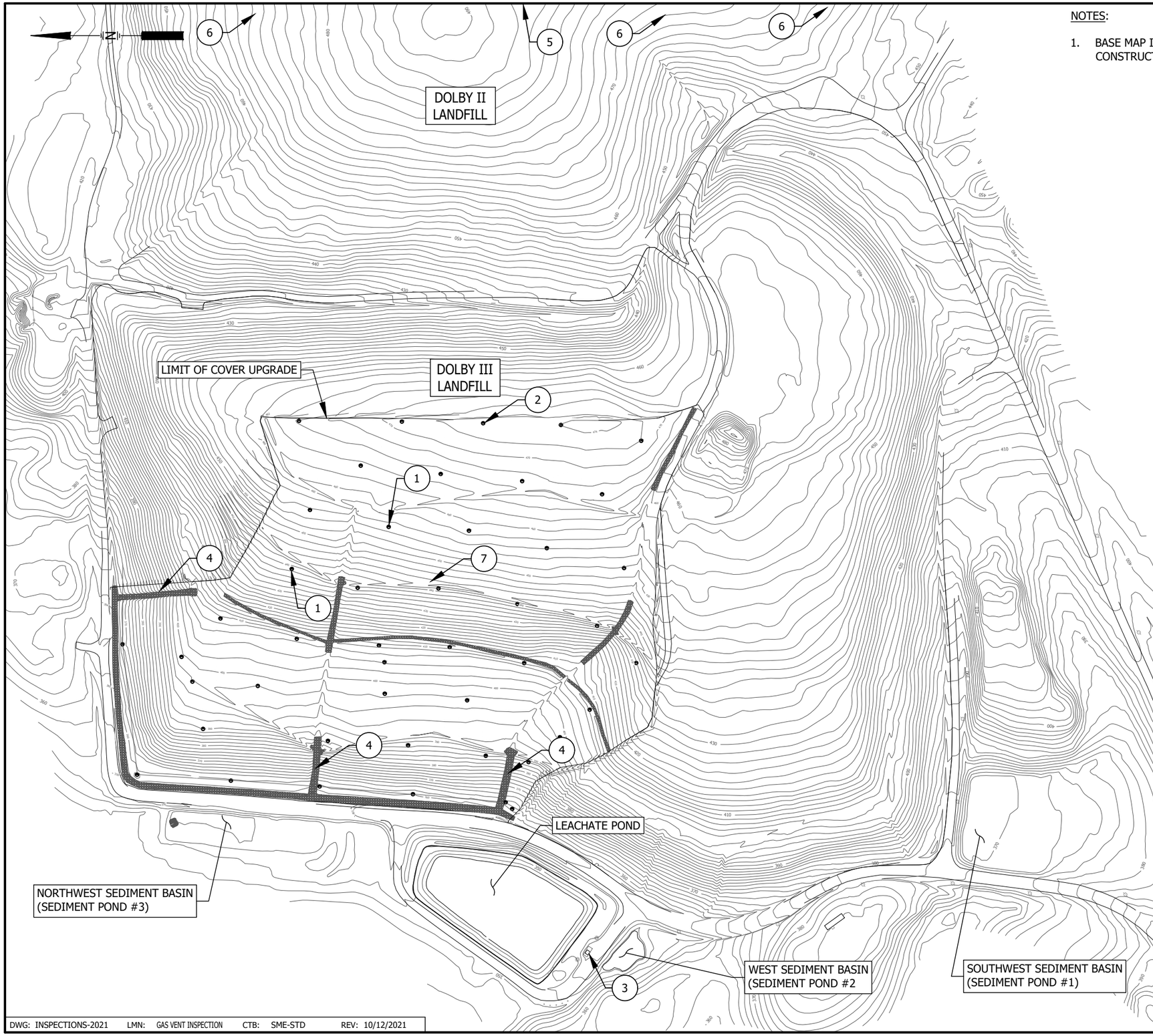

NOTES:

1. BASE MAP IS A COMPILATION OF PREVIOUS SURVEYS AND SHOULD NOT BE USED FOR CONSTRUCTION ESTIMATES..

MAINTENANCE ITEM NO.	DESCRIPTION
1	BROKEN GAS VENT
2	LEANING GAS VENT
3	BROKEN HINGE ON WET WELL COVER
4	VEGETATION AND SMALL TREE GROWTH
5	VEGETATION AND SMALL TREAT GROWTH AROUND HOLDING POND ON THE WEST SIDE OF DOLBY II
6	LOW LYING ARES IN THE DOLBY II COVER
7	ANIMAL BURROW HOLE

125 0 250 FEET

FIGURE 1
DOLBY INSPECTION SITE PLAN
DEPARTMENT OF ADMINISTRATION AND FINANCIAL SERVICES
BUREAU OF GENERAL SERVICES
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER ENGINEERS

DWG: INSPECTIONS-2021 LMN: GAS VENT INSPECTION CTB: SME-STD REV: 10/12/2021

ATTACHMENT 2

FORMS AND PHOTOS FOR
AUGUST 3, 2023 SITE INSPECTION

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DOLBY LANDFILL
LANDFILL INSPECTION CHECKLIST

Date: August 3, 2023 Time: 10:00 AM – 3:00 PM
Weather: Partly Sunny, 75 degrees Inspected By: NMT

ITEM	CONDITION	
DOLBY I LANDFILL	**Ok**	**Not Ok**
COVER SYSTEM		
Erosion, Channeling, Eruptions	X	
Poor Drainage, Ponding	X (1)	
Excessive Settling, Crack Development	X	
Grass Die-off-Failure to Thrive	X	
Mowing Required	X (2)	
Germination of Trees, Deep Root Vegetation	X (2)	
Animal Burrowing	X	
COLLECTION PONDS		
West End Pond Level (low, medium, or high)	X (Medium)	
East End Pond Level (low, medium, or high)	X (Medium)	
Vegetative Build-up in Ponds (Cat Tails and Trees)	X	
ACCESS GATES		
Gates Secured and Working Properly (Facility Main Gates)	X	
Road Accessible by Vehicle	X	
DOLBY II LANDFILL		
COVER SYSTEM		
Erosion, Channeling, Eruptions	X	
Poor Drainage, Ponding	X (3)	
Excessive Settling, Crack Development	X	
Grass Die-off, Failure to Thrive	X (4)	
Mowing Required (Mowing Should Occur Next Year due to Woody Vegetation)	X	
Germination of Trees, Deep Root Vegetation	X	
Animal Burrowing	X	
PERIMETER DRAIN CATCH BASINS		
Build-up Sediment in Catch Basins	X	
Flow Conditions (low, medium, or high)	X (low)	
Catch Basins Intact and Serviceable	X	
LEACHATE HOLDING POND		
Iron Staining (wooded area east of pond)	X	
Holding Pond Level	X (medium)	
DOLBY III LANDFILL		
COVER SYSTEM		
Erosion, Channeling, Eruptions	X (5)	
Excessive Settling, Crack Development	X	
Grass Die-off-Failure to Thrive	X (4)	
Mowing Required	X	
Germination of Trees, Deep Root Vegetation	X	
Poor Drainage, Ponding	X	

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ITEM	CONDITION	
DOLBY III LANDFILL (Cont'd)	**Ok**	**Not Ok**
Animal Burrowing	X (6)	
Access Road Condition	X	
Gas Vent Pipes	X (7)	
Active Area Berm	X	
PERIMETER DRAIN AND CATCH BASINS		
Build-up of Sediment in Catch Basins	X	
Valves Functioning Properly (free turning)	X	
LEACHATE COLLECTION POND	**Ok**	**Not OK**
LINER		
Condition of Liner (rips, holes, torn seams)	X	
LEACHATE PUMP STATION	(8)	
Build-up Sediment in Wetwells or Leachate Pond	X	
Pumps Functioning Properly (amps, noises)	X	
Valves Functioning Properly (free turning)	X	
Flow Conditions (low, medium, or high)	X (medium)	
Properly Vented	X	
Electrical Panel Inspection (corrosion, etc.)	X	
Flow Meter Inspection	X	
Transducer	X	
LEAK DETECTION SYSTEM	(8)	
Pump functioning properly (amps, noises)	X	
Flow Conditions (low, medium, high)	X (medium)	
Flow Meter Inspection	X	
Control Panel Inspection	X	
UNDERDRAIN PUMPING SYSTEM	(8)	
Pump functioning properly	X	
Flow Conditions	X (medium)	
SITE SEDIMENTATION STRUCTURES		
NORTHWEST SEDIMENT POND (SEDIMENT POND 3)		
Check Outlet Structure for Condition	X (9)	
Water Level (low, medium, or high)	X (Low)	
WEST SEDIMENT POND (SEDIMENT POND 2)		
Check Outlet Structure for Condition	X	
Water Level (low, medium, or high)	X (low)	
SOUTHWEST SEDIMENT POND (SEDIMENT POND 1)		
Check Outlet Structure for Condition	X	
Water Level (low, medium, or high)	X (Medium)	
SITE ROADWAYS AND DRAINAGE		
Check Catch Basins for Build-up of Sediment	X	
Check Culverts for Blocked Drainage and/or damage	X	
Check Monitoring Wells for Visual Damage	X (10)	
General condition of Perimeter Roadways	X	
LEACHATE PIPELINE		
Check Manhole Exterior Condition	X	
Check Transition Station Exterior Condition	X	
Check Aboveground Utility Line to the Transition Station	X	
General condition of Leachate Pipeline Access Road	X	

SME
SEVEE & MAHER
ENGINEERS

COMMENTS:

1. Growth of Cattails was noted on the south side of the Dolby I cover system; however, no standing water was observed.
2. Woody Vegetation observed on Dolby I cover system was most significant in downspouts and stormwater ponds. In 2019 MEDEP (Lou Pizzuti) indicated that MEDEP is okay with the tree growth so long as the water quality around this landfill does not degrade and the perimeter of the landfill is walked to assure that no leachate breakouts are occurring. Perimeter of Dolby I will be walked during this spring inspection.
3. Areas on ponding on Dolby II. These areas have been identified and repaired recommended.
4. Small areas of sparse grass vegetation (failure to thrive) on Dolby II and III landfills. The areas of sparse vegetation may be due to concentrated gas in the areas or topsoil with insufficient nutrients. Regardless of cause the areas are small and do not pose a threat to the overall integrity of the cover systems.
5. The north end of the Phase 2 cover will need to be reseeded and surface swale repaired.
6. Animal burrow hole located at the second from top surface swale of Phase 1 Cover Upgrade. Shown on Figure 1.
7. Two gas vent pipes on Dolby III need repair.
8. The leachate pond, leak detection system, and underdrain system are currently being monitored on a daily basis to determine the source of high flows to the leak detection system. The monitoring plan was approved by the MEDEP.
9. The outlet pipe for sedimentation pond 3 floated on the inlet side during a heavy rain event in 2022. This caused the pipe to come apart at a joint.
10. Visual observation of monitoring wells is performed during each environmental monitoring event.

RECOMMENDED ACTIONS:

1. Repair two gas vents located on the top of Dolby III during upcoming closure operations in 2024.
2. Remove vegetation and small tree growth from downspouts in the Phase 1 cover.
3. Remove vegetation from perimeter of Dolby II holding pond.
4. Remove vegetation from the top of the second from upper surface swale on the Dolby Phase 1 Cover Upgrade.
5. Repair low areas in the Dolby II to prevent ponding on the cover area. Adam Qualey has been contacted and will begin work week of October 2, 2023.

Dolby Landfill Inspection Photographs
East Millinocket, Maine
August 3, 2023



Leachate Pond



Leachate Pump Station Wet Well



Leachate Pond Emergency Outlet



Pump Station Control Panel

Dolby Landfill Inspection Photographs
East Millinocket, Maine
August 3, 2023



Sediment Pond I



Leachate Pond Underdrain Pump Station



Sediment Pond III Outlet Protection and Culvert



Sediment Pond III Outlet Culvert

Dolby Landfill Inspection Photographs
East Millinocket, Maine
August 3, 2023



Sediment Pond III Inlet Culvert



Dolby III Cover Upgrade Ditch Line NW Corner



Dolby III Cover Upgrade Ditch Line North



Phase I Downspout at Phase 1/2 Connection

Dolby Landfill Inspection Photographs
East Millinocket, Maine
August 3, 2023



Sediment Pond I Outlet Protection



Dolby II Leachate Holding Pond



East Side of Dolby II



Back Gate at SE Corner of Dolby II

Dolby Landfill Inspection Photographs
East Millinocket, Maine
August 3, 2023



Soil Piles to be used for Dolby II low spots



Access Road to Dolby I



Dolby I Holding Pond



Leachate Transport Pipeline Transition Station



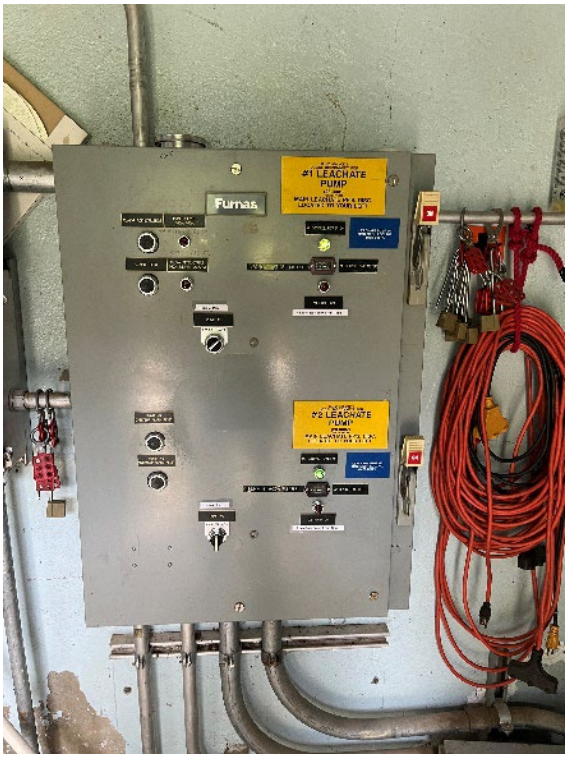
Leachate Pond Leak Detection Flow Transmitter



Leachate Pond Underdrain Run Time Meter



Leachate Pond Pump Flow Meter



Leachate Pond Pump Control Panel

SME
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ENGINEERS

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info@smemaine.com
smemaine.com

MEMO TO: William Longfellow, State of Maine **(VIA EMAIL)**

CC: Matt Muzzy, SME

FROM: Nick Thompson, SME

DATE: October 16, 2023

SUBJECT: **LANDFILL INSPECTION**
Fall 2023
DOLBY I, II, AND III LANDFILLS

The Dolby I, II, and III Landfill inspection (fall quarter) was completed by Nick Thompson and Trevor Michaud of Sevee & Maher Engineers, Inc. (SME) on October 5, 2023. Completed inspection forms and captioned photographs for the inspection are attached.

The inspection identified seven maintenance items that should be addressed before the end of 2023. Many of the items were included in the 2022 reports and appropriate contacts are being made for resolving the items in 2023.

1. Remove vegetation and small tree growth from the perimeter of the Dolby II holding pond. SME has contacted the landscaper for the Dolby Facility and added the vegetation removal to remaining work for summer 2023.
2. Repair low areas in Dolby II to prevent ponding on the cover area. Adam Qualey has been contacted and will perform the work week of October 2, 2023

The following maintenance items were identified and can be addressed in the future as they are not considered to be currently causing problems with landfill operations:

1. Repair of the leachate pond pump station hatch for Pump 1. The hatch hinges are broken and in need of repairs.
2. Repair animal burrow hole observed on the Phase 1 cover just above the second to upper surface swale as shown on Figure 1 and in the photos. For repair, the hole should be filled with cover soil material. If we continue to observe burrow holes in the final cover, a pest control services provider should be contacted.
3. Repair three gas vents on the top of the Dolby III Cover Upgrade area. The gas vents were not attached to their bases when viewed for this inspection. Repair will include hand excavation (+/- 9" depth) around the base, inserting a 4-inch PVC coupling, and gluing the vent pipe onto its base. The geomembrane boots will need to be reconstructed around the gas vents. The plan will be to include this task as part of the Phase 4 construction project.
4. Remove vegetation and small tree growth from riprap downspouts within the Phase 1 closure area. SME has contacted the landscaper for the Dolby Facility and added the vegetation removal to work for summer 2024.

5. Remove vegetation from the top of the second from upper surface swale on the Dolby Phase 1 Cover Upgrade. SME will contact the landscaper for the Dolby Facility and have them add the vegetation removal to work for summer 2024.

Please contact Matt Muzzy or me if you have any questions or require additional information.

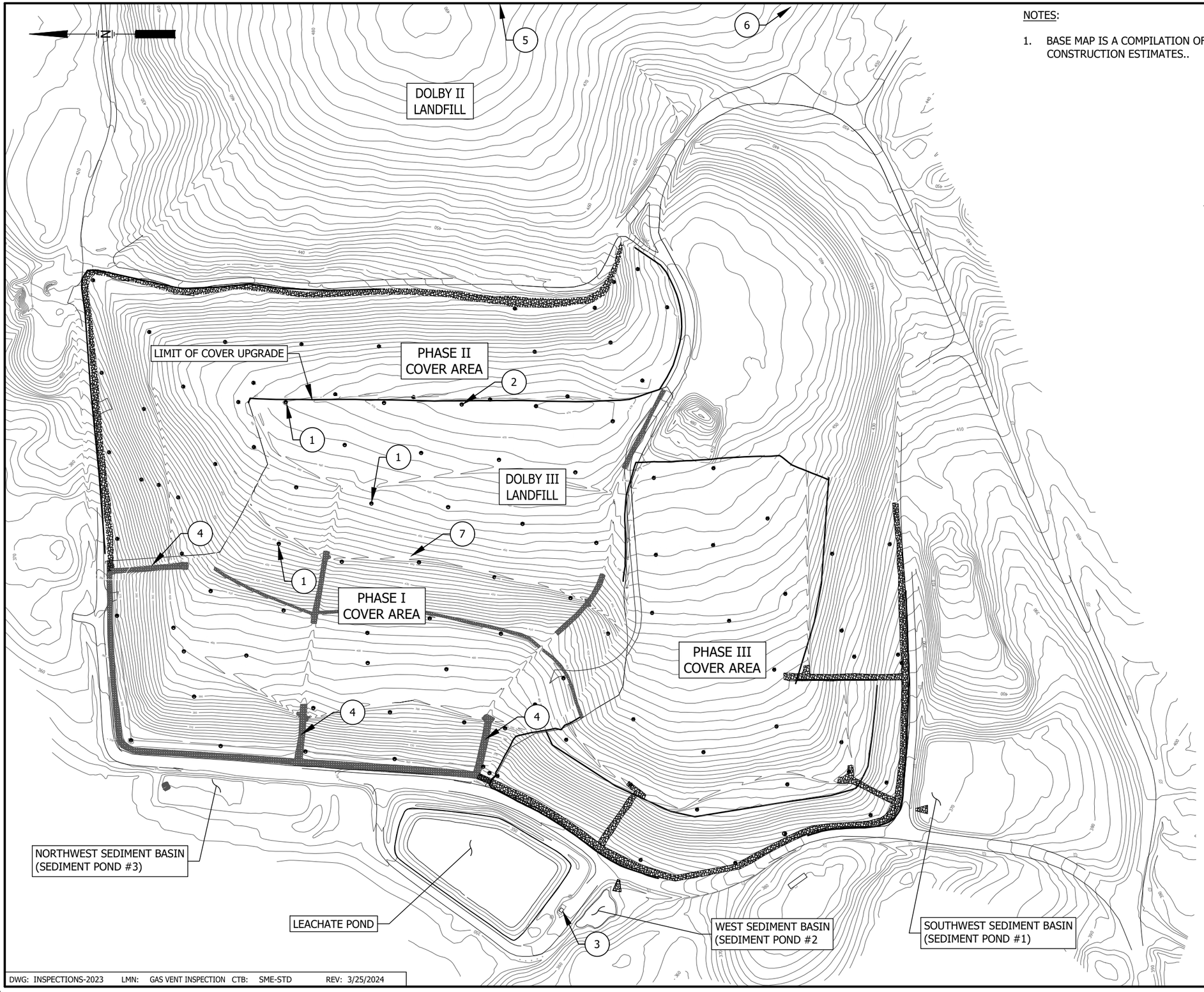
Thank you.

Attachments
Attachment 1 – Figure 1 – Site Plan
Attachment 2 – Fall Quarter Site Inspection Forms and Photos

ATTACHMENT 1

FIGURE 1 – SITE PLAN

SME
SEVEE & MAHER
ENGINEERS



NOTES:

1. BASE MAP IS A COMPILATION OF PREVIOUS SURVEYS AND SHOULD NOT BE USED FOR CONSTRUCTION ESTIMATES..

MAINTENANCE ITEM NO.	DESCRIPTION
1	BROKEN GAS VENT
2	LEANING GAS VENT
3	BROKEN HINGE ON WET WELL COVER
4	VEGETATION AND SMALL TREE GROWTH
5	VEGETATION AND SMALL TREE GROWTH AROUND HOLDING POND ON THE WEST SIDE OF DOLBY II
6	LOW LYING AREAS IN THE DOLBY II COVER
7	ANIMAL BURROW HOLE

125 0 250 FEET

FIGURE 1
DOLBY INSPECTION SITE PLAN
DEPARTMENT OF ADMINISTRATION AND FINANCIAL SERVICES
BUREAU OF GENERAL SERVICES
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER ENGINEERS

DWG: INSPECTIONS-2023 LMN: GAS VENT INSPECTION CTB: SME-STD REV: 3/25/2024

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ATTACHMENT 2

FORMS AND PHOTOS FOR
OCTOBER 5, 2023 SITE INSPECTION

SME
SEVEE & MAHER
ENGINEERS

DOLBY LANDFILL
LANDFILL INSPECTION CHECKLIST

Date: October 5, 2023 Time: 9:00 AM – 2:00 PM
Weather: Cloudy, 56 degrees Inspected By: NMT/TJM

ITEM	CONDITION	
DOLBY I LANDFILL	**Ok**	**Not Ok**
COVER SYSTEM		
Erosion, Channeling, Eruptions	X	
Poor Drainage, Ponding	X (1)	
Excessive Settling, Crack Development	X	
Grass Die-off-Failure to Thrive	X	
Mowing Required	X (2)	
Germination of Trees, Deep Root Vegetation	X (2)	
Animal Burrowing	X	
COLLECTION PONDS		
West End Pond Level (low, medium, or high)	X (Medium)	
East End Pond Level (low, medium, or high)	X (Medium)	
Vegetative Build-up in Ponds (Cat Tails and Trees)	X	
ACCESS GATES		
Gates Secured and Working Properly (Facility Main Gates)	X	
Road Accessible by Vehicle	X	
DOLBY II LANDFILL		
COVER SYSTEM		
Erosion, Channeling, Eruptions	X	
Poor Drainage, Ponding	X (3)	
Excessive Settling, Crack Development	X	
Grass Die-off, Failure to Thrive	X (4)	
Mowing Required (Mowing Should Occur Next Year due to Woody Vegetation)	X	
Germination of Trees, Deep Root Vegetation	X	
Animal Burrowing	X	
PERIMETER DRAIN CATCH BASINS		
Build-up Sediment in Catch Basins	X	
Flow Conditions (low, medium, or high)	X (low)	
Catch Basins Intact and Serviceable	X	
LEACHATE HOLDING POND		
Iron Staining (wooded area east of pond)	X	
Holding Pond Level	X (medium)	
DOLBY III LANDFILL		
COVER SYSTEM		
Erosion, Channeling, Eruptions	X (5)	
Excessive Settling, Crack Development	X	
Grass Die-off-Failure to Thrive	X	
Mowing Required	X (9)	
Germination of Trees, Deep Root Vegetation	X	
Poor Drainage, Ponding	X	

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ENGINEERS

ITEM	CONDITION	
DOLBY III LANDFILL (Cont'd)	**Ok**	**Not Ok**
Animal Burrowing	X (6)	
Access Road Condition	X	
Gas Vent Pipes	X (7)	
Active Area Berm	X	
PERIMETER DRAIN AND CATCH BASINS		
Build-up of Sediment in Catch Basins	X	
Valves Functioning Properly (free turning)	X	
LEACHATE COLLECTION POND	**Ok**	**Not OK**
LINER		
Condition of Liner (rips, holes, torn seams)	X	
LEACHATE PUMP STATION	(8)	
Build-up Sediment in Wetwells or Leachate Pond	X	
Pumps Functioning Properly (amps, noises)	X	
Valves Functioning Properly (free turning)	X	
Flow Conditions (low, medium, or high)	X (medium)	
Properly Vented	X	
Electrical Panel Inspection (corrosion, etc.)	X	
Flow Meter Inspection	X	
Transducer	X	
LEAK DETECTION SYSTEM	(8)	
Pump functioning properly (amps, noises)	X	
Flow Conditions (low, medium, high)	X (medium)	
Flow Meter Inspection	X	
Control Panel Inspection	X	
UNDERDRAIN PUMPING SYSTEM	(8)	
Pump functioning properly	X	
Flow Conditions	X (medium)	
SITE SEDIMENTATION STRUCTURES		
NORTHWEST SEDIMENT POND (SEDIMENT POND 3)		
Check Outlet Structure for Condition	X	
Water Level (low, medium, or high)	X (Low)	
WEST SEDIMENT POND (SEDIMENT POND 2)		
Check Outlet Structure for Condition	X	
Water Level (low, medium, or high)	X (low)	
SOUTHWEST SEDIMENT POND (SEDIMENT POND 1)		
Check Outlet Structure for Condition	X	
Water Level (low, medium, or high)	X (Medium)	
SITE ROADWAYS AND DRAINAGE		
Check Catch Basins for Build-up of Sediment	X	
Check Culverts for Blocked Drainage and/or damage	X	
Check Monitoring Wells for Visual Damage	X (10)	
General condition of Perimeter Roadways	X	
LEACHATE PIPELINE		
Check Manhole Exterior Condition	X	
Check Transition Station Exterior Condition	X	
Check Aboveground Utility Line to the Transition Station	X	
General condition of Leachate Pipeline Access Road	X	

SME
SEVEE & MAHER
ENGINEERS

COMMENTS:

1. Growth of Cattails was noted on the south side of the Dolby I cover system; however, no standing water was observed.
2. Woody vegetation observed on Dolby I cover system was most significant in downspouts and stormwater ponds. In 2019 MEDEP (Lou Pizzuti) indicated that MEDEP is okay with the tree growth so long as the water quality around this landfill does not degrade and the perimeter of the landfill is walked to assure that no leachate breakouts are occurring. Perimeter of Dolby I will be walked during the spring inspection.
3. Areas on ponding on Dolby II. These areas have been identified and repairs are currently being made. Repairs will be finalized in 2024.
4. Small areas of sparse grass vegetation (failure to thrive) on Dolby II landfill. The areas of sparse vegetation may be due to concentrated gas in the areas or topsoil with insufficient nutrients. Regardless of cause the areas are small and do not pose a threat to the overall integrity of the cover systems.
5. The north end of the Phase 2 cover will need to be reseeded and surface swale repaired.
6. Animal burrow hole located at the second from top surface swale of Phase 1 Cover Upgrade. Shown on Figure 1.
7. Three gas vent pipes on Dolby III need repair.
8. The leachate pond, leak detection system, and underdrain system are currently being monitored on a daily basis to determine the source of high flows to the leak detection system. The monitoring plan was approved by the MEDEP.
9. Vegetation observed on Dolby III cover system within the Phase 1 Cover Upgrade downspouts and perimeter ditch.
10. Visual observation of monitoring wells is performed during each environmental monitoring event.

RECOMMENDED ACTIONS:

1. Repair three gas vents located on the top of Dolby III during upcoming closure operations in 2024.
2. Remove vegetation and small tree growth from downspouts and perimeter ditch in the Phase 1 cover.
3. Remove vegetation from perimeter of Dolby II holding pond.
4. Remove vegetation from the top of the second from upper surface swale on the Dolby Phase 1 Cover Upgrade.
5. Finalize repairing low areas in the Dolby II to prevent ponding on the cover area.

DOLBY LANDFILL

CONCRETE MANHOLE INSPECTION FORM

Manhole / Catch Basin No: CB #13

Landfill Location: South side of Dolby III on Cell 3A / Cell 3B

Date: 10/5/2023 Time: 13:03

Weather: Cloudy, 60's Inspected by: NMT

Date of last inspection: 5/8/2020

Exterior Condition (Comments): Good

Cracks: None

Holes: Approximately 2-inches in diameter in barrel section.

Flaking: None

Seeps: None

Other: None

Interior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: None

Seeps: None

Other: NA

Corrective Action required (Y/N): None

Date and Details of Corrective Actions (if needed): None

Attachments: Photos

Manhole Inspection
Dolby Landfill, East Millinocket, Maine
October 5, 2023



CB-#13 Exterior



CB-#13 Interior

DOLBY LANDFILL

CONCRETE MANHOLE INSPECTION FORM

Manhole / Catch Basin No: CB #14

Landfill Location: South side of Dolby III on Cell 3B Cell 4

Date: 10/5/2023 Time: 13:01

Weather: Cloudy, 60's Inspected by: NMT

Date of last inspection: 5/8/2020

Exterior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: Minor around one-third of the rim.

Seeps: None

Other: Rim appears to be shifted approximately 2 inches off the barrel.

Interior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: None

Seeps: None

Other: NA

Corrective Action required (Y/N): None

Date and Details of Corrective Actions (if needed): None

Attachments: Photos

Manhole Inspection
Dolby Landfill, East Millinocket, Maine
October 5, 2023



CB-#14 Exterior



CB-#14 Interior

DOLBY LANDFILL

CONCRETE MANHOLE INSPECTION FORM

Manhole / Catch Basin No: CB #17

Landfill Location: South side of Dolby III on Cell 4 / Cell 5

Date: 10/5/2023 Time: 12:58

Weather: Cloudy, 60's Inspected by: NMT

Date of last inspection: 5/8/2020

Exterior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: Minimal but some

Seeps: None

Other: Rim slight shifted exposing a gap 2-inches in length.

Interior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: Minimal

Seeps: None

Other: Some sediment buildup but not excessive.

Corrective Action required (Y/N): None

Date and Details of Corrective Actions (if needed): None

Attachments: Photos

Manhole Inspection
Dolby Landfill, East Millinocket, Maine
October 5, 2023



CB-#17 Exterior



CB-#17 Interior

DOLBY LANDFILL

CONCRETE MANHOLE INSPECTION FORM

Manhole / Catch Basin No: CB #21

Landfill Location: East side of Dolby III on Cell 5

Date: 10/5/2023 Time: 12:02

Weather: Cloudy, 60's Inspected by: NMT

Date of last inspection: 5/8/2020

Exterior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: None

Seeps: None

Other: NA

Interior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: None

Seeps: None

Other: None

Corrective Action required (Y/N): None

Date and Details of Corrective Actions (if needed): None

Attachments: Photos

Manhole Inspection
Dolby Landfill, East Millinocket, Maine
October 5, 2023



CB-#21 Exterior



CB-#21 Interior

DOLBY LANDFILL

CONCRETE MANHOLE INSPECTION FORM

Manhole / Catch Basin No: CB #22

Landfill Location: East side of Dolby III on Cell 5

Date: 10/5/2023 Time: 12:07

Weather: Cloudy, 60's Inspected by: NMT

Date of last inspection: 5/8/2020

Exterior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: None

Seeps: None

Other: NA

Interior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: None

Seeps: None

Other: NA

Corrective Action required (Y/N): None

Date and Details of Corrective Actions (if needed): None

Attachments: Photos

Manhole Inspection
Dolby Landfill, East Millinocket, Maine
October 5, 2023



CB-#22 Exterior



CB-#22 Interior

DOLBY LANDFILL

CONCRETE MANHOLE INSPECTION FORM

Manhole / Catch Basin No: CB #23

Landfill Location: East side of Dolby III on Cell 5

Date: 10/5/2023 Time: 12:46

Weather: Cloudy, 60's Inspected by: NMT

Date of last inspection: 5/8/2020

Exterior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: Some on Rim.

Seeps: None

Other: Rim slight shifted off of barrel section exposing gap.

Interior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: None

Seeps: None

Other: None

Corrective Action required (Y/N): None

Date and Details of Corrective Actions (if needed): None

Attachments: Photos

Manhole Inspection
Dolby Landfill, East Millinocket, Maine
October 5, 2023



CB-#23 Exterior



CB-#23 Interior

DOLBY LANDFILL

CONCRETE MANHOLE INSPECTION FORM

Manhole / Catch Basin No: CB #24

Landfill Location: Southeast corner of Dolby III on Cell 5

Date: 10/5/2023 Time: 12:50

Weather: Cloudy, 60's Inspected by: NMT

Date of last inspection: 5/8/2020

Exterior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: Some flaking on cover.

Seeps: None

Other: None

Interior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: None

Seeps: None

Other: None

Corrective Action required (Y/N): None

Date and Details of Corrective Actions (if needed): None

Attachments: Photos

Manhole Inspection
Dolby Landfill, East Millinocket, Maine
October 5, 2023



CB-#24 Exterior



CB-#24 Interior

Manhole / Catch Basin No: CB-#25

Landfill Location: Dolby III, North Slope

Date: 10/5/2023 Time: 12:53

Weather: Cloudy, 60's Inspected by: NMT

Date of last inspection: 5/8/2020

Exterior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: Minor on one side of rim

Seeps: None

Other: NA

Interior Condition (Comments): Good

Cracks: None

Holes: None

Flaking: None

Seeps: None

Other: NA

Corrective Action required (Y/N): None

Date and Details of Corrective Actions (if needed): None

Attachments: Photos

Manhole Inspection
Dolby Landfill, East Millinocket, Maine
October 5, 2023



CB-#25 Exterior



CB-#25 Interior

Dolby Landfill Inspection Photographs
East Millinocket, Maine
October 5, 2023



Leachate Pond



Leachate Pump Station Wet Well



Leachate Pond Emergency Outlet

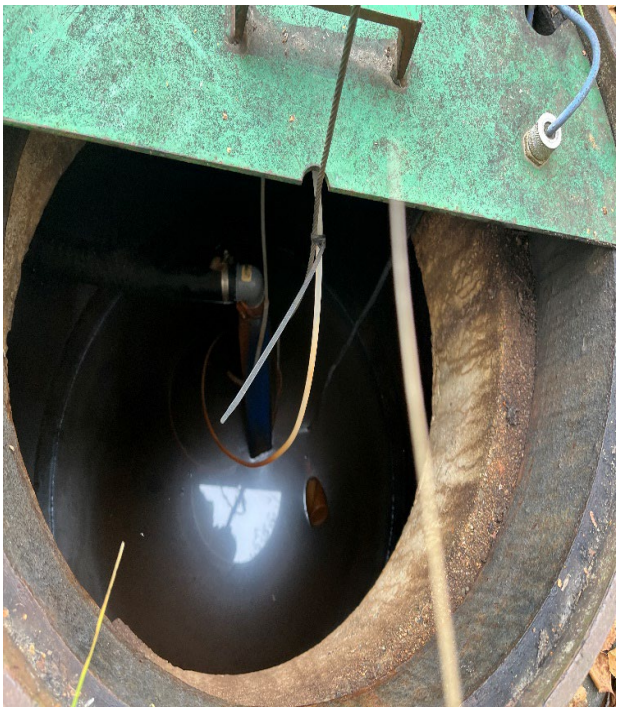


Leachate Pond Underdrain

Dolby Landfill Inspection Photographs
East Millinocket, Maine
October 5, 2023



Sediment Pond III



Leachate Pond Underdrain Pump Station



Phase 1 Cover Upgrade Downspout to Sediment Pond III



Sediment Pond III Inlet Culvert

Dolby Landfill Inspection Photographs
East Millinocket, Maine
October 5, 2023



Soil Piles to be used for Dolby II



Low spots on Dolby II being repaired



Dolby III Cover Upgrade Ditch Line North



Repaired Dolby III Phase 2 Surface Swale

Dolby Landfill Inspection Photographs
East Millinocket, Maine
October 5, 2023



Dolby III Temporary Open Cell



Dolby II Leachate Holding Pond



South Side of Dolby II



East Side of Dolby II

APPENDIX B

LEACHATE POND AND PIPELINE CLEANING

SME
SEVEE & MAHER
ENGINEERS

SME
SEVEE & MAHER
ENGINEERS

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Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692
info@smemaine.com
smemaine.com

MEMO TO: Matt Muzzy, Sevee & Maher Engineers (**VIA EMAIL**)

CC: Brian Pierce, Sevee & Maher Engineers

FROM: Brian Bardwell, Sevee & Maher Engineers

DATE: November 9, 2023

SUBJECT: **LEACHATE POND CLEANING**
DOLBY LANDFILL, EAST MILLINOCKET, MAINE

INTRODUCTION

The Dolby landfill leachate pond was cleaned and inspected during the period of September 25, 2023 to September 29, 2023. Sevee & Maher Engineers, Inc. (SME) planned and observed the cleaning. Republic Services (operated by ACV Enviro (ACV) of Skowhegan, Maine) was contracted to perform the leachate pond dewatering, and cleaning. This memorandum describes the procedures, observations, and recommendations associated with the cleaning and repair effort. Photographs taken during the leachate pond and repair process are attached.

LEACHATE POND CLEANING AND INSPECTION

On September 25, 2023, leachate was removed from the pond by using the leachate pump station and portable pumps. Leachate inflow into the pond was bypassed during the pond cleaning by closing the pond inlet valve, placing an inflatable pipe plug in the inlet pipe, and pumping leachate from catch basin No. 3 directly to the pump station's wet well. Bypass pumping was monitored continuously during cleaning and a high-level alarm system was in place to alert monitoring personnel of potential overflows. No pumping failure or problems occurred during the bypass pumping operations.

The leachate pond's 60-mil, textured HDPE geomembrane liner was cleaned beginning Monday September 25, 2023 and completed on Friday September 29, 2023. The surface of the pond liner was cleaned by vacuuming accumulated sediments from the bottom and sideslopes of the pond. Remaining sediments were cleaned by water jetting followed by additional vacuuming. After cleaning of the liner surface was complete, all water was vacuumed from the cleaned area to allow for visual inspection.

On Friday September 29, 2023, Matt Muzzy (SME), and Daniel Emerson (representing MEDEP) conducted a visual inspection of the geomembrane liner. The inspection showed the liner to be in good condition and cleaned to the satisfaction of SME and MEDEP. One small indentation was observed in the area of the emergency spillway at the south end of the pond, The indentation was located above the white line (normal leachate pond high level). It was determined that this was likely caused during a previous repair to the spillway. This indentation was repaired by Integrity Lining Systems (liner subcontractor for Dolby Phase 3 cover upgrade) on October 3, 2023, by placing an HDPE extrusion bead over the indentation. The repair was then tested with a vacuum box to ensure there were no leaks. Trevor Michaud (SME) observed all welding and testing.

The sediment and liquid mixture from the pond cleaning was transported to the temporary disposal cell on the Dolby III landfill. After the cleaning and inspection was completed, bypass pumping was ceased, the inlet valve to the pond was reopened, the inflatable pipe plug was removed, and leachate flows (from the landfills) were directed into the leachate pond.

CONCLUSIONS AND RECOMMENDATIONS

Consistent with previous years, ACV noted that the consistency of the leachate sediment continues to become finer and siltier, requiring additional effort to remove the sediment. Firehoses were mostly unable to move the siltier sediment as has been standard practice in previous year's cleaning efforts, requiring cleaning crews to squeegee and vacuum the majority of the sediment in the pond. SME observed that overall amounts of sediment in the North portion of the pond and around the inlet appeared to be more than for previous cleanings as a result of the pond not being cleaned since 2021.

If you have any questions or comments relating to the 2023 leachate pond cleaning, please feel free to contact me.

Attachments:

Photographs of 2023 Leachate Pond and Pipeline Cleaning

SEPTEMBER 2023 LEACHATE POND CLEANING PHOTOGRAPHS
DOLBY LANDFILL
EAST MILLINOCKET, MAINE



Pump installed at south end of leachate pond



Bypass pump installed at MH-3



Cleaning at north end of leachate pond



Leachate pond cleaning

SEPTEMBER 2023 LEACHATE POND CLEANING PHOTOGRAPHS
DOLBY LANDFILL
EAST MILLINOCKET, MAINE



Cleaning at north end of leachate pond



Cleaning at leachate pond inlet



Dumping at temporary cell



Cleaning leachate pond

SEPTEMBER 2023 LEACHATE POND CLEANING PHOTOGRAPHS
DOLBY LANDFILL
EAST MILLINOCKET, MAINE



Cleaning at leachate pond outlet



Leachate pond at completion of cleaning



Inlet opened and leachate flowing from manhole 3



Indentation repair near emergency spillway

SME
SEVEE & MAHER
ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692
info@smemaine.com
smemaine.com

MEMO TO: Matt Muzzy, Sevee & Maher Engineers (**VIA EMAIL**)

CC: Brian Pierce, Sevee & Maher Engineers

FROM: Brian Bardwell, Sevee & Maher Engineers

DATE: November 9, 2023

SUBJECT: **OCTOBER PIPELINE CLEANING**
DOLBY LANDFILL, EAST MILLINOCKET, MAINE

INTRODUCTION

The pipeline that connects the Dolby Landfill leachate pond to the East Millinocket Wastewater Treatment Plant (EMWWTP) in East Millinocket, Maine was cleaned during the period of October 9, 2023 to October 13, 2023. Sevee & Maher Engineers, Inc. (SME) planned and observed the cleaning. Republic Services (operated by ACV Enviro (ACV) of Skowhegan, Maine) was contracted to perform the pipeline dewatering, disassembly, cleaning, and reassembly. This memorandum describes the procedures, observations, and recommendations associated with the cleaning effort. Figure 1 shows the leachate pond, pipeline, and manhole locations from the Dolby Landfill to the former GNP Mill property. Photographs taken during the pipeline cleaning process are attached.

LEACHATE PIPELINE CLEANING

Leachate pipeline cleaning was performed from October 9, 2023, to October 13, 2023. The leachate pond level had been previously drained for the September 25-29 leachate pond cleaning and remained at a level low enough to allow the pipeline to be temporarily taken out of service. Prior to the pipeline cleaning, power to the pump station pumps was shut off and the electrical power panels were locked out by John Hinkley and Alan Reed of ACV Enviro using standard lock-out/tag-out safety protocols. ACV then dewatered the leachate pipeline at Manholes (MH-) 2, 8, 14, 17, 23, 24, 26, and 27. During pipeline dewatering, leachate was pumped from the manholes and trucked to the leachate dumping pad located at the former GNP mill property in East Millinocket.

Following the pipeline dewatering, the pipe connections were disassembled in every manhole between MH-1 and MH-27 except (MH-) 7, 12, 22, 23, 25, and 26 to provide access for the cleaning equipment. The equipment used by ACV was capable of cleaning the entire section of pipeline from MH-6 to MH-8, MH-11 to MH-13, MH-21 to MH-24, and MH-24 to MH-26. The piping disassembly generally consisted of removing two Victaulic Style 995 couplings and a section of HDPE pipe spool to allow access for the cleaning equipment.

The pipeline cleaning process utilized a high-pressure nozzle attached to a two-inch diameter hose that was inserted into the pipeline. Water was discharged backwards through the nozzle to advance the hose and remove scale accumulated on the pipe wall. The hose was then pulled back with a hydraulic motor while continuing to flush and remove scale during the backward pass. Water, sediment, and debris from

the cleaning process drained to the lower of the manholes associated with the section of pipe being cleaned. It was then vacuumed from the manhole into a tank truck and hauled to the leachate dumping pad located at the former GNP mill property in East Millinocket.

After the pipeline was cleaned, the pipe fittings were cleaned, lubricated, and reassembled. The existing gaskets on the Victaulic couplings that were found in good condition were reused and gaskets that were damaged or unusable were replaced with new gaskets. Two new 8-inch and two new 10-inch gaskets were used, along with several replacement nuts and bolts. One new 8" Victaulic coupling was replaced at manhole 2.

In addition to cleaning the leachate pipeline, the pump station wet well was cleaned by removing sediment and pressure washing the interior and the underdrain pipe was cleaned from the underdrain pump station manhole to the pump station wet well. The check valve in manhole 1 was disassembled and cleaned. Air release valves were replaced at manholes 3, 4, 13, 16, and 18.

Reassembly of the pipeline was completed on Thursday October 12, 2023. The pipeline was recharged and a leak test was conducted on Friday October 13, 2023. Leaks were observed and pipe connections were adjusted at manholes 2, 11, and 14. ACV Enviro noted that pipe ends at several of the couplings are becoming out of round as a result of disassembly and reassembly during annual cleanings making it difficult to achieve a seal. SME conducted a second leak check on Monday October 23, 2023 to verify that all connections remained intact, no leaks were observed at that time.

Clean water for the leachate pipeline cleaning was obtained from the East Millinocket Wastewater Treatment Plant.

CONCLUSIONS AND RECOMMENDATIONS

Table 1 provides a summary of the lengths of pipe cleaned, pipe condition prior to cleaning, and observations made during the pipeline cleaning process.

The leachate pipeline force main from MH-1 to MH-9 was noticeably dirtier than the gravity line portion of the pipeline, except for MH-10 to MH-11 which was the dirtiest length of the gravity line section. Many of the segments from MH-12 to MH-21 have low spots; very little sediment was removed from these sections, although the cleaning water was dirty to fairly clear in these sections. Pipe sections from MH-17 to MH-21 contained the same fine black silt that was observed during the pond. From MH-21 to MH-30, the pipeline maintains a continuous negative slope, with no low spots. These sections, despite having not been cleaned for several years, were mostly free of sediment buildup, although the water was observed to be dirty.

Several gaskets were reused at manholes 2 and 14 and likely caused leaks (which were resolved), it is recommended that these gaskets be replaced each year or extra caution be exercised when inspecting gaskets for reuse to avoid leaks. These manholes, with the addition of manhole 8, are located at low spots on the forcemain and gravity portion of the pipeline and a leak at these locations results in long delays while the pipeline is dewatered and the connections reassembled. ACV Enviro also noted that

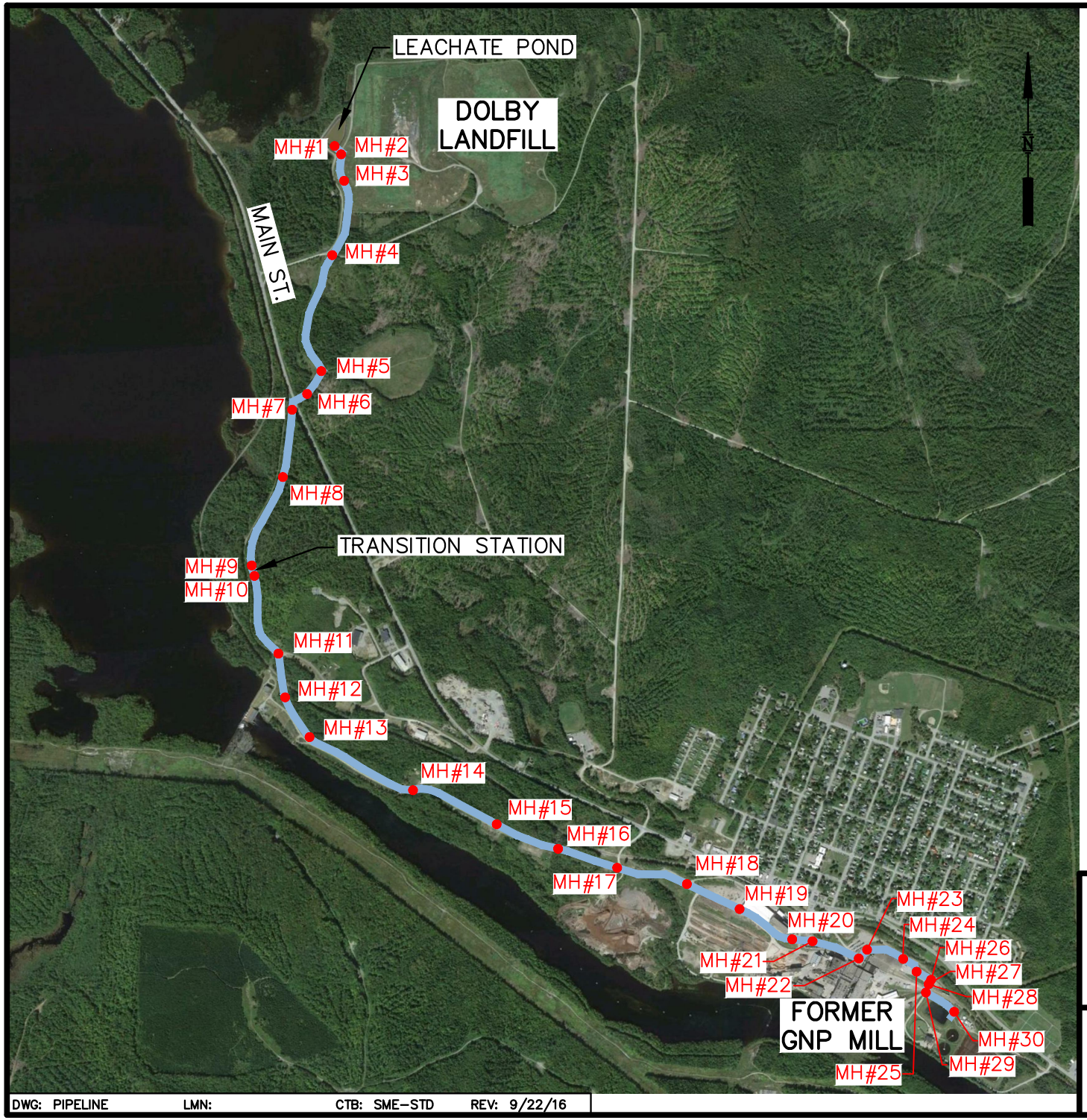
many nuts and bolts are showing signs of wear. The on-site inventory of replacement nuts, bolts, and gaskets should be increased for the 2024 pipeline cleaning in anticipation of replacing these parts.

SME recommends regrading in the area around manhole 8 to correct depressions that have formed on either side of the structure in the wheel path, and to create positive drainage away from the structure.

If you have any questions or comments relating to the 2023 pipeline cleaning, please feel free to contact me.

Attachments:

Figure 1 – Site Plan of Leachate Pond, Pipeline, and Manholes
Table 1 –October 2023 Leachate Pipeline Cleaning Summary
Photographs of 2023 Pipeline Cleaning



NOTES

BASE MAP FROM GOOGLE EARTH PHOTO DATED 9/18/13.

MANHOLE PIPE LOCATIONS FROM SQUAW BAY CORPORATION DRAWING DATED 4/25/95. LOCATIONS ARE APPROXIMATE.

APPROXIMATE SCALE

1000 0 2000 FEET

FIGURE 1
DOLBY LANDFILL
LEACHATE FORCE MAIN
MANHOLE LOCATIONS

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

DWG: PIPELINE LMN: CTB: SME-STD REV: 9/22/16

\\Nserver\cfs\Kpc\Dol\ACAD\Leachate Line\PIPELINE.dwg, 9/22/2016 2:45:35 PM, paf

TABLE 1

LEACHATE PIPELINE CLEANING SUMMARY
DOLBY LANDFILL
EAST MILLINOCKET, MAINE

	Pipe Station Component	Air Release Valve (Y/N)	Pipeline Station	Pipe Segment Diameter (in)	Distance Between Manholes (ft)	Distance Cleaned in 2023 (ft)	Cleaning Water Condition Observed During Cleaning[a]	Notes
Force Main Section	Pump Station Wet Well	N	0+81			-		
				8	14	0	N/A	
	MH No. 1	N	0+95					MH Opened
				8	146	146	Fairly Clean	Flushed 2 times
	MH No. 2	N	2+41					MH Opened
				8	590	590	Fairly Clean	Flushed 2 times
	MH No. 3	Y	8+31					MH Opened
				8	915	915	Fairly Dirty	Flushed 3 times
	MH No. 4	Y	17+46					MH Opened
				8	1750	1750	Fairly Dirty	Flushed 2 times
	MH No. 5	N	34+96					MH Opened
				8	398	398	Fairly Clean	Flushed 2 times
	MH No. 6	N	38+94					MH Opened
				8	206	206	Clean	Flushed 2 times
	MH No. 7	N	41+00					Not Opened
				8	1050	1050	N/A	
	MH No. 8	N	51+50					MH Opened
				8	1190	1190	Fairly Dirty	Flushed 2 times
	MH No. 9	N	63+40					MH Opened
							Fairly clean	Flushed 1 times
	Transition Station	NA	63+75					Not Cleaned
Gravity Main Section								
	MH No. 10	N	64+05					MH opened
				10	1430	1430	N/A	Flushed 1 time
	MH No. 11	N	78+35					MH opened
				10	695	695	Clean	Flushed 2 times
	MH No. 12	N	85+30					Not Opened
				10	620	620	Fairly Clean	Flushed 1 time
	MH No. 13	Y	91+50					MH Opened
				10	1650	1650	Fairly Clean	Flushed 1 time
	MH No. 14	N	108+00					MH Opened
				10	1200	1200	Fairly Clean	Flushed 1 time
	MH No. 15	N	120+00					MH Opened
				10	767	767	Fairly clean	Flushed 1 time
	MH No. 16	Y	127+67					Not Opened
				10	833	833	Fairly Clean	Flushed 2 times
	MH No. 17	N	136+00					MH Opened
				10	1060	1060	Dirty	Flushed 2 times
	MH No. 18	Y	146+60					MH Opened
				10	1216	1216	Dirty	Flushed 2 times
	MH No. 19	Y	158+76					MH Opened
				10	809	809	Dirty	Flushed 2 times
	MH No. 20	Y	166+85					Not Opened
				10	515	515	Fairly Dirty	Flushed 1 time
	MH No. 21	Y	169+40					MH Opened
				10	690	690	Fairly Dirty	Flushed 1 time
	MH No. 22	N	176+30					Not Opened
				10	174	174	Fairly Dirty	Flushed 1 time
	MH No. 23	N	178+04					Not Opened
				10	539	539	N/A	Flushed 1 time
	MH No. 24	N	183+43					MH Opened
				10	278	278	Clean	Flushed 1 time
	MH No. 25	N	186+21					Not Opened
				10	233	233	Clean	Flushed 1 time
	MH No. 26	N	188+54					Not Opened
				10	60	60	Fairly Dirty	Flushed 1 time
	MH No. 27[b]	N	189+14					MH Opened
				8	12	0	N/A	Flushed 1 time
	MH No. 28	N	189+26					Not Opened
				18	120	0	N/A	
	MH No. 29	N	190+46					Not Opened
				18	482	0	N/A	
	MH No. 30	N	195+28					Not Opened
				18	112	0	N/A	
	WWTP	N	196+40					
			total		19,754	**19,014**		

Notes:
a. Cleaning water condition observed during cleaning was rated Clean, Fairly Clean, Dirty, Fairly Dirty, or Very Dirty.
b. Flow Meter Building

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SEVEE & MAHER ENGINEERS

OCTOBER 2023 LEACHATE PIPELINE CLEANING PHOTOGRAPHS
DOLBY LANDFILL
EAST MILLINOCKET, MAINE



Vacuuming and cleaning at pump station wet well



Cleaning at manhole 2



Check valve disassembled at manhole 1



Cleaning at manhole 4

OCTOBER 2023 LEACHATE PIPELINE CLEANING PHOTOGRAPHS
DOLBY LANDFILL
EAST MILLINOCKET, MAINE



Clean wash hose after cleaning at manhole 4



Cleaning at manhole 8



Depressions formed on either side of manhole 8



Cleaning at manhole 10

OCTOBER 2023 LEACHATE PIPELINE CLEANING PHOTOGRAPHS
DOLBY LANDFILL
EAST MILLINOCKET, MAINE



Reassembly crew at manhole 2



Black silt on hose at manhole 18



Cleaning at manhole 21



Cleaning at manhole 24

OCTOBER 2023 LEACHATE PIPELINE CLEANING PHOTOGRAPHS
DOLBY LANDFILL
EAST MILLINOCKET, MAINE



Cleaning at flow meter building (manhole 27)



Replacing air release valve at manhole 16



Replacing air release valve at manhole 18



Leachate pumps on after leak inspection

SME
SEVEE & MAHER
ENGINEERS

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sme-engineers.com

MEMO TO: Matthew Muzzy, SME

FROM: Trevor Michaud, SME

DATE: October 24, 2023

SUBJECT: **DOLBY FORCEMAIN MANHOLE CLEANING INSPECTION**

During the week of October 9, 2023, the leachate force main pipeline at the Dolby Landfill located in East Millinocket was cleaned and inspected by SME personnel. The leachate force main pipeline transports leachate from the leachate pond at Dolby Landfill to the wastewater treatment plant in East Millinocket, Maine. During the cleaning and inspection, several components of the pipeline were either replaced or repaired. On October 23, 2023, SME and MSE personnel opened the covers to the manholes along the force main pipeline to inspect any potential leaking while the pumps were running at the leachate pond pumpstation. All 27 manholes were opened, and no leaking was observed in the force main. Attached are the photos taken during the inspection.



Photo 1 – MH-#1



Photo 2 – MH-#2



Photo 3 – MH-#3



Photo 4 – MH-#4



Photo 5 – MH-#5



Photo 6 – MH-#6



Photo 7 – MH-#7



Photo 8 – MH-#8



Photo 9 – MH-#9



Photo 10 – MH-#10



Photo 11 – MH-#11



Photo 12 – MH-#12



Photo 13 – MH-#13



Photo 14 – MH-#14



Photo 15 – MH-#15



Photo 16 – MH-#16



Photo 17 – MH-#17



Photo 18 – MH-#18



Photo 19 – MH-#19



Photo 20 – MH-#20



Photo 21 – MH-#21



Photo 22 – MH-#22



Photo 23 – MH-#23



Photo 24 – MH-#24



Photo 25 – MH-#25



Photo 26 – MH-#26



Photo 27 – MH-#27

APPENDIX C

LEACHATE POND PUMPS AND ASSOCIATED EQUIPMENT

SME
SEVEE & MAHER
ENGINEERS

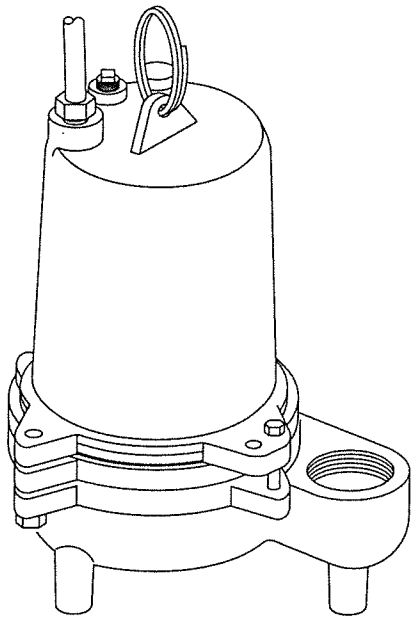
Series SE & SEV

2" Spherical Solids Handlin
Manual & Automati

1½", 2" & 3" Discharg

DISCHARGE		2" NPT, Female, Vertical
LIQUID TEMPERATURE		104°F (40°C) Continuous
VOLUTE		Cast Iron ASTM A-48, Class 30
MOTOR HOUSING		Cast Iron ASTM A-48, Class 30
SEAL PLATE		Cast Iron ASTM A-48, Class 30
IMPELLER:	*Design*	**SE -** 2 Vane, Open.
		SEV - 12 Vane, Vortex. with pump out vanes on back side. Dynamically Balanced, ISO G6.3
	Material	**SE -** Cast Iron ASTM A-48, Class 30
		SEV - 81-3-7-9 Bronze
SHAFT		416 Stainless Steel
SQUARE RINGS		Buna-N
HARDWARE		300 Series Stainless Steel
PAINT		Air Dry Enamel
SEAL:	*Design*	Single Mechanical, Oil Filled Reservoir, Secondary Exclusion Seal
	Material	Carbon/Ceramic/Buna-N Hardware -300 Series Stainless
CORD ENTRY		15 ft. (5m) Quick Disconnect Cord with plug On 115 Volt, Pressure Gromment for sealing and strain relief
SPEED		1750 RPM (Nominal)
UPPER BEARING		Single Row, Ball, Oil Lubricated
	Load	Radial
LOWER BEARING		Single Row, Ball, Oil Lubricated
	Load	Radial & Thrust
MOTOR:	*Design*	NEMA L Torque Curve, Oil Filled, Squirrel Cage Induction
	Insulation	Class B
SINGLE PHASE		Permanent Split Capacitor (PSC) Includes Overload Protection in Motor
LEVEL CONTROL		**"A" -** Wide Angle, PVC, Mechanical, 15 ft (5m) cord with Piggy-Back Plug, N/O
		"AU"- Wide Angle, Polypropylene, Mechanical, N/O, Integral to pump. ON and OFF Points are adjustable
		"VF" - Vertical Float, PVC, Snap Action, 15 ft (5m) cord, with Piggy-Back plug. OFF point ONLY is adjustable
OPTIONAL EQUIPMENT		Seal Material, Additional Cord

Model # SEV521AU



Series:
SE .5HP, 1750RPM, 60Hz
SEV .5HP, 1750RPM, 60Hz

Submersible Wastewater Pump Association SWPA MEMBER

C SP® US
CSA 108
UL 778
LR16567

Sample Specifications: Section 1 Page 3.

DESCRIPTION:

SUBMERSIBLE NON-CLOG SEWAGE PUMP DESIGNED FOR TYPICAL RAW SEWAGE APPLICATIONS

Series SE & SEV

2" Spherical Solids Handling
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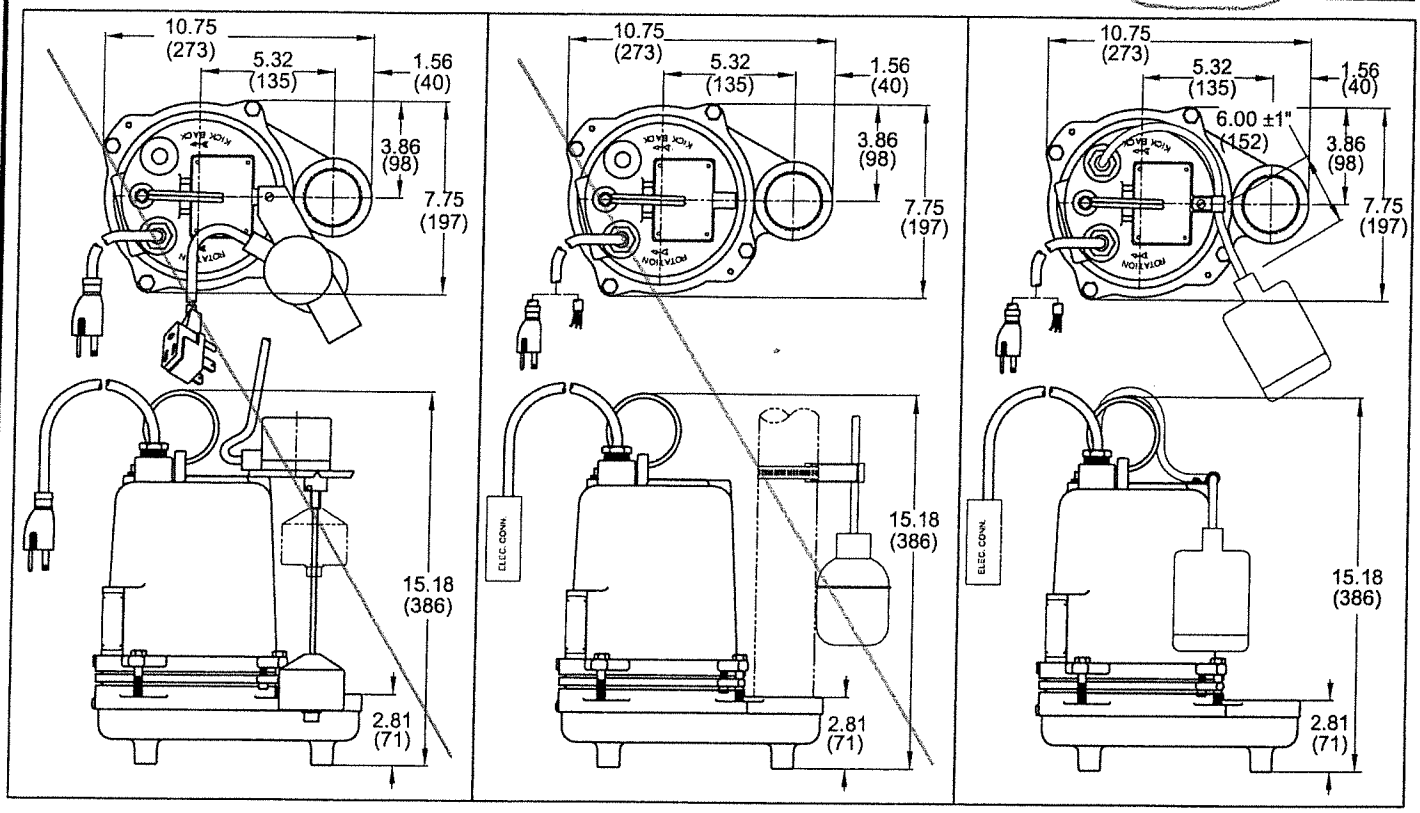
1½", 2" & 3" Discharge

SE511VF
SEV511VF

SE511, SE521, SEV511, SEV521 (Less Float)
SE511A, SEV511A

SE511AU, SE521AU,
SEV511AU, SEV521AU

inches (mm)



MODEL NO	PART NO	HP	VOLT/PH	Hz	RPM (Nom)	NEMA START CODE	FULL LOAD AMPS	LOCKED ROTOR AMPS	CORD SIZE	CORD TYPE	CORD O.D inch (mm)
SE511	096752	0.5	115/1	60	1750	A	12.0	26.0	14/3	SJTOW	0.375 (9.5)
SE511A	096753	0.5	115/1	60	1750	A	12.0	26.0	14/3	SJTOW	0.375 (9.5)
SE511AU	096754	0.5	115/1	60	1750	A	12.0	26.0	14/3	SJTOW	0.375 (9.5)
SE511VF	100837	0.5	115/1	60	1750	A	12.0	26.0	14/3	SJTOW	0.375 (9.5)
SE521	096755	0.5	230/1	60	1750	A	6.2	13.0	14/3	SJTOW	0.375 (9.5)
SE521AU	096756	0.5	230/1	60	1750	A	6.2	13.0	14/3	SJTOW	0.375 (9.5)
SEV511	096757	0.5	115/1	60	1750	A	12.0	26.0	14/3	SJTOW	0.375 (9.5)
SEV511A	096758	0.5	115/1	60	1750	A	12.0	26.0	14/3	SJTOW	0.375 (9.5)
SEV511AU	096759	0.5	115/1	60	1750	A	12.0	26.0	14/3	SJTOW	0.375 (9.5)
SEV511VF	100838	0.5	115/1	60	1750	A	12.0	26.0	14/3	SJTOW	0.375 (9.5)
SEV521	096760	0.5	230/1	60	1750	A	6.2	13.0	14/3	SJTOW	0.375 (9.5)
SEV521AU	096761	0.5	230/1	60	1750	A	6.2	13.0	14/3	SJTOW	0.375 (9.5)

Mechanical Switch on SE-A, cord 16/2, SJOW, Piggy-Back Plug
Mechanical Switch on SE-AU, cord 14/2, SJOW, 0.370 (9.4mm) O.D.
Vertical Switch on SE-VF, cord 16/2, SJOW, 0.320 (8.1mm) O.D. Piggy-Back Plug

IMPORTANT !

1.) PUMP MAY BE OPERATED "DRY" FOR EXTENDED PERIODS WITHOUT DAMAGE TO MOTOR AND/OR SEALS.
2.) THIS PUMP IS APPROPRIATE FOR THOSE APPLICATIONS SPECIFIED AS CLASS I DIVISION II HAZARDOUS LOCATIONS.
3.) THIS PUMP IS NOT APPROPRIATE FOR THOSE APPLICATIONS SPECIFIED AS CLASS I DIVISION I HAZARDOUS LOCATIONS.
4.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.

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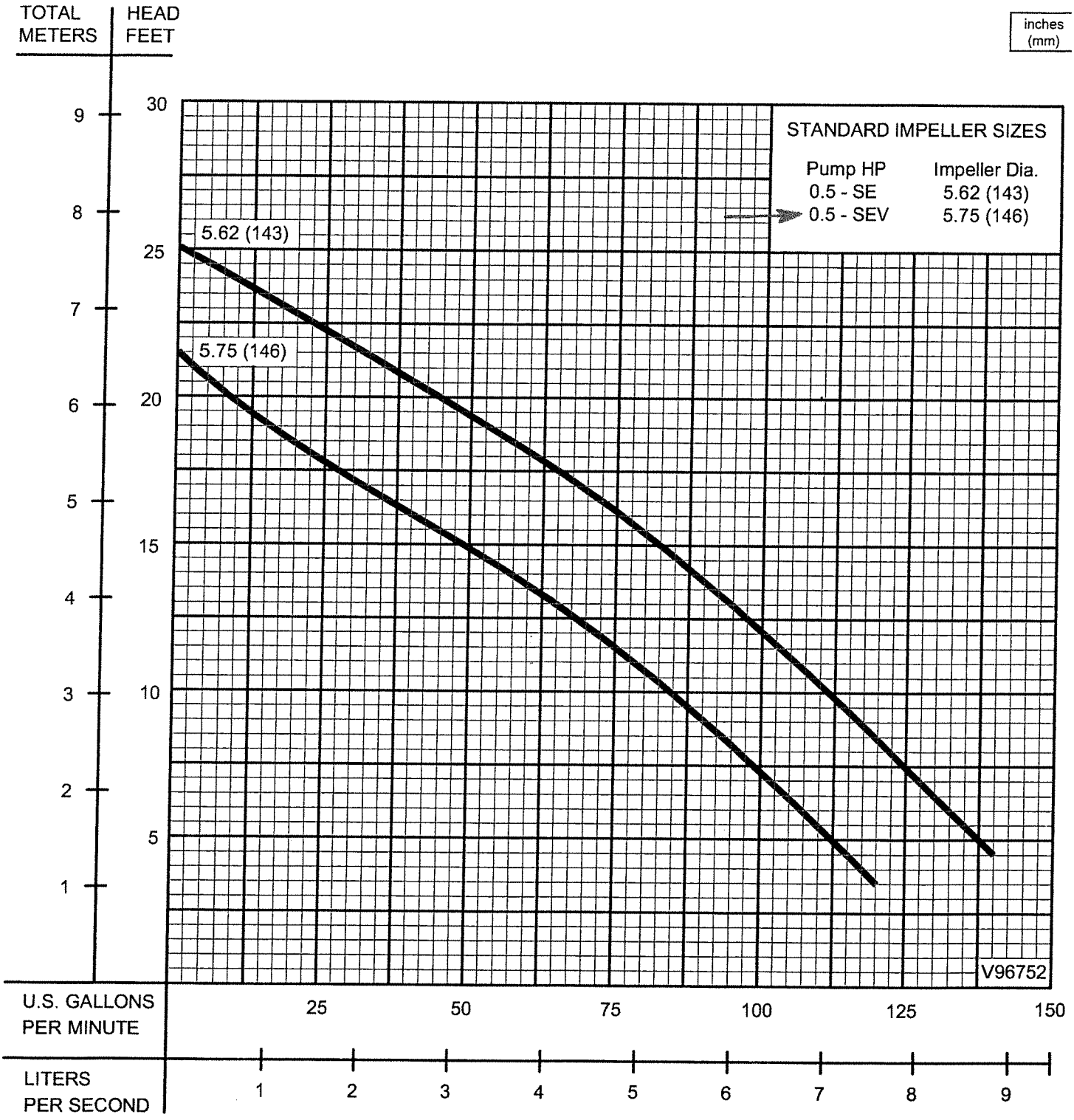
1½", 2" & 3" Discharge



Testing is performed with water, specific gravity 1.0 @ 68° F @ (20°C), other fluids may vary performance

Trevor Michaud

From: Nicholas Thompson
Sent: Tuesday, April 2, 2024 2:10 PM
To: Trevor Michaud
Subject: FW: underdrain pump at Dolby

Regards,

Nicholas M. Thompson
Design Engineer/Project Manager

SME
SEVEE & MAHER ENGINEERS
Sevee & Maher Engineers, Inc.
4 Blanchard Road, P.O. Box 85A
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From: Matt Muzzy <mmuzzy@smemaine.com>
Sent: Wednesday, March 1, 2023 9:16 AM
To: Vera A. Maheu (vera.a.maheu@maine.gov) <vera.a.maheu@maine.gov>
Cc: William.Longfellow@maine.gov; Wallace.Giakas@maine.gov; Nicholas Thompson <nmt@smemaine.com>; Brian Pierce <bdp@smemaine.com>
Subject: underdrain pump at Dolby

Good morning, Vera.

On 2/23/2023 the underdrain pump for the Dolby leachate pond was replaced. The previous pump had been in service approximately one year and failed about 2 weeks ago. A spare pump was available at the landfill and an electrician was subcontracted to provide the electrical connection. Mid-South Engineering (another SME subcontractor) performed the hydraulic connections. The electrician tested the failed pump and concluded the pump had indeed burned out and the float switch for the failed pump was working as intended. The new pump has sense been checked several times and determined to be functioning. The leak detection pump (for the leak detection system) has been re-started. The underdrain dewatering has returned to the normal lowered conditions. An evaluation of the pond performance relative to possible liner leakage will be included in the 2022 annual report for the landfill.

Please let me know if you have any questions.

Thank you,

Matt M.

Matthew W. Muzzy, P.E.
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Fax: 207-829-5692
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Stevens Electric & Pump Service, Inc.

P.O. Box 238
Monmouth, ME. 04259

Phone #	Fax #	Invoice #
207-933-9638	207-933-9639	33606

Date	Due Date
5/18/2023	6/17/2023
P.O. No.	Terms
Muzzy 03/06	Net 30
W.O. No.	Job Date
634244	5/11/2023

Bill To

Dolby Landfill
C/O Sevee and Maher Engineers, Inc.
Attn: Matt Muzzy
PO Box 85A
Cumberland Ctr, ME 04021

Project

Dolby Landfill

Qua...	Material	Unit	Description of Work	Amount
			Re: Dolby Landfill, East Millinocket, Me -- Underdrain pump system, Leachate Pond	
1	As Per Proposal-...	1,398.00	We have supplied a new Barnes submersible sewage pump,	1,398.00
	As Per Proposal-...		-- consisting of: (1) Barnes SEV521AU sub sewage pump -- an "automatic" pump, with integral float switch	
1	As Per Proposal-...	143.00	Freight Charge -- shipping in & out	143.00
	Proposal Notes		-- Notes -- -- Reference our Proposal # 5762 -- Shipped with Packing Slip # 634244, on 05/11/23 -- Shipped to: Sevee & Maher Eng'rs, Cumberland, Me -- Delivered by: Stevens E&PS / Philip	

1.5% service charge on balances past 30 days

Total $1,541.00

This proposal may be withdrawn by us if not accepted within 30 days.

Invoice

Trevor Michaud

From: Matt Muzzy
Sent: Monday, July 17, 2023 12:49 PM
To: Wallace.Giakas@maine.gov; William.Longfellow@maine.gov
Cc: Vera A. Maheu (vera.a.maheu@maine.gov); Nicholas Thompson; Brian Pierce; James Goodwin
Subject: Electrical failure - leachate pond pumps

All……

When Jim Goodwin perforemed his daily inspection of the leachate pond and pump station on July 17, 2023 he noted that the leachate level in the leachate pond was higher than normal. A follow up investigation by Jim indicated power to both leachate pumps was out.

Rick Wacken of Pine State Electric (Millinocket) was contacted and it was determined that fuses and a relay to the leachate pumps had failed. Rick replaced the fuses and relay but the pumps failed to start.

It was subsequently determined that the pump failure was initiated at the transition station. The transition station is part of the pipeline that transports leachate from the leachate pond to the East Millinocket wastewater treatment plant. The transition station is where the force main flow transitions to gravity flow. The are two floats in the transition station that communicate via telephone line to the leachate pond pump station. If flow entering the transition station cannot be handled by the gravity pipeline the liquid level in the transition station lifts the floats, the float circuit closes, and a signal is sent to the leachate pond pump station that results in automatic shutdown of the leachate pumps.

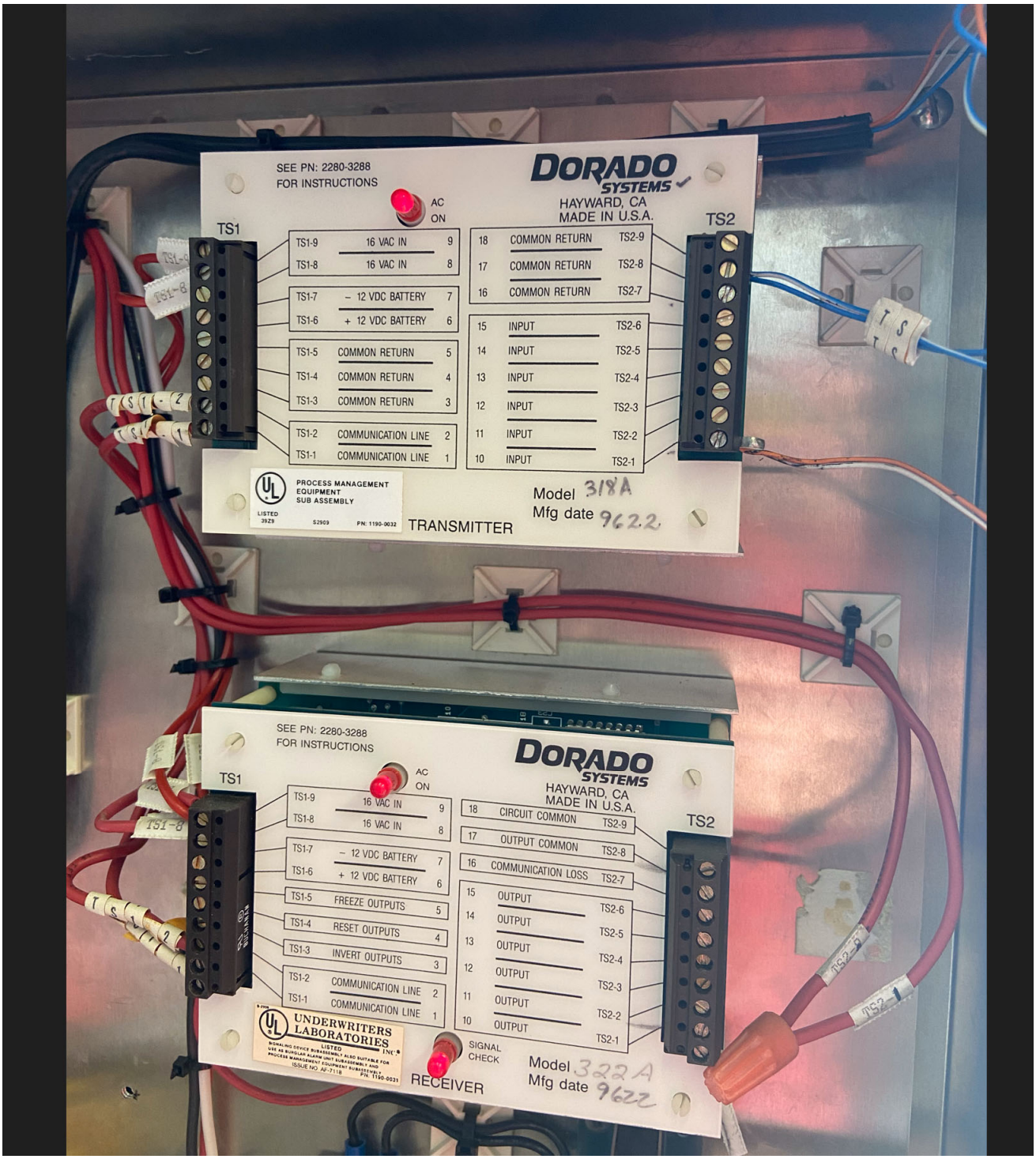
Apparently a voltage spike occurred which damaged the electrical modules associated with the floats in the transition station which in turn cased the damaged fuses etc. The photo at the end of this email shows the modules. Rick Wacken will order replacement modules and install them as soon as they can be obtained from a vendor.

In the interim, the floats at the transition station have been by-passed thereby allowing the leachate pond pumps to operate as intended. SME (i.e., Jim Goodwin) will check the transition station when the leachate pumps are in operation to verify overtopping of the transition station is not occurring. SME does not recall the liquid levels in the transition station causing a pump shut down since the Dolby facility became state owned (~2010).

As an aside, Stevens Electric was on site at the same time as the electrical failure was being investigated. Stevens performs the annual inspection of the leachate pumps. A separate email will be sent when Stevens' inspection report is available.

Please contact me with any questions.

Matt M.



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STEVENS 24 HR. ELECTRIC & PUMP SERVICE INC

Residential – Commercial – Pumps and Controls

(207) 933-9638
11 Berry Road
PO Box 238
Monmouth, ME 04259

PREVENTATIVE MAINTENANCE REPORT

INSPECTION TYPE: ANNUAL

Location: Dolby Landfill **Date:** 7/17/2023
Customer: Dolby Landfill **Contact Person:** Dick Angotti
Phone Number: (207) 217-0385 **Email:** bdp@smemaine.com

CONDITION OF WET WELL / VALVE PIT:

	N/A	GOOD	WORKING OK	NEEDS ATTN
ACCESS HATCH			●	
HATCH DRAIN	●			
HATCH NET/GRATE	●			
VENTILATION		●		
UPPER GUIDE RAIL BRACKETS		●		
GUIDE RAILS		●		
INTERMEDIATE GUIDE BRACKETS	●			
BASE ELBOW		●		
DISCHARGE PIPING		●		
CHECK VALVES		●		
SHUT-OFF VALVES		●		

	N/A	GOOD	WORKING OK	NEEDS ATTN
EXTENSION HANDLES	●			
DISCHARGE PIPE BRACING	●			
DRAIN BACK PIPE	●			
TRASH BASKET	●			
STRUCTURE		●		
LADDER/STEPS		●		
VALVE PIT DRAIN	●			
LIFTING CHAINS	●			
LIFTING CHAIN HANGERS	●			
LIGHTING	●			
EMERGENCY BYPASS	●			

IS THERE BUILD UP OF GREASE ON THE WALLS? No
ON THE WATER? No
DOES THE WET WELL NEED CLEANING? No
ARE THEY ON SCHEDULE? Yes

JUNCTION BOXES:

	N/A	GOOD	WORKING OK	NEEDS ATTN
CONDITION OF BOXES	●			
CONDITION OF CORD CONNECTORS	●			
CONDITION OF TERMINALS	●			

IS THERE MOISTURE PRESENT ? NA

CONTROL SYSTEM:

	N/A	GOOD	WORKING OK	NEEDS ATTN
FLOAT SWITCHES		●		
CONDITION OF FLOAT CORDS		●		
CONDITION OF FLOAT RACK / POLE		●		

ARE THE FLOATS AT THE PROPER LEVELS ? Yes

HAVE THE FLOATS BEEN CLEANED ? Yes

FLOAT OPERATION:

	N/A	GOOD	NOT GOOD
LOW LOW LEVEL ALARM	●		
LOW LEVEL ALARM	●		
START /STOP CYCLE		●	
ALTERNATION		●	

	N/A	GOOD	NOT GOOD
LAG START		●	
SECOND LAG START	●		
HIGH ALARM /LAG START	●		
HIGH LEVEL ALARM		●	

CONTROL PANEL:

	N/A	GOOD	NOT GOOD
CONDITION OF PEDISTAL	●		
CONDITION OF ENCLOSURE		●	
SERVICE LIGHT	●		
HOA SWITCHES		●	
PILOT LIGHTS		●	
HOUR METERS		●	
SILENCE CIRCUIT	●		
GFCI OUTLET	●		
FUSES		●	
RECONNECT RELAY	●		
LEAD SELECT SWITCH	●		
START/RUN CAPCITOR KITS	●		
MOTOR STARTERS		●	
TEST TRIP OVERLOADS		●	
VFD	●		
SOFT STARTERS	●		

	N/A	GOOD	NOT GOOD
UPS	●		
BATTERY BACKUP	●		
POWER FAIL ALARM	●		
PUMP SEAL FAIL ALARM		●	
PUMP OVERTEMP ALARM		●	
PUMP FAIL ALARM			
GENERATOR FAIL ALARM	●		
INTRUSION ALARM	●		
LOSS OF ECHO ALARM	●		
ALARM LIGHT ON PANEL	●		
AUDIBLE ALARM		●	
CONNECTIONS TIGHT ?		●	
MOISTURE IN PANEL ?		●	
CORROSION IN PANEL ?		●	
SEAL OFFS FILLED ?	●		
TELEMETRY WORKING ?	●		

PUMP # 1 & PUMP # 2

	# 1	# 2
CONDITION OF CABLE JACKET	Good	Good
CONDITION OF IMPELLER	Good	Note
CUTTER / WEAR RING COND.	Good	Note
CONDITION OF PUMP OIL	Clear	Clear
CORRECT IMPELLER ROTATION	CCWb	CCWb
DOES IMPELLER SPIN FREELY BY HAND?	Yes	Yes
PUMP MAKE PUMP MODEL	Flygt	Flygt

	# 1	# 2
CONDITION OF DISCHARGE CONNECTION	Good	Good
CONDITION OF PUMP CASE	Good	Good
CONDITION OF BEARINGS	Good	Good
CONDITION OF AIR RELEASE	N/A	N/A
ARE BELTS & PULLEYS TIGHT	N/A	N/A
HAVE PUMPS & MOTORS BEEN GREASED?	N/A	N/A
HAVE SEAL WATER FILTERS BEEN CLEANED	N/A	N/A

RESISTANCE OF MOTOR AT CONTROL:

	#1	#2		#1	#2		#1	#2
BLK/RED	0.4	0.4	RED/WHT	0.4	0.4	WHT/BLK	0.4	0.4
BLK/GND	Open	Open	RED/GND	Open	Open	WHT/GND	Open	Open

VOLTAGE:

	L1/L2		L2/L3		L3/L1	
	#1	#2	#1	#2	#1	#2
PUMP OFF:	497	497	496	496	496	496
PUMP ON:	492	492	492	492	491	492

AMPERAGE:

(BLK) L1	
#1	#2
27.7	29.6

(RED) L2	
#1	#2
28.6	29.2

(WHT) L3	
#1	#2
29.1	27.8

Flow test:

	TEST #1		TEST #2		INFLOW
	#1	#2	#1	#2	
START LEVEL:	120	120			
STOP LEVEL:	154.5	156			
TIME SPAN:	150	150	60	60	60
GAL/IN:	40	40	40	40	40
GAL/MIN:	552.00	576.00	0.00	0.00	0.00
PRESSURE:					
LAST GAL/MIN	622.5	640.0			

HOUR METER READINGS:

OLD	
#1	#2
9925.9	10239.0

NEW	
#1	#2
11301.6	11797.5

DIFF	
#1	#2
1,375.70	1,558.50

DIFF LAST VISIT	
#1	#2
1536.1	1417.6

FINAL CHECK:

ARE THE PUMPS SEATED PROPERLY?	Yes
ANY LEAKS IN THE SYSTEM?	No
PROBLEMS WHEN LIFTING PUMPS?	No

ARE THE HOA SWITCHES IN AUTO AND ALARM ON?	Yes
ARE THE CIRCUIT BREAKERS ON?	Yes
ARE ALL DOORS AND HATCHES LOCKED?	No locks

WORK PERFORMED DURING THIS VISIT:

RECOMMENDATIONS FOR IMPROVEMENTS:

COMMENTS:

The shackle pin on pump 2 vibrated loose and got sucked up into pump #2. This did a little damage to the impeller of the pump. See pictures.

Bill/Brian

INSPECTION DONE BY:_____








INSTRUCTION MANUAL
R PROPER INSTALLATION
3170 180 0880025
3170 180 1550
442
AB
22kW–30hp 1/50rpm SI
/Y//230V 6/12A

APPENDIX D

PHASE 3 COVER UPGRADE DOCUMENTATION

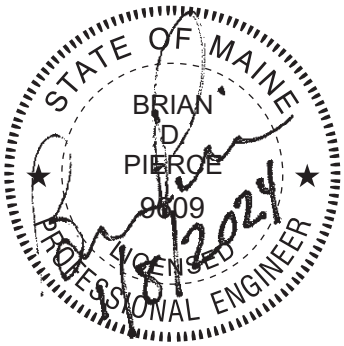
SME
SEVEE & MAHER
ENGINEERS

CONSTRUCTION DOCUMENTATION REPORT
PHASE 3 COVER UPGRADE
DOLBY LANDFILL
EAST MILLINOCKET, MAINE

Prepared for

MAINE BUREAU OF GENERAL SERVICES AND DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL SERVICES

Augusta Maine



January 2024

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ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

SME
SEVEE & MAHER
ENGINEERS

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CONSTRUCTION DOCUMENTATION REPORT
PHASE 3 COVER UPGRADE
DOLBY LANDFILL
EAST MILLINOCKET, MAINE

1.0 INTRODUCTION

This report was prepared by Sevee & Maher Engineers, Inc. (SME) and consists of construction documentation information compiled for the Dolby Landfill Phase 3 Cover Upgrade (i.e., the Project). The Dolby Solid Waste Landfill Facility (Dolby) is located in East Millinocket, Maine and the cover upgrade construction occurred during the summer of 2023. A Statement of Compliance for the cover upgrade construction from SME is included in Attachment 1. The Project consisted of constructing approximately 18.25 acres of final cover upgrade on the Dolby III Landfill. The final cover system included (from bottom to top): a minimum 6-inch-thick gas collection sand layer with embedded gas collection piping, a 40-mil high-density polyethylene (HDPE) geomembrane, a drainage geocomposite, a 14-inch-thick cover soil layer with drainage piping, and a 4-inch-thick layer of vegetative cover soil. Ancillary construction related to the Project included construction of stormwater management structures associated with the cover system.

The Project is the third stage of a multistage project to upgrade the final cover system over Dolby III. The stages of the Project consist of Phase 1 (2016), Phase 2 (2022), Phase 3 (2023) and future Phase 4. Phase 1 and Phases 2/3 were done under separate contracts. The cover system upgrade for Phase 3 incorporated existing vegetative cover soil, cover soil, and drainage sand materials previously placed at Dolby III. The Project was constructed in accordance with the Engineering Design Report (Contract Documents, Construction Drawings, Construction Specifications, and Quality Assurance/Quality Control Plan) (SME, December 2021) and the Maine Department of Environmental Protection (MEDEP) Final Closure Order (#S-000796-WO-AP-C) for the Landfill. The Project was administered by the Maine Bureau of General Services (BGS), which is a part of the Maine Department of Administrative and Financial services (DAFS). Gordon Contracting Inc. (Gordon) of Sangerville, Maine was the general contractor for the Phase 2/3 cover construction. Similar construction documentation reports for Phases 1 and 2 were provided to MEDEP in November 2016 and January 2023, respectively.

2.0 PROJECT DESCRIPTION

The Project consisted of constructing approximately 18.25 acres of final cover upgrade over the Dolby III Landfill. The cover system upgrade utilized existing gas collection sand, cover soil, and vegetative cover soil from portions of Dolby III whenever possible. The Phase 3 cover upgrade system included the following materials, from bottom to top:

- A minimum 6-inch-thick gas collection system consisting of gas collection sand and 4-inch-diameter HDPE corrugated gas collection pipe vented to the atmosphere;
- A 40-mil HDPE textured liner;
- A drainage geocomposite and 4-inch-diameter drainage pipes;
- A 14-inch-thick cover soil layer; and
- A 4-inch-thick topsoil layer (seeded and mulched).

Additional project activities at the Landfill during Phase 3 of the cover upgrade included the following:

- Construction of stormwater management features including riprap-lined perimeter ditch and downspouts, culvert, catch basins, and surface swales;
- Installation of miscellaneous permanent erosion control measures such as erosion control mat, riprap, seeding, and placement of mulch;
- Modification of the outlets for the stormwater sediment ponds, as necessary, to provide additional erosion/sediment control; and
- Removal of existing piezometers and modification of existing manholes within the Phase 3 limit of work.

The Project construction began the week of May 3, 2023 and was substantially completed on October 6, 2023. The parties involved with construction are listed in Table 1.

TABLE 1

SUMMARY OF PARTIES INVOLVED WITH CONSTRUCTION

Responsibility	Organization
Owner	Maine Department of Administrative and Financial Services – Bureau of General Services
Design Engineer	Sevee & Maher Engineers, Inc.
Construction Quality Assurance Agent	Sevee & Maher Engineers, Inc.
General Contractor	Gordon Contracting, Inc.
Leachate Transport Structure Cleaning	Republic Services (subcontractor to Gordon)
Sediment clean-up	TGP Enterprises(subcontractor to Gordon)
Geosynthetic Contractor	Integrity Lining Systems, LLC (subcontractor to Gordon)
Geosynthetic Quality Assurance Laboratory	TRI Environmental, Inc. (subcontractor to Sevee & Maher)
Soils Quality Assurance Laboratory	Sevee & Maher Engineers, Inc.
Regulatory Oversight	Maine Department of Environmental Protection

3.0 CONSTRUCTION OVERVIEW

The following is a general description of the construction activities that took place during the Project.

3.1 Erosion and Sedimentation Controls and Site Layout

Site mobilization (equipment delivery, project layout, etc.) occurred from April 24, 2023 to May 2, 2023. The Contractor (i.e., Gordon), began construction activities on May 3, 2023, with the installation of erosion and sedimentation control measures, stockpile preparation, and stripping existing topsoil.

3.2 Existing Vegetative Cover Soil, Cover Soil Stripping, and Stockpiling.

The intent of this Project was to utilize existing gas collection sand, cover soil, and vegetive cover soil to the greatest extent practical. The sequence of construction was to strip and stockpile the vegetative cover soil and then strip and stockpile the cover soil down to existing gas collection sand. After the cover soil was removed, the gas collection piping was embedded in the gas collection sand, the geomembrane and drainage geocomposite were installed, and then the cover soil and vegetative cover soil were replaced. Phase 3 was divided into three 6-acre work areas for construction: Work Area 1 is the western portion of Phase 3, Work Area 2 is the southwestern corner of Phase 3, and Area 3 is the south slope of Phase 3.

3.3 Gas Collection Layer

The gas collection system consisted of 4-inch perforated, corrugated HDPE gas collection pipes with attached PVC gas vents. Embedded gas piping and gas vent installation for Work Area 1 began on May 17, 2023, and generally progressed from north to south. Gas piping and gas vent installation for Work Area 2 began on June 22, 2023, and generally progressed southwest to east. Gas piping and gas vent installation for Work Area 3 began on July 31, 2023 and generally progressed south to north. Contractor borrow source characterization (hydraulic conductivity testing and grain size analysis) of the sand used for the Dolby Phases 2 and 3 Cover Upgrade Project was included as part of the Phase 2 construction documentation report.

Observation of the construction methods used during the gas sand placement and grading was performed by SME's field engineer, along with the in-place quality control testing. The in-place gas sand was sampled for remolded hydraulic conductivity testing (ASTM D 2434) in accordance with the construction specifications. Borrow source quality assurance and field quality control laboratory testing for the gas sand was performed by SME's laboratory in Cumberland, Maine. Gordon stripped existing topsoil and cover soil until the existing sand layer was exposed. Sand thickness was spot-checked at a rate of at least five measurements per acre. Laboratory results for the borrow source sand testing are included in the Quality Assurance Soil Testing section of this report (see Attachment 5).

3.4 Geomembrane Liner and Drainage Geocomposite

Integrity Lining Systems, LLC. (Integrity) performed installation of the geosynthetic components (i.e., geomembrane and drainage geocomposite) of the cover system for the Project. The geosynthetic components were installed following topsoil and cover soil removal and gas collection layer placement and preparation.

Geomembrane (i.e., 40-mil HDPE) deployment began on June 12, 2023, at the north end of Work Area 1, and generally progressed from north to south. A drainage geocomposite was installed over the geomembrane, after the non-destructive and destructive liner testing was completed and passing test results were confirmed. Cover system installation in Work Area 1 was completed on June 13, 2023. Integrity began geosynthetic installation in Work Area 2 on June 23, 2023. Geomembrane deployment began at the north end of Work Area 2 and progressed to the south and east. After a brief demobilization due to inclement weather and allowing time for Gordon to prepare the gas collection layer, Integrity began geosynthetic installation in Work Area 3 on August 16, 2023. Integrity completed installing the geosynthetics for Phase 3 on September 9, 2023. A Phase 3 panel layout for the geomembrane is provided on Figure 1.

Deployment, trial welds, welding, non-destructive air testing, and vacuum box testing of the geomembrane were observed by SME's field engineer (see Attachment 7). Destructive tests were taken on welded seams at a frequency of one per every 1,000 linear feet of seam. Destructive test samples were sent to an independent laboratory for peel and shear testing. Laboratory results demonstrated that the peel and shear testing met or exceeded the construction specifications (see Attachment 7).

3.5 Cover Soil and Topsoil Layer

Placement of cover soil began on July 12, 2023 and was completed on September 29, 2023. Cover soil and topsoil used for the project was obtained from the following two sources:

- Cover soil stripped and stockpiled from Work Areas 1, 2, and 3 (approximately 45,200 cubic yards); and
- Topsoil stripped and stockpiled from Work Areas 1, 2, and 3 (approximately 11,100 cubic yards).

Cover soil was installed to a thickness of at least 14 inches per the design drawings. Topsoil was installed to a thickness of at least 4 inches per the design drawings. Cover soil thickness was measured at a rate of at least five measurements per acre by hand-excavating test holes to expose the underlying drainage geocomposite. Topsoil thickness was also measured at a rate of at least five per acre by hand-excavating test holes. In-place cover soil was tested at a rate of at least five per acre for moisture content and density testing (ASTM D 6938) in accordance with the construction specifications. The testing results are included in the Quality Control Soil Testing section of this report (see Attachment 5).

3.6 Stormwater Management

Stormwater management features for Phase 3 included installation of the perimeter ditch along the landfill access road, catch basins, culverts, downspouts, and surface swales. Installation of stormwater management features typically occurred from north to south and west to east. Stormwater management features were installed in accordance with the approved Contract Drawings. See Table 2 for the start and completion dates.

TABLE 2

SUMMARY OF STORMWATER MANAGEMENT FEATURES

Stormwater Management Feature	Excavation/ Install Date	Completion Date
Perimeter Ditch	July 25, 2023	October 4, 2023
Catch basin CB-2c	June 2, 2023	August 23, 2023
Southwest Corner Culvert	July 6, 2023	August 23, 2023
Catch basin CB-1i	July 20, 2023	August 22, 2023
West Slope Downspout	June 2, 2023	July 26, 2023
Southwest Corner Downspout	July 6, 2023	September 1, 2023
South Slope Downspout	July 19, 2023	September 29, 2023
Surface Swales	July 24, 2023	October 2, 2023
Riprap Ditch RD-1i1	August 22, 2023	August 22, 2023
Riprap Ditch RD-1i2	August 22, 2023	August 22, 2023

3.7 Seeding and Mulching

For temporary erosion control, Gordon applied hay mulch and seed to completed areas of the Phase 3 cover. Phase 3 cover soil and topsoil was completed on September 29, 2023, Gordon completed applying hay mulch and hand seeding. Gordon self-performed the hydroseeding and began on October 3, 2023 and was completed on October 6, 2023. The entire Phase 3 area was hydroseeded. The seed mix included fescue, ryegrass, and bluegrass.

3.8 Rain Events

The East Millinocket area received significant rainfall throughout the course of the Phase 3 project. Overall, there was a total of 20 rain events that impacted the construction schedule and required repairs due to washouts or temporarily caused areas too wet to work in. When the existing cover soil and topsoil material was removed and the existing gas collection sand was exposed, the rain caused erosion rills on the slopes of Phase 3. The washed-out sand was contained by the landfill perimeter ditch and was collected and reused once conditions were dry enough. There were two events where sediment migrated to outside the limit of work (LOW), but was contained within the Sediment Ponds (#1 and #2). After those two events (August 8 and 11, 2023), Gordon was also able to clean-up sediment beyond the LOW for reuse on Phase 3. Immediately after completing cover soil placement over an area of geocomposite, Gordon tracked the slopes and placed hay mulch on the exposed soil. Placing hay mulch and tracking the slopes

greatly reduced the impacts of rain events. Stormwater inspections were completed by SME field personnel after significant rain events and are included in Attachment 9.

4.0 CONSTRUCTION MONITORING

Construction monitoring and in-place quality control material testing was performed by SME. Bi-weekly construction meetings were held at the site that included representatives of BGS, MEDEP, Gordon, and SME. A site visit followed each meeting. Copies of the construction meeting minutes are included in the Project Correspondence section (Attachment 3) of this document. The majority of submittals for the project were submitted in 2023. New submittals supplied by the Contractor for the project were reviewed by SME and are included in the Contractor Submittals section (see Attachment 4) of this report. Submittals reviewed by SME during the Phase 2 Cover Upgrade are included in the Phase 2 construction documentation report provided to MEDEP in January 2023. Copies of the weekly reports and daily reports with construction photographs are provided in the report (see Attachment 8). Copies of the contract specifications are provided in the report (see Attachment 10). A set of record drawings are provided in the report (see Attachment 11). The Record drawings provided are for both Phase 2 and Phase 3.

ATTACHMENT 1

STATEMENT OF COMPLIANCE

SME
SEVEE & MAHER
ENGINEERS

SME
SEVEE & MAHER
ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692
info@smemaine.com
smemaine.com

STATEMENT OF COMPLIANCE
WITH APPROVED PLANS AND SPECIFICATIONS

Project Owner:	***Maine Department of Administrative and Financial Services***
Project Title:	***Dolby Phase 3 Cover Upgrade***
Project Location:	***East Millinocket, Maine***
Contractor:	***Gordon Contracting*** ***Sangerville, Maine***
Engineer:	***Sevee & Maher Engineers, Inc.*** ***Cumberland, Maine***

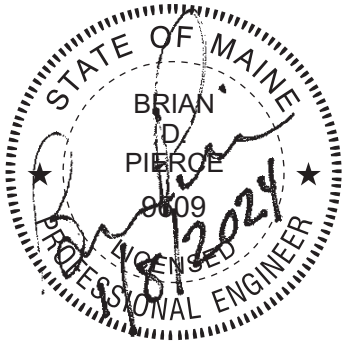
The undersigned, registered Professional Engineer in the State of Maine and in the employ of Sevee & Maher Engineers, Inc., which is responsible for construction monitoring pursuant to its contract with Maine Department of Administrative and Financial Services, states to the Maine Department of Environmental Protection that it is the professional engineering opinion of Sevee & Maher Engineers, Inc., based on monitoring of the contractor's activities, and the quality control/quality assurance test results, that the construction of the Dolby Phase 3 Cover Upgrade project in East Millinocket, Maine was performed in general accordance and compliance with the contract, plans, specifications, and conditions as approved by the Maine Department of Environmental Protection.

Date: January 8, 2024

Project Engineer: _____
Trevor Michaud, Civil Engineer

Date: January 8, 2024

Chief Engineer: _____
Brian Pierce, P.E., Principal/Chief Engineer
Reg. No. 9609



ATTACHMENT 2

MEDEP PERMIT

SME
SEVEE & MAHER
ENGINEERS

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

STATE OF MAINE, ACTING THROUGH THE	)	SOLID WASTE
DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL	)	LICENSE
SERVICES, BUREAU OF GENERAL SERVICES	)	
EAST MILLINOCKET, PENOBSCOT COUNTY, MAINE	)	
DOLBY LANDFILL FACILITY	)	
S#-000796-WO-AP-C	)	
SPECIAL CONDITIONS #3 & #4	)	CONDITION
(APPROVAL)	)	COMPLIANCE

Pursuant to the provisions of the *Maine Hazardous Waste, Septage and Solid Waste Management Act,* 38 M.R.S. §§1301 to 1319-Y; the *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 C.M.R. ch. 2 last amended June 9, 2018); and the *Solid Waste Management Rules: General Provisions,* 06-096 C.M.R. ch. 400 (last amended February 9, 2021); *Landfill Siting, Design and Operation*, 06-096 C.M.R. ch. 401 (last amended April 12, 2015); and *Water Quality Monitoring, Leachate Monitoring, and Waste Characterization,* 06-096 C.M.R. ch. 405 (last amended April 12, 2015), the Department of Environmental Protection ("Department") has considered the application of the STATE OF MAINE, acting through the Department of Administrative and Financial Services, Bureau of General Services, with its supportive data, agency review comments, staff summary, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

A. Application: The Department of Administrative and Financial Services, Bureau of General Services ("DAFS/BGS") has submitted documentation of compliance with Special Conditions #3 & #4 of Department License #S-000796-WO-AO-N, dated June 30, 2016, for the installation of an upgraded cover system on 33 acres of the landfill in two phases as a continuation of the Dolby Landfill Cover Upgrade Project ("Project"), as well as an update to the facility's post-closure monitoring and maintenance plan. Department License #S-000796-WO-AO-N approved the closure of the remaining open portions of the Dolby III Landfill and upgrade of the cover systems of previously closed areas of the Dolby II and Dolby III Landfills in several phases, with conditions requiring submittal of the design documents for each phase.

B. History:

(1) On June 13, 1984, the Great Northern Paper Company ("GNP") received Department approval to construct and operate the Dolby III landfill (Department license #L-000796-07-A-N).

(2) The Dolby III landfill occupies approximately 72 acres and has been operated in stages consisting of 17 waste cells. The site also includes the Dolby I and Dolby II landfills, which have been filled to licensed capacity and are closed. Dolby I, II and III landfills are hereinafter collectively referred to as the Dolby Landfill Facility.

(3) On April 28, 2003, the Department approved the transfer from GNP of all solid waste licenses, and other Department licenses, associated with the Dolby Landfill Facility to Katahdin Paper Company LLC ("KPC").

(4) On August 30, 2011, the Maine State Planning Office ("SPO") acquired the Dolby Landfill Facility and related properties from KPC. On September 28, 2011, the Department approved the transfer of all solid waste licenses (Department license #S-000796-WR-AJ-T), and other Departmental licenses, associated with the Dolby Landfill Facility to the SPO from KPC.

(5) Since the issuance of the aforementioned transfer license, the SPO has been dissolved and responsibilities for the oversight and operation of the Dolby Landfill Facility have been turned over to the DAFS/BGS.

(6) On June 30, 2016, the Department issued license #S-000796-WO-AO-N, approving closure of the remaining open portions of Dolby III and upgrades to the cover systems of previously closed areas of Dolby II and Dolby III in several phases over a few years. The license also included approval of the Phase 1 design, and subsequently approximately 25 acres of the Dolby III cover system were upgraded in 2016.

C. Summary of Proposal: The DAFS/BGS now requests approval of its application for compliance with Special Condition #3 of Department Order

#S-000796-WO-AO-N for the design of the next two phases of the Project, as well as Special Condition #4 for the revised post-closure monitoring and maintenance plan for Phase 1.

The Condition Compliance Application ("Application") addressed in this Department license, titled *Dolby Landfill Cover Upgrade—Phase 2 and 3*, prepared by Sevee & Maher Engineers, Inc. ("SME") for the DAFS/BGS was received on June 9, 2017 and accepted by the Department on June 22, 2017. The 2017 application was for the completion of a cover upgrade for approximately 43 acres of the Dolby III Landfill. The State of Maine Department of Economic and Community Development requested to put the Application on hold on May 20, 2019, pending authorization from the Maine Legislature for the remaining funding to complete the Project. Supplemental information to the Application was received on December 9, 2021 and the Application was taken off hold status on December 14, 2021. The 2021 supplemental information indicates funding is available for approximately 33 acres of the remaining 43 acres of the Project. Construction for the funded portion of the Project is expected to occur in 2022 and 2023 and will consist of two phases: Phase 2 (approximately 15 acres) and Phase 3 (approximately 18 acres). The remaining 10 acres of Dolby III Landfill will receive the cover upgrade when funding becomes available and is expected to be known as Phase 4.

2. COMPLIANCE SUBMITTAL FOR SPECIAL CONDITION #3

Condition #3 of Department Order #S-000796-WO-AO-N reads as follows:

"3. At least 3 months prior to the commencement of construction of each subsequent phase, the DAFS/BGS shall submit an engineering report, a CQA Plan and the construction contract bid documents including drawings, technical specifications, and the contract administrative documents to the Department for review and approval."

In response to this condition requirement, the DAFS/BGS submitted an application, received on June 9, 2017 and prepared by SME, that included the *Contract Documents Dolby Landfill Cover Upgrade – Phases 2 and 3* ("Contract Documents"). The Contract Documents include the following sections: Standard Contract Forms; Construction Specifications; Quality Assurance/Quality Control Plans; Contract Drawings; Erosion and Sedimentation Control Plan; and

Geotechnical Evaluation. Supplemental information for the application was submitted on December 9, 2021 and reflects the revised locations and lateral extent of Phase 2 and Phase 3 based upon the funding available in 2021. Departmental comments on the Contract Documents were submitted to DAFS/BGS and SME on March 2, 2022 and responses to the comments were received from SME on March 25, 2022. As part of SME's March 25, 2022 response, a Sampling and Analysis Plan ("SAP") for Per and Polyfluoroalkyl Substances ("PFAS") was submitted to and approved by the Department on March 16, 2022. PFAS sampling occurred on March 22, 2022. On April 8, 2022 the Department issued a memorandum to DAFS/BGS and SME stating that all comments relating to Special Condition #3 were adequately addressed, pending analytical results for PFAS. On April 14, 2022 SME provided documentation of PFAS sampling results.

The Department finds that DAFS/BGS has adequately addressed the requirements of 06-096 C.M.R. ch. 401, § 2(F), 06-096 C.M.R. ch. 401, § 2(I), and 06-096 C.M.R. ch. 401, § 2(J).

3. COMPLIANCE SUBMITTAL FOR SPECIAL CONDITION #4

Condition #4 of Department Order #S-000796-WO-AO-N reads as follows:

> "4. At least 30 days prior to substantial completion of construction activities within the Dolby Landfill Cover Upgrade Project – Phase I, the DAFS/BGS shall submit to the Department, for review and approval, a revised post-closure monitoring and maintenance plan to reflect changes associated with the Dolby Landfill Cover Upgrade Project."

In response to this condition requirement, the submitted Contract Documents included a Post-Closure Monitoring and Maintenance Plan ("PCMMP") revised in June 2017 to address the Project and a 2012 Environmental Monitoring Plan ("EMP"). Additionally, the 2021 Annual Report for the Dolby Landfill facility, due on or before April 30, 2022, will contain an updated PCMMP and a revised EMP and Action Leakage Rate/Response Action Plan based on the revised location and lateral extent of Phase 2 and Phase 3. On March 2, 2022, the Department submitted an engineering and hydrogeology review memorandum to DAFS/BGS, requesting additional information, clarification, and corrections relating to specific items in the submitted documentation. Responses to the comments were submitted by SME on March 25, 2022. On April 8, 2022 the Department issued a

memorandum to DAFS/BGS and SME stating that all comments relating to Special Condition #4 were adequately addressed.

The Department finds that the proposed changes to the PCMMP and EMP meet the requirements of 06-096 C.M.R. ch. 401 § 6.

4. DESIGN OF COVER UPGRADE

A. Cover System Design: The two types of cover systems which currently exist on the areas to be upgraded include the following components from top to bottom:

Type 1:
(1) 3 inches of secondary sludge;
(2) 3 inches of cover soil;
(3) 18 inches of screened till; and
(4) 6 inches of grit or sand (at landfill top), or 12 inches of sand (at sideslopes).

Type 2:
(1) 6 inches of manufactured topsoil;
(2) 18 inches of compacted sludge/till cover soil; and
(3) 12 inches of sand.

The proposed final cover system upgrade includes the following components from top to bottom:

(1) 4 inches of topsoil;
(2) 14 inches of cover soil;
(3) Drainage geocomposite;
(4) 40 mil textured high-density polyethylene (HDPE) geomembrane; and
(5) 6 inches of drainage sand for gas collection.

PFAS Testing: The in-place secondary sludge and manufactured topsoil is proposed to be re-used as part of the cover system upgrade for Phases 2 and 3. Pursuant to Public Law 2021, Ch. 478, the secondary sludge and manufactured topsoil were tested for PFAS. As outlined in the Department's April 21, 2022

memorandum to DAFS/BGS and SME, the Department recommends no modifications to the Phase 2 and Phase 3 cover system upgrade project plans.

The proposed cover system upgrade is consistent with the alternative design approved in Department License #S-000796-WO-AO-N, and the Department finds that the proposed cover system upgrade for Phases 2 and 3 meets the requirements of 06-096 C.M.R. ch. 401, § 5(G) and 06-096 C.M.R. ch. 401, § 5(H).

B. Engineering Report: Construction Specifications, Construction Drawings, an Erosion and Sedimentation Control Plan, and a Geotechnical Evaluation were included in the Application. The proposal for Phases 2 and 3 is consistent with the information submitted for the Project in Department License #S-000796-WO-AO-N.

The Department finds that the proposed cover system upgrade for Phases 2 and 3 meets the applicable requirements of 06-096 C.M.R. ch. 401, § 5(I).

5. DEPARTMENT REVIEW

All comments and recommendations from Department staff provided on the Application during its review have been satisfactorily addressed.

As a result of its review, the Department finds that the information submitted satisfactorily addresses the requirements of Special Conditions #3 and #4 of Department Order #S-000796-WO-AO-N.

6. OTHER FACTS AND CONCLUSIONS

All other Findings of Fact, Conclusions and Conditions made in Department Order #S-000796-WO-AO-N, dated June 30, 2016, remain unchanged.

BASED on the above Findings of Fact, and subject to the Standard Conditions listed below, the Department makes the following CONCLUSIONS:

1. The DAFS/BGS has complied with Special Conditions #3 and #4 of Department Order #S-000796-WO-AO-N.

THEREFORE, the Department APPROVES the above noted application of the Department of Administrative and Financial Services, Bureau of General Services,

STATE OF MAINE, ACTING THROUGH THE DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL SERVICES, BUREAU OF GENERAL SERVICES EAST MILLINOCKET, PENOBSCOT COUNTY, MAINE DOLBY LANDFILL FACILITY S#-000796-WO-AP-C SPECIAL CONDITIONS #3 & #4 (APPROVAL)	) 7)))))))	SOLID WASTE LICENSE CONDITION COMPLIANCE

SUBJECT TO THE FOLLOWING STANDARD CONDITIONS, and all applicable standards and regulations.

1. The applicable Standard Conditions of Approval, a copy attached as Appendix A.

2. The invalidity or unenforceability of any provision, or part thereof, of this license shall not affect the remainder of the provision or any other provisions. This license shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

DONE AND DATED AT AUGUSTA, MAINE, THIS 29th DAY OF April, 2022.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ *for* _____
Melanie Loyzim, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

Date of initial receipt of application: June 9, 2017
Date of acceptance: June 22, 2017

Dates of on-hold status: May 20, 2019-December 14, 2021

Date filed with Board of Environmental Protection:

xvm81963/vam

FILED
APR 29, 2022
State of Maine
Board of Environmental Protection

Appendix A

STANDARD CONDITIONS
TO ALL SOLID WASTE LANDFILL LICENSES

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL. VIOLATIONS OF THE CONDITIONS UNDER WHICH A LICENSE IS ISSUED SHALL CONSTITUTE A VIOLATION OF THAT LICENSE AGAINST WHICH ENFORCEMENT ACTION MAY BE TAKEN, INCLUDING REVOCATION.

1. **Approval of Variations from Plans.** The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed by the license. Any consequential variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

2. **Compliance with All Applicable Laws.** The licensee shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

3. **Compliance with All Terms and Conditions of Approval.** The licensee shall submit all reports and information requested by the Department demonstrating that the licensee has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

4. **Transfer of License.** The licensee may not transfer the solid waste facility license or any portion thereof without approval of the Department.

5. **Initiation of Construction or Development Within Two Years.** If the construction or operation of the solid waste facility is not begun within two years of issuance of within 2 years after any administrative and judicial appeals have been resolved, the license lapses and the licensee must reapply to the Department for a new license unless otherwise approved by the Department.

6. **Approval Included in Contract Bids.** A copy of the approval must be included in or attached to all contract bid specifications for the solid waste facility.

7. **Approval Shown to Contractors.** Contractors must be shown the license by the licensee before commencing work on the solid waste facility.

8. **Background of key individuals.** A licensee may not knowingly hire as an officer, director or key solid waste facility employee, or knowingly acquire an equity interest or

debt interest in, any person convicted of a felony or found to have violated a State or federal environmental law or rule without first obtaining the approval of the Department.

9. **Fees.** The licensee must comply with annual license and annual reporting fee requirements of the Department's rules.

10. **Recycling and Source Reduction Determination for Solid Waste Disposal Facilities.** This condition does not apply to the expansion of a commercial solid waste disposal facility that accepts only special waste for landfilling.

The solid waste disposal facility shall only accept solid waste that is subject to recycling and source reduction programs, voluntary or otherwise, at least as effective as those imposed by 38 M.R.S. Ch. 13.

11. **Deed Requirements for Solid Waste Disposal Facilities.** Whenever any lot of land on which an active, inactive, or closed solid waste disposal facility is located is being transferred by deed, the following must be expressly stated in the deed:

A. The type of facility located on the lot and the dates of its establishment and closure.

B. A description of the location and the composition, extent, and depth of the waste deposited.

C. The disposal location coordinates of asbestos wastes must be identified.

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: August 2021 **Contact: (207) 314-1458**

SUMMARY

This document provides information regarding a person's rights and obligations in filing an administrative or judicial appeal of a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner.

Except as provided below, there are two methods available to an aggrieved person seeking to appeal a licensing decision made by the DEP Commissioner: (1) an administrative process before the Board of Environmental Protection (Board); or (2) a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

A person filing an appeal with the Board should review Organization and Powers, 38 M.R.S. §§ 341-D(4) and 346; the Maine Administrative Procedure Act, 5 M.R.S. § 11001; and the DEP's *Rule Concerning the Processing of Applications and Other Administrative Matters* (Chapter 2), 06-096 C.M.R. ch. 2.

DEADLINE TO SUBMIT AN APPEAL TO THE BOARD

Not more than 30 days following the filing of a license decision by the Commissioner with the Board, an aggrieved person may appeal to the Board for review of the Commissioner's decision. The filing of an appeal with the Board, in care of the Board Clerk, is complete when the Board receives the submission by the close of business on the due date (5:00 p.m. on the 30th calendar day from which the Commissioner's decision was filed with the Board, as determined by the received time stamp on the document or electronic mail). Appeals filed after 5:00 p.m. on the 30th calendar day from which the Commissioner's decision was filed with the Board will be dismissed as untimely, absent a showing of good cause.

HOW TO SUBMIT AN APPEAL TO THE BOARD

An appeal to the Board may be submitted via postal mail or electronic mail and must contain all signatures and required appeal contents. An electronic filing must contain the scanned original signature of the appellant(s). The appeal documents must be sent to the following address.

Chair, Board of Environmental Protection
c/o Board Clerk
17 State House Station
Augusta, ME 04333-0017
ruth.a.burke@maine.gov

The DEP may also request the submittal of the original signed paper appeal documents when the appeal is filed electronically. The risk of material not being received in a timely manner is on the sender, regardless of the method used.

At the time an appeal is filed with the Board, the appellant must send a copy of the appeal to: (1) the Commissioner of the DEP (Maine Department of Environmental Protection, 17 State House Station, Augusta, Maine 04333-0017); (2) the licensee; and if a hearing was held on the application, (3) any intervenors in that hearing proceeding. **Please contact the DEP at 207-287-7688 with questions or for contact information regarding a specific licensing decision.**

REQUIRED APPEAL CONTENTS

A complete appeal must contain the following information at the time the appeal is submitted.

1. *Aggrieved status*. The appeal must explain how the appellant has standing to bring the appeal. This requires an explanation of how the appellant may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions, or conditions objected to or believed to be in error.* The appeal must identify the specific findings of fact, conclusions of law, license conditions, or other aspects of the written license decision or of the license review process that the appellant objects to or believes to be in error.
3. *The basis of the objections or challenge.* For the objections identified in Item #2, the appeal must state why the appellant believes that the license decision is incorrect and should be modified or reversed. If possible, the appeal should cite specific evidence in the record or specific licensing criteria that the appellant believes were not properly considered or fully addressed.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license to changes in specific license conditions.
5. *All the matters to be contested*. The Board will limit its consideration to those matters specifically raised in the written notice of appeal.
6. *Request for hearing.* If the appellant wishes the Board to hold a public hearing on the appeal, a request for hearing must be filed as part of the notice of appeal, and it must include an offer of proof regarding the testimony and other evidence that would be presented at the hearing. The offer of proof must consist of a statement of the substance of the evidence, its relevance to the issues on appeal, and whether any witnesses would testify. The Board will hear the arguments in favor of and in opposition to a hearing on the appeal and the presentations on the merits of an appeal at a regularly scheduled meeting. If the Board decides to hold a public hearing on an appeal, that hearing will then be scheduled for a later date.
7. *New or additional evidence to be offered.* If an appellant wants to provide evidence not previously provided to DEP staff during the DEP's review of the application, the request and the proposed supplemental evidence must be submitted with the appeal. The Board may allow new or additional evidence to be considered in an appeal only under limited circumstances. The proposed supplemental evidence must be relevant and material, and (a) the person seeking to add information to the record must show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process; or (b) the evidence itself must be newly discovered and therefore unable to have been presented earlier in the process. Requirements for supplemental evidence are set forth in Chapter 2 § 24.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, and is made accessible by the DEP. Upon request, the DEP will make application materials available to review and photocopy during normal working hours. There may be a charge for copies or copying services.

2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing the appeal.* DEP staff will provide this information upon request and answer general questions regarding the appeal process.

3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed, the license normally remains in effect pending the processing of the appeal. Unless a stay of the decision is requested and granted, a licensee may proceed with a project pending the outcome of an appeal, but the licensee runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will acknowledge receipt of an appeal, and it will provide the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials admitted by the Board as supplementary evidence, any materials admitted in response to the appeal, relevant excerpts from the DEP's administrative record for the application, and the DEP staff's recommendation, in the form of a proposed Board Order, will be provided to Board members. The appellant, the licensee, and parties of record are notified in advance of the date set for the Board's consideration of an appeal or request for a hearing. The appellant and the licensee will have an opportunity to address the Board at the Board meeting. The Board will decide whether to hold a hearing on appeal when one is requested before deciding the merits of the appeal. The Board's decision on appeal may be to affirm all or part, affirm with conditions, order a hearing to be held as expeditiously as possible, reverse all or part of the decision of the Commissioner, or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, the licensee, and parties of record of its decision on appeal.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court (see 38 M.R.S. § 346(1); 06-096 C.M.R. ch. 2; 5 M.R.S. § 11001; and M.R. Civ. P. 80C). A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board Clerk at 207-287-2811 or the Board Executive Analyst at 207-314-1458 bill.hinkel@maine.gov, or for judicial appeals contact the court clerk's office in which the appeal will be filed.

Note: This information sheet, in conjunction with a review of the statutory and regulatory provisions referred to herein, is provided to help a person to understand their rights and obligations in filing an administrative or judicial appeal. The DEP provides this information sheet for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

ATTACHMENT 3

PROJECT CORRESPONDENCE

- **PRE-CONSTRUCTION MEETING AGENDA**
- **PRE-CONSTRUCTION MEETING MINUTES**
- **MEETING MINUTES**

SME
SEVEE & MAHER
ENGINEERS

- PRE-CONSTRUCTION MEETING AGENDA

SME
SEVEE & MAHER
ENGINEERS

SME
SEVEE & MAHER
ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692
info@sme-engineers.com
sme-engineers.com

Dolby Landfill – Phase 3 Cover Upgrade
Pre-Construction Meeting Agenda
Wednesday, April 12, 2023 at 10:00 am
Location: Room 400, 4th Floor, Cross Office Building, 111 Sewall Street, Augusta, Maine

Participants

- Owner – Department of Administrative and Financial Services
- Owner's Representative – Bureau of General Services (Wallace Giakas, Landfill Manager)
- Engineer – Sevee & Maher Engineers, Inc.
- Regulatory – Maine Department of Environmental Protection (MEDEP)
- General Contractor – Gordon Contracting, Inc.

Topics

- Project Overview
- Discussion of site safety
- Discussion of schedule
- Update on additional cover soil procurement
- Erosion/runoff control
- Maximum open area
- Trevor Michaud will be the primary on-site representative for SME. Full time inspection is planned with the possibility of two on-site representatives when the geomembrane is placed. Good communication between Gordon and SME will be needed to facilitate construction activities. Ben Monohon or Nick Thompson will be substitute for Trevor when necessary.
- Submittals
- Requisitions
    - Payment process
- Change order process
- Weekly meetings
    - Establish a regular day of week, time of day, and location
    - Schedule a pre-liner installation meeting one week prior to liner start date
    - Invite Engineer to weekly Safety meeting
    - MEDEP will be invited to all weekly meetings

- Close-out procedures
    - Punch list and Substantial Completion (September 15, 2023)
- Other issues and discussion items

- **PRE-CONSTRUCTION MEETING MINUTES**

SME
SEVEE & MAHER
ENGINEERS

SME
SEVEE & MAHER
ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692
info@sme-engineers.com
sme-engineers.com

PRE-CONSTRUCTION MEETING MINUTES
Dolby Landfill – Phase 3 Cover Upgrade
Meeting Date: April 12, 2023 – 10:00 AM
Location: Room 400, 4th Floor, Cross Office Building, 111 Sewall Street, Augusta, Maine

On April 12, 2023, a pre-construction meeting was held for the cover upgrade associated with a portion of the Dolby III Landfill in Millinocket, Maine. Maine Bureau of General Service (BGS), Gordon Contracting (Gordon), Maine Department of Environment Protection (MEDEP) and Sevee & Maher Engineers, Inc. (SME) attended the meeting. A list of the meeting attendees is attached.

The meeting was moderated by Nick Thompson of SME. Nick noted the following regarding the planned construction for the cover upgrade:

PROJECT OVERVIEW

- Install erosion control measures.
- Strip and stockpile existing vegetative cover and cover soil for future use in Phase 3.
- Install gas collection piping and vents.
- Install intermediate underdrain berms.
- Install geosynthetics.
- Place and compact cover soil.
- Install underdrain piping in conjunction with cover soil placement.
- Place vegetative cover.
- Install stormwater management.

SITE SAFETY

- Weekly safety meeting will occur every Monday morning before work begins.
- All workers of Gordon have their OSHA 10 and are traffic trained.
- Gordon has workers that are confined space certified.
- Landfill gas could be present when installing gas collection piping and abandoning structures. A gas meter will be available on site.
- Either Nick Schmeidlehner or Trevor Michaud will check the site at the end of each workday to confirm the site is clear of unauthorized visitors before locking the site gate for the day.

SCHEDULE

The preliminary construction schedule for Phase 3 was discussed and includes:

- Mobilization will take place beginning Monday, April 24, 2023.
- Phase 3 construction will begin May 1, 2023.
- Liner installation is set to start May 29, 2023.
- Project completion is set for September 1, 2023.

A formal construction schedule will be submitted to SME prior to mobilization.

SUBMITTALS

- Gordon will prepare a submittal for the cover soil once they are able to obtain and test a representative soil.

PAYMENT REQUISITIONS

- Payment requisitions will be sent to SME for review. SME will distribute the payment requisitions to MEBGS.
- Payment requestions will be sent at the end of each month.
- Drew Straehle (Gordon) will submit each payment requisition to Nick Thompson (SME) one week prior the end of the month for review.

CHANGE ORDER PROCESS

- No changes to the contract drawings and specifications will be made in the field.
- Change orders must be submitted to the engineer and MEDEP for review/acceptance.
- Once MEDEP has given approval, change orders must be submitted to MEBGS with substantial evidence for review/acceptance.

ON-SITE MEETINGS

- Meetings will occur bi-weekly on Thursdays. The first meeting is set to take place May 18th, 2023 @ 10 am. Meetings will occur in Gordon's on-site office trailer.
- A pre-liner installation meeting will take place the week prior to starting liner installation. Once liner is being installed, meetings will occur weekly.

OTHER DISCUSSION ITEMS

- All liner material for Phase 3 is currently stored at Dolby Landfill. SME was onsite 4/11/2023 to check the site conditions. The liner material appears to be in good condition.
- All geocomposite material for Phase 3 is currently stored at Gordon Contracting Headquarters in Sangerville, Maine.
- SME recommends the use of a mini excavator to accomplish tasks during the Phase 3 construction.
- Maximum open area will be held to 5 acres open at one time. Gordon plans to start at the east side of Phase 3 near the leachate pond and work around the corner, leaving the top section of Phase 3 for last.
- Two buckets of the new cover soil material will be needed along with a sample of the Phase 3 geocomposite to be tested by TRI California for interface conformance testing. SME will coordinate with Gordon to obtain the geocomposite sample.

Notes by:
Trevor Michaud

PRE-CONSTRUCTION MEETING MINUTES
Dolby Landfill – Phase 3 Cover Upgrade
Meeting Date: April 12, 2023 – 10:00 AM
Location: Room 400, 4th Floor, Cross Office Building, 111 Sewall Street, Augusta, Maine

ATTENDEES

Name	Representing
William Longfellow	MEBGS
Wallace Giakas	MEBGS
Vera Maheu	MEDEP
Kathy Tarbuck	MEDEP
Daniel Emerson (via Teams)	MEDEP
Drew Straehle	Gordon Contracting
Nick Schmeidlehner	Gordon Contracting
Matt Muzzy	SME
Nick Thompson	SME
Trevor Michaud	SME

- **MEETING MINUTES**

SME
SEVEE & MAHER
ENGINEERS

SME
SEVEE & MAHER
ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692
info@smemaine.com

CONSTRUCTION MEETING MINUTES
PHASE 3 COVER UPGRADE PROJECT
DOLBY LANDFILL FACILITY
MILLINOCKET, MAINE
Thursday, May 18th, 2023 – 10:00 AM

1. Meeting Attendees:
   - Sevee & Maher Engineers – Trevor Michaud, Nick Thompson
   - Gordon Contracting – Nick Schmeidlehner
   - MEDEP – Vera Maheu, Daniel Emerson

2. Project Safety:
   - Gordon Contracting personnel holds job site safety meetings each Monday morning for anticipated work.
   - There have been no safety incidents to date.
   - Dust has increased due to the recent dry weather. Gordon continuously uses the water truck to keep the dust down.

3. Work Performed to Date:
   - Gordon has stripped and stockpiled to the northern stockpile the first five acres (Area 1) of vegetative cover soil in the southwestern corner of Phase 3.
   - Gordon has stripped and stockpiled to the southern stockpile the first five acres (Area 1) of cover soil in the southwestern corner of Phase 3.
   - Approximately 980 LF of gas collection piping and 4 gas vents have been installed.
   - All erosion control measures installed.
   - Gordon began constructing perimeter ditch in Area 1. Approximately 390 LF of ditch has been constructed.

4. Work Anticipated Over the Next Two Weeks:
   - Finalize installation of gas collection system in Area 1 of Phase 3.
   - Complete existing structure abandonment in Area 1 of Phase 3.
   - Complete perimeter ditch excavation in Area 1 of Phase 3.
   - Complete downspout construction on the west slope of Phase 3.
   - Install CB-2C and the associated culvert and riprap apron.
   - Install intermediate underdrain berms in Area 1 of Phase 3.

5. QA/QC Testing:
   - 71 test pits have been performed to verify gas collection sand thickness.
   - Borrow source samples BSGS-01 have been collected for the gas collection/drainage sand.
   - Stormwater inspections performed weekly.

6. Submittals/Field Change Orders/Permit Change Orders:
    - N/A

7. Changes to the Specifications and Drawings:
    - N/A

8. Project Meetings:
    - The next project meeting will be Thursday June 1, 2023 @ 10am.

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CONSTRUCTION MEETING MINUTES
PHASE 3 COVER UPGRADE PROJECT
DOLBY LANDFILL FACILITY
MILLINOCKET, MAINE
Thursday, June 1st, 2023 – 10:00 AM

1. Meeting Attendees:
   - Sevee & Maher Engineers – Trevor Michaud, Nick Thompson
   - Gordon Contracting – Nick Schmeidlehner
   - MEDEP – Vera Maheu, Rachel

2. Project Safety:
   - Gordon Contracting personnel conduct job site safety meetings each Monday morning for anticipated work.
   - There have been no safety incidents to date.
   - Dust has increased due to the recent dry weather. Gordon continuously uses the water truck to keep the dust down.

3. Work Performed Over the Previous Two Weeks:
   - Intermediate underdrain berms have been constructed in Area 1 of Phase 3.
   - All existing structures in Area 1 have been abandoned except CB #5. ACV is scheduled to be onsite in early June and they will clean CB #5 at that time.
   - Perimeter ditch along Area 1 of Phase 3 has been excavated to grade. Perimeter ditch still needs to be excavated to specified dimensions and any large rocks removed.

4. Work Anticipated Over the Next Two Weeks:
   - Complete existing structure abandonment in Area 1 of Phase 3.
   - Complete perimeter ditch excavation in Area 1 of Phase 3.
   - Complete downspout construction on the west slope of Phase 3.
   - Remove existing culvert going to Sediment Pond #2.
   - Install CB-2C and the associated culvert and riprap apron.
   - Begin liner installation in Area 1 of Phase 3.
   - Perform any repair work needed on Phase 2.

5. QA/QC Testing:
   - 71 test pits have been performed to verify gas collection sand thickness.
   - Borrow source samples BSGS-01 and BSGS-02 have been collected for the gas collection/drainage sand.
   - Gas collection installation has been field verified.
   - Perimeter ditch excavation has been field verified with GPS to meet specified dimensions and elevation.

- Intermediate underdrain berms have been field verified with GPS to meet specified dimensions and slope requirements.
- Stormwater inspections performed weekly.

6. Submittals/Field Change Orders/Permit Change Orders:
   - Liner layout plan for Phase 3 has been submitted.

7. Changes to the Specifications and Drawings:
   - N/A

8. Project Meetings
   - The next project meeting will be Thursday June 15, 2023 @ 10am.

9. Discussion Items.
   - The project specifications require a 6-inch overlap between panels of geomembrane for fusion welding.
   - All geomembrane and geocomposite materials are onsite.
   - Liner crew will be arriving over the next couple of days.
   - Protection of the sand intermediate underdrain berms will be required during liner deployment.
   - Use of rub sheet required during geocomposite deployment.
   - Gordon would like to begin stripping the soil on the SW corner of Phase 3, approximately 1 acre beyond Area 1, due to the amount of work required in that area. MEDEP has granted Gordon permission to begin work in that area.

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CONSTRUCTION MEETING MINUTES
PHASE 3 COVER UPGRADE PROJECT
DOLBY LANDFILL FACILITY
MILLINOCKET, MAINE
Thursday, June 15, 2023 – 10:00 AM

1. Meeting Attendees:
   - Sevee & Maher Engineers, Inc. – Trevor Michaud, Nick Thompson
   - Gordon Contracting – Nick Schmeidlehner
   - MEDEP – Vera Maheu, Daniel Emerson
   - Integrity – Tim Parks
   - Maine Bureau of General Services (MEBGS) – Wallace Giakas, Landfill Manager

2. Project Safety:
   - No safety concerns to date.

3. Work Performed Over the Previous Two Weeks:
   - Installed CB-2C and culvert.
   - Geomembrane placed on Area 1 (5 Acres) along with applicable repairs and testing.
   - Began stripping cover soil on Area 2 on the southwest corner of Phase 3 and progressing east.

4. Work Anticipated Over the Next Two Weeks:
   - Install passive gas collection system, intermediate drainage berms, and culvert in Area 2
   - Install geocomposite over Area 1.
   - Possibly begin geomembrane placement over Area 2.

5. QA/QC Testing:
   - 71 test pits have been performed to verify gas collection sand thickness.
   - Borrow source samples BSGS-01 and BSGS-02 have been collected for the gas collection/drainage sand.
   - Gas collection installation has been field verified.
   - Perimeter ditch excavation has been field verified with GPS to meet specified dimensions and elevation.
   - Intermediate underdrain berms have been field verified with GPS to meet specified dimensions and slope requirements.
   - Stormwater inspections performed weekly.

6. Submittals/Field Change Orders/Permit Change Orders:
   - None

7. Changes to the Specifications and Drawings:
   - None

8. Project Meetings
    - The next project meeting will be Thursday June 29, 2023 @ 10am.

9. Discussion Items.
    - The flat spot in Area 2 needs to be graded to the correct pitch.
    - Backfill top anchor trench.
    - As with Area 1 there is a surplus of cover soil material being stripped from Area 2.



Liner placement beginning on the northwest corner of Phase



Preparing sand surface for geomembrane placement

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Geomembrane deployment and seam cleaning on the west slope



Geomembrane placed on the west slope of Phase 3

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CONSTRUCTION MEETING MINUTES
PHASE 3 COVER UPGRADE PROJECT
DOLBY LANDFILL FACILITY
MILLINOCKET, MAINE
Thursday, June 29, 2023 – 10:00 AM

1. Meeting Attendees:
   - Sevee & Maher Engineers, Inc. – Trevor Michaud, Nick Thompson
   - Gordon Contracting – Nick Schmeidlehner
   - MEDEP – Daniel Emerson
   - Integrity Lining Systems – Tim Parks
   - Maine Bureau of General Services (MEBGS) – Wallace Giakas, Landfill Manager

2. Project Safety:
   - Gordon Contracting personnel holds job site safety meetings each Monday morning for anticipated work.
   - There have been no safety incidents to date.
   - Gordon has a water truck onsite to keep the dust down if needed.

3. Work Performed Over the Previous Two Weeks:
   - Intermediate underdrain berms have been installed in Area 2 of Phase 3 at top of slope.
   - Republic Services on-site for existing structure cleaning.
   - Gas collection system has been installed in Area 2 of Phase 3.
   - Approximately 2 acres of geomembrane installed at top of Phase 3 in Area 2 along with applicable repairs and testing.

4. Work Anticipated Over the Next Two Weeks:
   - Complete existing structure abandonment in Area 2 of Phase 3.
   - Complete perimeter ditch excavation in Area 2 of Phase 3.
   - Complete downspout installation on the south slope and southwest corner of Phase 3.
   - Remove existing culvert going to Sediment Pond #1 and replace.
   - Continue liner installation in Area 2 of Phase 3.

5. QA/QC Testing:
   - 94 test pits have been performed to verify gas collection sand thickness.
   - Borrow source samples BSGS-01 and BSGS-02 have been collected for the gas collection/drainage sand.
   - Gas collection installation has been field verified.
   - Perimeter ditch excavation has been field verified with GPS to meet specified dimensions and elevation.
   - Intermediate underdrain berms have been field verified with GPS to meet specified dimensions and slope requirements.
   - Stormwater inspections performed weekly.

- 19 geomembrane destructive seam tests have been performed and passed.

6. Submittals/Field Change Orders/Permit Change Orders:
   - N/A

7. Changes to the Specifications and Drawings:
   - N/A

8. Project Meetings
   - The next project meeting is scheduled for Thursday July 13, 2023 at 10am.

9. Discussion Items.
   - Gordon will be on-site Thursday and Friday July 6 and 7, 2023 for subgrade preparation prior to liner installation. Integrity will mobilize back on-site Wednesday July 5.



Photo 1 – Geomembrane installation on the west slope of Phase 3. Photo taken looking southwest.



Photo 2 – Republic Services onsite for existing structure cleaning. Photo taken looking east.

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Photo 3 – Geocomposite installation at top of Phase 3. Photo taken looking southwest.



Photo 3 – Geocomposite installation at west slope of Phase 3. Photo taken looking east.

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CONSTRUCTION MEETING MINUTES
PHASE 3 COVER UPGRADE PROJECT
DOLBY LANDFILL FACILITY
MILLINOCKET, MAINE
Thursday, July 13, 2023 – 10:00 AM

1. Meeting Attendees:
   - Sevee & Maher Engineers, Inc. – Trevor Michaud, Nick Thompson
   - Gordon Contracting – Drew Straehle, Nick Schmeidlehner
   - MEDEP – Daniel Emerson, Vera Maheu
   - Maine Bureau of General Services (MEBGS) – William Longfellow, Wallace Giakas

2. Project Safety:
   - Gordon Contracting personnel holds job site safety meetings each Monday morning for anticipated work.
   - There have been no safety incidents to date.
   - Gordon has a water truck onsite to keep the dust down if needed.

3. Work Performed Over the Previous Two Weeks:
   - 1.85 acres of liner have been installed.
   - 1.5 acres of topsoil have been stripped.
   - Stripping cover soil on the south slope and placing on the west slope geocomposite.

4. Work Anticipated Over the Next Two Weeks:
   - Complete south slope downspout/perimeter ditch.
   - Complete underdrain berms on south slope Phase 3.
   - Remaining gas collection.
   - Finalize stripping the south slope, start on the rest of Phase 3 (approximately 4 acres).

5. QA/QC Testing:
   - 94 test pits have been performed to verify gas collection sand thickness.
   - Borrow source samples BSGS-01 and BSGS-02 have been collected for the gas collection/drainage sand.
   - Gas collection installation has been field verified.
   - Perimeter ditch excavation has been field verified with GPS to meet specified dimensions and elevation.
   - Intermediate underdrain berms have been field verified with GPS to meet specified dimensions and slope requirements.
   - Stormwater inspections performed weekly.
   - 19 geomembrane destructive seam tests have been performed and passed.

6. Submittals/Field Change Orders/Permit Change Orders:
   - N/A

7. Changes to the Specifications and Drawings:
    - N/A

8. Project Meetings
    - The next project meeting is scheduled for Thursday July 27, 2023 at 10 am.

9. Discussion Items.
    - Precipitation has caused some delays in schedule, but only by a few days. Anticipated completion date is the end of August/beginning of September.
    - Cover geocomposite that was installed on June 16, 2023 is the highest priority.
    - Integrity will remobilize in the next week to week and a half.



Photo 1 – Cover soil on west slope looking across the leachate pond



Photo 2 – Intermediate berm drainage pipe

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Photo 3 – Stripping cover soil on south slope of Phase 3



Photo 4 – South slope of Phase 3

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CONSTRUCTION MEETING MINUTES
PHASE 3 COVER UPGRADE PROJECT
DOLBY LANDFILL FACILITY
MILLINOCKET, MAINE
Thursday, July 27, 2023 – 10:00 AM

1. Meeting Attendees:
   - Sevee & Maher Engineers, Inc. – Trevor Michaud, Nick Thompson
   - Gordon Contracting – Nick Schmeidlehner
   - MEDEP – Daniel Emerson

2. Project Safety:
   - Gordon Contracting personnel holds job site safety meetings each Monday morning for anticipated work.
   - There have been no safety incidents to date.
   - Gordon has a water truck onsite to keep the dust down if needed.

3. Work Performed Over the Previous Two Weeks:
   - Excavated 360 LF of anchor trench at the south slope of Phase 3.
   - Excavated 360 LF of perimeter ditch at the south slope of Phase 3.
   - Approx. 3.4 acres of cover soil stripped on the south slope of Phase 3 and used to cover geocomposite on the west slope of Phase 3.
   - Constructed downspout on the south slope of Phase 3.
   - Installed CB-1i and outlet culvert.
   - Installed approximately 500 LF of intermediate underdrain berms.
   - Covered approximately 4 acres of geocomposite on the west slope of Phase 3.
   - Installed approximately 1.6 acres of geomembrane.
   - Installed approximately 2 acres of geocomposite.
   - Placed rip rap in approximately 370 LF of perimeter ditch on the west side of Phase 3.
   - Placed rip rap in west slope downspout.

4. Work Anticipated Over the Next Two Weeks:
   - Begin constructing the perimeter ditch in Area 3 of Phase 3.
   - Begin gas collection pipe installation in Area 3 of Phase 3.
   - Continue stripping existing cover soil on the remaining top area of Phase 3.
   - Begin intermediate underdrain berm installation in Area 3 of Phase 3.
   - Continue placing cover soil over geocomposite on the west slope of Phase 3.
   - Resume geomembrane installation.

5. QA/QC Testing:
    - 196 test pits have been performed to verify gas collection sand thickness. See associated spreadsheet.
    - Borrow source samples BSGS-01 and BSGS-02 have been collected for the gas collection/drainage sand.
    - Gas collection installation has been field verified.
    - Perimeter ditch excavation has been field verified with GPS to meet specified dimensions and elevation.
    - Intermediate underdrain berms have been field verified with GPS to meet specified dimensions and slope requirements.
    - Stormwater inspections performed weekly.
    - 26 destructive tests have been performed and passed on geomembrane.
    - Verified cover soil compaction.
    - Verified cover soil and topsoil thickness over geocomposite.

6. Submittals/Field Change Orders/Permit Change Orders:
    - N/A

7. Changes to the Specifications and Drawings:
    - N/A

8. Project Meetings
    - The next project meeting will be Thursday August 10, 2023 @ 10 am.

9. Discussion Items:
    - Areas that have been finalized with cover soil and topsoil over geocomposite should be stabilized with mulch and seeded per the approved plans and specifications as quickly as possible.
    - Liner installation to resume the week of August 7, 2023.



Photo 1 – Geomembrane installation on the southwest corner of Phase 3. Photo taken looking east.



Photo 2 – Gordon stripping existing cover soil at top of Phase 3. Photo taken looking east.

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Photo 3 – Gordon placing cover soil at top of Phase 3. Photo taken looking north.



Photo 4 – Gordon installing riprap at west slope perimeter ditch of Phase 3. Photo taken looking north.

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CONSTRUCTION MEETING MINUTES
PHASE 3 COVER UPGRADE PROJECT
DOLBY LANDFILL FACILITY
MILLINOCKET, MAINE
Thursday, August 10, 2023 – 10:00 AM

1. Meeting Attendees:
   - Sevee & Maher Engineers, Inc. – Trevor Michaud, Nick Thompson
   - Gordon Contracting – Nick Schmeidlehner
   - MEDEP – Daniel Emerson, Vera Maheu
   - MEBGS – Wallace Giakas

2. Project Safety:
   - Gordon Contracting personnel holds job site safety meetings each Monday morning for anticipated work.
   - There have been no safety incidents to date.
   - Gordon has a water truck on-site to keep the dust down if needed.

3. Work Performed Over the Previous Two Weeks:
   - Abandoned CB-#10.
   - Installed 880 LF of gas collection pipe.
   - Installed 4 gas vents.
   - Constructed 425 LF of perimeter ditch.
   - Continued installation of underdrain pipe and drainage sand.
   - Exposed 220 LF of Phase 1 tie-in.
   - Constructed 455 LF of surface swales on the west slope of Phase 3.
   - Mulched approximately 3.5 acres on the west slope cover soil.
   - Clean up from rain event.

4. Work Anticipated Over the Next Two Weeks:
   - Complete construction of the perimeter ditch around Area 3 of Phase 3.
   - Complete gas collection installation in Area 3 of Phase 3.
   - Finalize stripping existing cover soil on the remaining top area of Phase 3.
   - Continue intermediate underdrain berm installation in Area 3 of Phase 3.
   - Continue placing cover soil over geocomposite on the southwest slope of Phase 3.
   - Resume geomembrane installation.

5. QA/QC Testing:
    - Weekly stormwater inspection performed.
    - Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
    - 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness.
    - Verified cover soil and topsoil thickness over geocomposite.
    - Verified cover soil compaction with nuke density gauge.
    - 26 destructive tests have been performed on geomembrane installed.

6. Submittals/Field Change Orders/Permit Change Orders:
    - N/A

7. Changes to the Specifications and Drawings:
    - N/A

8. Project Meetings:
    - The next project meeting will be Thursday August 24, 2023 @ 10 am.

9. Discussion Items:
    - Significant rain event on Tuesday August 8, 2023. Gordon Contracting working diligently to clean site and be ready for Integrity to return to the site.
    - Liner installation to resume the week of August 14, 2023.



Photo 1 – Gordon installing gas collection system. Photo taken looking west.



Photo 2 – Gordon exposing Phase 1 tie-in. Photo taken looking north.

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Photo 3 – Gordon smoothing existing gas collection sand. Photo taken looking west.



Photo 4 – Gordon installing riprap at west slope perimeter ditch of Phase 3. Photo taken looking northwest.

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Photo 5 – Gordon placing mulch on the west slope of Phase 3. Photo taken looking northwest.

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CONSTRUCTION MEETING MINUTES
PHASE 3 COVER UPGRADE PROJECT
DOLBY LANDFILL FACILITY
MILLINOCKET, MAINE
Thursday, August 24, 2023 – 10:00 AM

1. Meeting Attendees:

   - Sevee & Maher Engineers – Trevor Michaud
   - Gordon Contracting – Nick Schmeidlehner
   - MEDEP – Daniel Emerson, Vera Maheu
   - Integrity Lining Systems – Tim Parks

2. Project Safety:

   - Gordon Contracting personnel holds job site safety meetings each Monday morning for anticipated work.
   - There have been no safety incidents to date.
   - Gordon has a water truck onsite to keep the dust down if needed.

3. Work Performed Over the Previous Two Weeks:

   - Finalized installation of gas collection system for Phase 3.
   - Finalized stripping existing cover soil for Phase 3.
   - Finalized installation of intermediate underdrain berms for Phase 3.
   - Finalized installation of geomembrane for Phase 3.
   - Finalized excavation of perimeter ditch for Phase 3.
   - Continued installation of underdrain pipe and drainage sand.
   - Finalized exposing Phase 1 tie-in.
   - Finalized excavation of anchor trench along Phase 3.
   - Installed riprap aprons and riprap ditch at outlets to stormwater culverts for Phase 3.
   - Continued placing cover soil over geocomposite (approximately 1 acre).

4. Work Anticipated Over the Next Two Weeks:

   - Finalize geomembrane detail work.
   - Install remaining geocomposite for Phase 3.
   - Continue cover soil placement over geocomposite.

- Build remaining surface swales for Phase 3.
- Continue mulching.
- Hydroseed application.

5. QA/QC Testing:
    - Weekly stormwater inspection performed.
    - Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
    - 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness.
    - Verified cover soil and topsoil thickness over geocomposite.
    - Verified cover soil compaction with nuke density gauge.
    - 46 destructive tests have been performed on geomembrane installed.
6. Submittals/Field Change Orders/Permit Change Orders:
    - N/A
7. Changes to the Specifications and Drawings:
    - N/A
8. Project Meetings
    - The next project meeting will be Thursday September 7, 2023 @ 10 am.
9. Discussion Items:
    - A 0.25-acre section of Phase 3 was not stripped down to existing sand layer. This is due to the significant change in elevation and will be a future redesign for Phase 4.



Photo 1 – Gordon installing intermediate underdrain berms. Photo taken looking west.



Photo 2 – Gordon cleaning sediment out of perimeter ditch. Photo taken looking west.

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Photo 3 – Gordon excavating perimeter ditch and anchor trench. Integrity installing geomembrane. Photo taken looking southeast.



Photo 4 – Geomembrane installation completed for Phase 3. Photo taken looking west.

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CONSTRUCTION MEETING MINUTES
PHASE 3 COVER UPGRADE PROJECT
DOLBY LANDFILL FACILITY
MILLINOCKET, MAINE
Thursday, September 7, 2023 – 10:00 AM

1. Meeting Attendees:
   - Sevee & Maher Engineers – Trevor Michaud, Nick Thompson
   - Gordon Contracting – Nick Schmeidlehner
   - MEDEP – Daniel Emerson, Vera Maheu
   - MEBGS – Wallace Giakas

2. Project Safety:
   - Gordon Contracting personnel holds job site safety meetings each Monday morning for anticipated work.
   - There have been no safety incidents to date.
   - Gordon has a water truck onsite to keep the dust down if needed.

3. Work Performed Over the Previous Two Weeks:
   - Placed cover soil over approximately 2.5 acres of geocomposite.
   - Continued installation of underdrain piping and drainage sand as cover soil placement progresses.
   - Applied approximately 2 acres of mulch over cover soil.
   - All work on geomembrane completed.
   - Approximately 5 acres of geocomposite installed.
   - Placed riprap in the SW corner perimeter ditch and downspout.

4. Work Anticipated Over the Next Two Weeks:
   - Finalize installation of geocomposite.
   - Continue placing cover soil over geocomposite.
   - Build remaining surface swales for Phase 3.
   - Install riprap in south slope downspout and perimeter ditch.
   - Continue mulching.
   - Hydroseed application.

5. QA/QC Testing:
    - Weekly stormwater inspection performed.
    - Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
    - 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness.
    - Verified cover soil and topsoil thickness over geocomposite.
    - Verified cover soil compaction with nuke density gauge.
    - 46 destructive tests have been performed on geomembrane installed.

6. Submittals/Field Change Orders/Permit Change Orders:
    - N/A

7. Changes to the Specifications and Drawings:
    - N/A

8. Project Meetings
    - The next project meeting will be Thursday September 21, 2023 @ 10am.

9. Discussion Items.
    - Gordon anticipates being substantially complete by the end of September, weather permitting.



Photo 1 – Gordon adding riprap to perimeter ditch. Photo taken looking southeast.



Photo 2 – Gordon placing cover soil over geocomposite. Photo taken looking south.

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Photo 3 – Integrity installing geocomposite. Photo taken looking south.



Photo 4 – Gordon installing underdrain piping and drainage sand. Photo taken looking south.

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CONSTRUCTION MEETING MINUTES
PHASE 3 COVER UPGRADE PROJECT
DOLBY LANDFILL FACILITY
MILLINOCKET, MAINE
Thursday, September 21, 2023 – 10:00 AM

1. Meeting Attendees:
   - Sevee & Maher Engineers – Nick Thompson
   - Gordon Contracting – Nick Schmeidlehner
   - MEDEP – Daniel Emerson

2. Project Safety:
   - Gordon Contracting personnel holds job site safety meetings each Monday morning for anticipated work.
   - There have been no safety incidents to date.
   - Gordon has a water truck onsite to keep the dust down if needed.

3. Work Performed Over the Previous Two Weeks:
   - Placed cover soil over approximately 3 acres of geocomposite.
   - Continued installation of underdrain piping and drainage sand as cover soil placement progresses.
   - Applied approximately 2 acres of mulch over cover soil.
   - Completed geocomposite placement.
   - Begin site clean-up.

4. Work Anticipated Over the Next Two Weeks:
   - Complete cover soil placement.
   - Build remaining surface swales for Phase 3.
   - Install riprap in south slope downspout and perimeter ditch.
   - Continue mulching.
   - Hydroseed application.
   - Repair Phase 2 north slope surface swale.

5. QA/QC Testing:
    - Weekly stormwater inspection performed.
    - Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
    - 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness.
    - Verified cover soil and topsoil thickness over geocomposite.
    - Verified cover soil compaction with nuke density gauge.
    - 46 destructive tests have been performed on geomembrane installed.

6. Submittals/Field Change Orders/Permit Change Orders:
    - N/A

7. Changes to the Specifications and Drawings:
    - N/A

8. Project Meetings
    - The next project meeting will be Thursday October 5, 2023 @ 10am. This meeting will be the final walk through for Phase 3.

9. Discussion Items.
    - N/A



Photo 1 – South slope with geocomposite and drainage pipe



Photo 2 – Cover soil placement at the top of Phase 3

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Photo 3 – Southwest corner of Phase 3



Photo 4 – Constructing surface swale on the west slope of Phase 3

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CONSTRUCTION MEETING MINUTES
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DOLBY LANDFILL FACILITY
MILLINOCKET, MAINE
Thursday, October 5, 2023 – 10:00 AM

1. Meeting Attendees:
   - Sevee & Maher Engineers – Trevor Michaud, Nick Thompson
   - Gordon Contracting – Nick Schmeidlehner
   - MEDEP – Daniel Emerson, Vera Maheu, Sean Doughtery

2. Project Safety:
   - Gordon Contracting personnel holds job site safety meetings each Monday morning for anticipated work.
   - There have been no safety incidents to date.

3. Work Performed Over the Previous Two Weeks:
   - Finalized placing cover soil over geocomposite.
   - Finalized installation of underdrain piping and drainage sand along intermediate underdrain berms.
   - Finalized installation of surface swales along the southwest corner and the south slope of Phase 3.
   - Finalized installation of riprap in perimeter ditch and south slope downspout.
   - Finalized hay mulch application.
   - Repaired Phase 2 north slope surface swale.
   - Built up existing roadway in front of leachate pond.
   - Installed soil diversion berm in perimeter ditch near CB-1i.

4. Work Anticipated Over the Next Two Weeks:
   - Finalize hydroseed application.
   - General site clean-up.
   - Demobilize equipment and materials.
   - Mulch and temporary seeding for all disturbed areas, laydown area, and stockpiles.

5. QA/QC Testing:
   - Weekly stormwater inspection performed. See associated report.
   - Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.

- 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite. See associated spreadsheet.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 46 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QC.

6. Submittals/Field Change Orders/Permit Change Orders:
   - N/A
7. Changes to the Specifications and Drawings:
   - N/A
8. Discussion Items:
   - Gordon will fix any erosion rills from previous rain events on Phase 3 and apply hay mulch and hydroseed.
   - Gordon will apply additional hay mulch over the first area covered with cover soil on the west slope of Phase 3 and hydroseed.



Photo 1 – Gordon fixed Phase 2 surface swale. Photo taken looking east.



Photo 2 – Gordon fixing Phase 3 west slope surface swale from rain damage. Photo taken looking north.



Photo 3 – Gordon installing erosion control matting along surface swale. Photo taken looking south.



Photo 4 – Gordon building surface swale along the south slope of Phase 3. Photo taken looking east.



Photo 5 – Gordon installing soil diversion berm in perimeter ditch. Photo taken looking west.



Photo 6 – Gordon applying hay mulch over Phase 3. Photo taken looking southwest.



Photo 7 – Gordon building up existing roadway in front of leachate pond. Photo taken looking south.



Photo 8 – Gordon adding riprap to perimeter ditch. Photo taken looking east.

ATTACHMENT 4

CONTRACTOR SUBMITTALS

SME
SEVEE & MAHER
ENGINEERS

SME
SEVEE & MAHER
ENGINEERS

CONTRACTOR SUBMITTALS

Date: 6/5/2023

SME Job No. 220265.01

SME Transmittal No. 14 **Contractor's Transmittal No. 14 (Liner Layout)**

To: Drew Straehle
Gordon Contracting

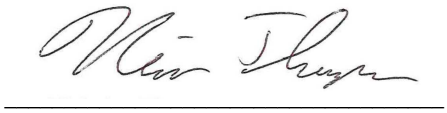
Project Title: Dolby Phases 2 and 3 Final Cover Upgrade

We are transmitting the following listed submittals with actions as indicated:

Description	No. of Copies	No Exception Taken	Make Corrections Noted	Revise and Resubmit	Rejected
Submittal No. 014 02771-2.0 Liner Layout Plan Phase 3	1	**X (1)**			

Remarks: See attached sheet* (X), or indicate here: None (1)
1. Fusion and Extrusion overlap must be of sufficient length to perform the testing required outlined in the specifications.

Corrections or comments made relative to submittals during this review do not relieve the Contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of other trades, and performing his work in a safe and satisfactory manner.



*See attached item submittal sheets.

RECEIVED
By Nicholas Thompson at 12:52 pm, Jun 02, 2023

REVIEWED
By Nicholas Thompson at 12:53 pm, Jun 02, 2023

Gordon Contracting, Inc.
627 N. Dexter Rd.
Sangerville, Maine 04479
P: 207-876-3798
F: 207-876-3799

Project: 1020 Dolby Landfill Cover Upgrade
Dolby Landfill Road
Millinocket, Maine 04430
P: 207-876-3798
F: 207-876-3799

Submittal #02771-4.0 - Liner Layout Plan (Phase 3)
02771 - Geomembrane Liner

Revision	0	**Submittal Manager**	Drew Straehle (Gordon Contracting, Inc.)
Status	Open	**Date Created**	May 30, 2023
Issue Date	May 30, 2023	**Spec Section**	02771 - Geomembrane Liner
Responsible Contractor	Integrity Lining Systems, LLC	**Received From**	
Received Date	May 30, 2023	**Submit By**	May 30, 2023
Final Due Date	Jun 13, 2023	**Lead Time**	
		Cost Code	
Location		**Type**	Plans

Approvers Nicholas Thompson (Sevee & Maher Engineers, Inc)

Ball in Court Nicholas Thompson (Sevee & Maher Engineers, Inc)

Distribution Trevor Michaud (Sevee & Maher Engineers, Inc), Nicholas Thompson (Sevee & Maher Engineers, Inc), Nicholas Schmiedlehner (Gordon Contracting, Inc.), Brian Pierce (Sevee & Maher Engineers, Inc)

Description Liner Layout Plan for Phase (3).

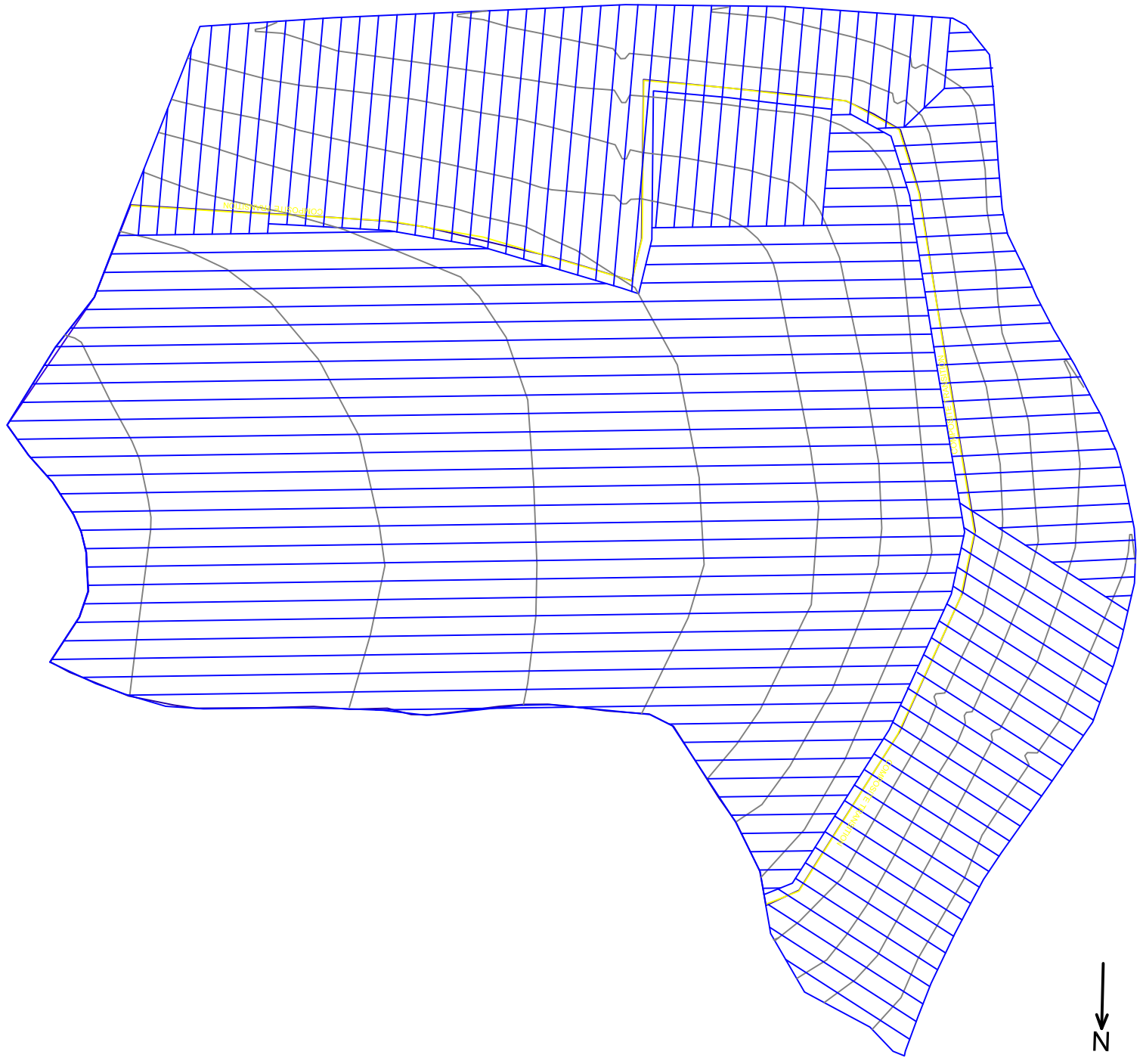
Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					Dolby Cap Proposed Liner Phase III 5-26 Model (1).pdf
Nicholas Thompson	May 30, 2023	Jun 13, 2023		Pending	

DOLBY LANDFILL COVER UPGRADE
PHASE 3
EAST MILLINOCKET, MAINE

PROPOSED PANEL LAYOUT

DATE - 5/30/23
DRAWN BY - JR



-100 -80 -60 -40 -20 0 20 40 60 80 100

NOTES

1. PANELS AND SEAMS ARE SHOWN FOR GENERAL SEQUENCE AND ORIENTATION. FIELD SUPERVISOR MAY MODIFY TO MEET FIELD CONDITIONS.
2. ROLL SPLICES ARE NOT SHOWN. THEY WILL BE PRESENT ON BOTH THE FLOOR AND SLOPE.
3. WHEN PRACTICAL THE SEAMING METHOD WILL BE FUSION.
4. ALL LAYERS WILL FOLLOW THE SAME GENERAL ORIENTATION.

ROLL SPLICE DETAIL

TYPICAL FOR ALL ROLL SPLICES...INCLUDING WHEN THEY FALL ON SLOPES

P39 P40 P41

PANELS WILL BE NUMBERED ACCORDINGLY AT ROLL SPLICES

All Seams Will be either

Typical Fusion Weld Detail

Typical Extrusion Weld Detail

INTEGRITY LINING SYSTEMS LLC

ATTACHMENT 5

CONSTRUCTION BORROW SOURCE/IN-PLACE TESTING

- **GAS COLLECTION SAND THICKNESS TESTING**
- **GAS COLLECTION SAND**
- **COVER SOIL COMPACTION TESTING**
- **COVER SOIL AND TOPSOIL THICKNESS TESTING**
- **ON-SITE COVER SOIL TESTING**

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ENGINEERS

- **GAS COLLECTION SAND THICKNESS TESTING**

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SEVEE & MAHER
ENGINEERS

Lift Thickness Testing					
Phase 3 Cover Upgrade Gas Vent Sand					
CQA Engineer: Trevor Michaud		Project Number: 220265.01	Project Manager: Nick Thompson		
DATE	TEST NO.	TEST DEPTH (Inches)	PASS/FAIL	TESTING AREA	COMMENTS
5/8/2023	1	19	P	NW Corner of Phase 3	N/A
5/8/2023	2	17	P	NW Corner of Phase 3	N/A
5/8/2023	3	10	P	NW Corner of Phase 3	N/A
5/8/2023	4	15	P	NW Corner of Phase 3	N/A
5/8/2023	5	21	P	NW Corner of Phase 3	N/A
5/8/2023	6	19	P	NW Corner of Phase 3	N/A
5/8/2023	7	19	P	NW Corner of Phase 3	N/A
5/9/2023	8	19	P	NW Corner of Phase 3	N/A
5/9/2023	9	19	P	NW Corner of Phase 3	N/A
5/9/2023	10	15	P	NW Corner of Phase 3	N/A
5/9/2023	11	20	P	NW Corner of Phase 3	N/A
5/9/2023	12	19	P	NW Corner of Phase 3	N/A
5/9/2023	13	19	P	NW Corner of Phase 3	N/A
5/9/2023	14	19	P	NW Corner of Phase 3	N/A
5/9/2023	15	10	P	NW Corner of Phase 3	N/A
5/9/2023	16	24	P	NW Corner of Phase 3	N/A
5/9/2023	17	12	P	NW Corner of Phase 3	N/A
5/9/2023	18	15	P	NW Corner of Phase 3	N/A
5/9/2023	19	19	P	NW Corner of Phase 3	N/A
5/9/2023	20	24	P	NW Corner of Phase 3	N/A
5/9/2023	21	24	P	NW Corner of Phase 3	N/A
5/9/2023	22	24	P	NW Corner of Phase 3	N/A
5/9/2023	23	19	P	NW Corner of Phase 3	N/A
5/9/2023	24	19	P	NW Corner of Phase 3	N/A
5/9/2023	25	7	P	NW Corner of Phase 3	N/A
5/9/2023	26	24	P	NW Corner of Phase 3	N/A
5/9/2023	27	19	P	NW Corner of Phase 3	N/A
5/9/2023	28	22	P	NW Corner of Phase 3	N/A
5/10/2023	29	24	P	West Slope of Phase 3	N/A
5/10/2023	30	19	P	West Slope of Phase 3	N/A
5/10/2023	31	19	P	West Slope of Phase 3	N/A
5/10/2023	32	34	P	West Slope of Phase 3	N/A
5/10/2023	33	12	P	West Slope of Phase 3	N/A
5/10/2023	34	16	P	West Slope of Phase 3	N/A
5/10/2023	35	19	P	West Slope of Phase 3	N/A
5/10/2023	36	12	P	West Slope of Phase 3	N/A
5/10/2023	37	15	P	West Slope of Phase 3	N/A
5/10/2023	38	17	P	West Slope of Phase 3	N/A
5/10/2023	39	20	P	West Slope of Phase 3	N/A
5/10/2023	40	17	P	West Slope of Phase 3	N/A

Lift Thickness Testing					
Phase 3 Cover Upgrade Gas Vent Sand					
CQA Engineer: Trevor Michaud		Project Number: 220265.01	Project Manager: Nick Thompson		
DATE	TEST NO.	TEST DEPTH (Inches)	PASS/FAIL	TESTING AREA	COMMENTS
5/11/2023	41	11	P	West Slope of Phase 3	N/A
5/11/2023	42	19	P	West Slope of Phase 3	N/A
5/11/2023	43	7	P	West Slope of Phase 3	N/A
5/11/2023	44	7	P	West Slope of Phase 3	N/A
5/11/2023	45	16	P	West Slope of Phase 3	N/A
5/11/2023	46	19	P	West Slope of Phase 3	N/A
5/11/2023	47	20	P	West Slope of Phase 3	N/A
5/11/2023	48	12	P	West Slope of Phase 3	N/A
5/11/2023	49	12	P	West Slope of Phase 3	N/A
5/11/2023	50	12	P	West Slope of Phase 3	N/A
5/11/2023	51	14	P	West Slope of Phase 3	N/A
5/11/2023	52	17	P	West Slope of Phase 3	N/A
5/11/2023	53	10	P	West Slope of Phase 3	N/A
5/11/2023	54	20	P	West Slope of Phase 3	N/A
5/12/2023	55	14	P	West Slope of Phase 3	N/A
5/12/2023	56	18	P	West Slope of Phase 3	N/A
5/12/2023	57	7	P	West Slope of Phase 3	N/A
5/12/2023	58	16	P	West Slope of Phase 3	N/A
5/12/2023	59	9	P	West Slope of Phase 3	N/A
5/15/2023	60	14	P	West Slope of Phase 3	N/A
5/15/2023	61	19	P	West Slope of Phase 3	N/A
5/15/2023	62	14	P	West Slope of Phase 3	N/A
5/15/2023	63	24	P	West Slope of Phase 3	N/A
5/15/2023	64	19	P	West Slope of Phase 3	N/A
5/15/2023	65	22	P	West Slope of Phase 3	N/A
5/15/2023	66	12	P	West Slope of Phase 3	N/A
5/15/2023	67	10	P	West Slope of Phase 3	N/A
5/15/2023	68	11	P	West Slope of Phase 3	N/A
5/15/2023	69	13	P	West Slope of Phase 3	N/A
5/15/2023	70	22	P	West Slope of Phase 3	N/A
5/15/2023	71	15	P	West Slope of Phase 3	N/A
6/15/2023	72	8	P	SW Corner of Phase 3	N/A
6/15/2023	73	8	P	SW Corner of Phase 3	N/A
6/15/2023	74	8	P	SW Corner of Phase 3	N/A
6/15/2023	75	8	P	SW Corner of Phase 3	N/A
6/15/2023	76	8	P	SW Corner of Phase 3	N/A
6/15/2023	77	8	P	SW Corner of Phase 3	N/A
6/15/2023	78	8	P	SW Corner of Phase 3	N/A
6/15/2023	79	8	P	SW Corner of Phase 3	N/A
6/15/2023	80	8	P	SW Corner of Phase 3	N/A

Lift Thickness Testing					
Phase 3 Cover Upgrade Gas Vent Sand					
CQA Engineer: Trevor Michaud		Project Number: 220265.01	Project Manager: Nick Thompson		
DATE	TEST NO.	TEST DEPTH (Inches)	PASS/FAIL	TESTING AREA	COMMENTS
6/15/2023	81	8	P	SW Corner of Phase 3	N/A
6/20/2023	82	7	P	SW Corner of Phase 3	N/A
6/20/2023	83	7	P	SW Corner of Phase 3	N/A
6/20/2023	84	7	P	SW Corner of Phase 3	N/A
6/20/2023	85	7	P	SW Corner of Phase 3	N/A
6/20/2023	86	7	P	SW Corner of Phase 3	N/A
6/20/2023	87	7	P	SW Corner of Phase 3	N/A
6/20/2023	88	7	P	SW Corner of Phase 3	N/A
6/20/2023	89	7	P	SW Corner of Phase 3	N/A
6/20/2023	90	7	P	SW Corner of Phase 3	N/A
6/20/2023	91	7	P	SW Corner of Phase 3	N/A
6/20/2023	92	7	P	SW Corner of Phase 3	N/A
6/20/2023	93	7	P	SW Corner of Phase 3	N/A
6/20/2023	94	7	P	SW Corner of Phase 3	N/A
6/21/2023	95	6	P	Top of Phase 3	N/A
6/21/2023	96	6	P	Top of Phase 3	N/A
6/21/2023	97	6	P	Top of Phase 3	N/A
6/21/2023	98	6	P	Top of Phase 3	N/A
6/21/2023	99	6	P	Top of Phase 3	N/A
6/21/2023	100	6	P	Top of Phase 3	N/A
6/21/2023	101	6	P	Top of Phase 3	N/A
6/21/2023	102	6	P	Top of Phase 3	N/A
6/21/2023	103	6	P	Top of Phase 3	N/A
6/21/2023	104	6	P	Top of Phase 3	N/A
6/21/2023	105	6	P	Top of Phase 3	N/A
6/21/2023	106	6	P	Top of Phase 3	N/A
6/21/2023	107	6	P	Top of Phase 3	N/A
6/21/2023	108	6	P	Top of Phase 3	N/A
6/21/2023	109	6	P	Top of Phase 3	N/A
6/21/2023	110	6	P	Top of Phase 3	N/A
6/22/2023	111	6	P	Top of Phase 3	N/A
6/22/2023	112	6	P	Top of Phase 3	N/A
6/22/2023	113	6	P	Top of Phase 3	N/A
6/22/2023	114	6	P	Top of Phase 3	N/A
6/22/2023	115	6	P	Top of Phase 3	N/A
6/22/2023	116	6	P	Top of Phase 3	N/A
6/22/2023	117	6	P	Top of Phase 3	N/A
6/22/2023	118	6	P	Top of Phase 3	N/A
6/22/2023	119	6	P	Top of Phase 3	N/A
6/22/2023	120	6	P	Top of Phase 3	N/A

Lift Thickness Testing					
Phase 3 Cover Upgrade Gas Vent Sand					
CQA Engineer: Trevor Michaud		Project Number: 220265.01	Project Manager: Nick Thompson		
DATE	TEST NO.	TEST DEPTH (Inches)	PASS/FAIL	TESTING AREA	COMMENTS
6/22/2023	121	6	P	Top of Phase 3	N/A
6/22/2023	122	6	P	Top of Phase 3	N/A
6/22/2023	123	6	P	Top of Phase 3	N/A
6/22/2023	124	6	P	Top of Phase 3	N/A
6/22/2023	125	6	P	Top of Phase 3	N/A
6/22/2023	126	6	P	Top of Phase 3	N/A
6/22/2023	127	6	P	Top of Phase 3	N/A
6/22/2023	128	6	P	Top of Phase 3	N/A
7/12/2023	129	12	P	South Slope of Phase 3	N/A
7/12/2023	130	13	P	South Slope of Phase 3	N/A
7/12/2023	131	6	P	South Slope of Phase 3	N/A
7/12/2023	132	15	P	South Slope of Phase 3	N/A
7/12/2023	133	11	P	South Slope of Phase 3	N/A
7/12/2023	134	19	P	South Slope of Phase 3	N/A
7/13/2023	135	17	P	South Slope of Phase 3	N/A
7/13/2023	136	12	P	South Slope of Phase 3	N/A
7/13/2023	137	10	P	South Slope of Phase 3	N/A
7/13/2023	138	8	P	South Slope of Phase 3	N/A
7/18/2023	139	8	P	South Slope of Phase 3	N/A
7/18/2023	140	7	P	South Slope of Phase 3	N/A
7/18/2023	141	6	P	South Slope of Phase 3	N/A
7/18/2023	142	6	P	South Slope of Phase 3	N/A
7/18/2023	143	8	P	South Slope of Phase 3	N/A
7/18/2023	144	8	P	South Slope of Phase 3	N/A
7/18/2023	145	9	P	South Slope of Phase 3	N/A
7/18/2023	146	8	P	South Slope of Phase 3	N/A
7/18/2023	147	12	P	South Slope of Phase 3	N/A
7/18/2023	148	7	P	South Slope of Phase 3	N/A
7/18/2023	149	6	P	South Slope of Phase 3	N/A
7/18/2023	150	9	P	South Slope of Phase 3	N/A
7/20/2023	151	6	P	Top of Phase 3	N/A
7/20/2023	152	6	P	Top of Phase 3	N/A
7/20/2023	153	6	P	Top of Phase 3	N/A
7/20/2023	154	6	P	Top of Phase 3	N/A
7/20/2023	155	6	P	Top of Phase 3	N/A
7/20/2023	156	6	P	Top of Phase 3	N/A
7/20/2023	157	6	P	Top of Phase 3	N/A
7/20/2023	158	6	P	Top of Phase 3	N/A
7/20/2023	159	6	P	Top of Phase 3	N/A
7/20/2023	160	6	P	Top of Phase 3	N/A

Lift Thickness Testing					
Phase 3 Cover Upgrade Gas Vent Sand					
CQA Engineer: Trevor Michaud		Project Number: 220265.01	Project Manager: Nick Thompson		
DATE	TEST NO.	TEST DEPTH (Inches)	PASS/FAIL	TESTING AREA	COMMENTS
7/20/2023	161	6	P	Top of Phase 3	N/A
7/20/2023	162	6	P	Top of Phase 3	N/A
7/20/2023	163	6	P	Top of Phase 3	N/A
7/20/2023	164	6	P	Top of Phase 3	N/A
7/20/2023	165	6	P	Top of Phase 3	N/A
7/20/2023	166	6	P	Top of Phase 3	N/A
7/20/2023	167	6	P	Top of Phase 3	N/A
7/20/2023	168	6	P	Top of Phase 3	N/A
7/20/2023	169	6	P	Top of Phase 3	N/A
7/20/2023	170	6	P	Top of Phase 3	N/A
7/20/2023	171	6	P	Top of Phase 3	N/A
7/20/2023	172	6	P	Top of Phase 3	N/A
7/20/2023	173	6	P	Top of Phase 3	N/A
7/20/2023	174	6	P	Top of Phase 3	N/A
7/20/2023	175	6	P	Top of Phase 3	N/A
7/24/2023	176	6	P	Top of Phase 3	N/A
7/24/2023	177	11	P	Top of Phase 3	N/A
7/24/2023	178	12	P	Top of Phase 3	N/A
7/24/2023	179	8	P	Top of Phase 3	N/A
7/24/2023	180	6	P	Top of Phase 3	N/A
7/24/2023	181	10	P	Top of Phase 3	N/A
7/24/2023	182	11	P	Top of Phase 3	N/A
7/24/2023	183	10	P	Top of Phase 3	N/A
7/25/2023	184	8	P	Top of Phase 3	N/A
7/25/2023	185	7	P	Top of Phase 3	N/A
7/25/2023	186	8	P	Top of Phase 3	N/A
7/25/2023	187	9	P	Top of Phase 3	N/A
7/25/2023	188	7	P	Top of Phase 3	N/A
7/26/2023	189	8	P	Top of Phase 3	N/A
7/26/2023	190	9	P	Top of Phase 3	N/A
7/26/2023	191	10	P	Top of Phase 3	N/A
7/26/2023	192	7	P	Top of Phase 3	N/A
7/26/2023	193	7	P	Top of Phase 3	N/A
7/26/2023	194	9	P	Top of Phase 3	N/A
7/26/2023	195	10	P	Top of Phase 3	N/A
7/26/2023	196	13	P	Top of Phase 3	N/A
7/31/2023	197	9	P	South Slope of Phase 3	N/A
7/31/2023	198	12	P	South Slope of Phase 3	N/A
7/31/2023	199	9	P	South Slope of Phase 3	N/A
7/31/2023	200	10	P	South Slope of Phase 3	N/A

Lift Thickness Testing					
Phase 3 Cover Upgrade Gas Vent Sand					
CQA Engineer: Trevor Michaud		Project Number: 220265.01	Project Manager: Nick Thompson		
DATE	**TEST NO.**	**TEST DEPTH (Inches)**	**PASS/FAIL**	**TESTING AREA**	**COMMENTS**
7/31/2023	201	12	P	South Slope of Phase 3	N/A
7/31/2023	202	10	P	South Slope of Phase 3	N/A
8/3/2023	203	8	P	Top of Phase 3	N/A
8/3/2023	204	7	P	Top of Phase 3	N/A
8/3/2023	205	9	P	Top of Phase 3	N/A
8/3/2023	206	9	P	Top of Phase 3	N/A
8/3/2023	207	8	P	Top of Phase 3	N/A
8/3/2023	208	7	P	Top of Phase 3	N/A

- **GAS COLLECTION SAND BORROW SOURCE TESTING**

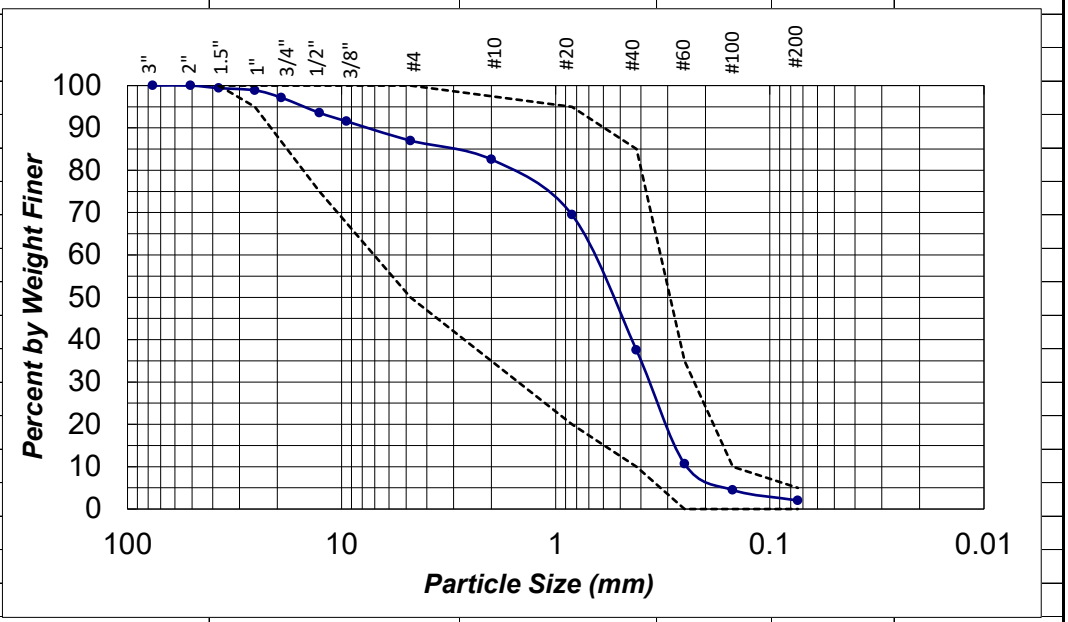
SME
SEVEE & MAHER
ENGINEERS

Grain Size Analysis - ASTM D421

PROJECT NAME:	MEDECD Phase III		PROJECT No:	220265.01
	Dolby Cover Upgrade		DATE:	17-May-23
SAMPLE SOURCE:	Gas Collection Sand		SAMPLE No:	BSGS-01
SAMPLE DESCRIP:	Brown medium to fine SAND,			

DATA

			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**			
2	50.8	**100.0**			
1.5	37.5	**99.4**	100	100	**F**
1	25.4	**98.9**	95	100	**P**
3/4	19.1	**97.1**			
1/2	12.7	**93.6**	75	100	**P**
3/8	9.5	**91.6**			
#4	4.76	**87.0**	50	100	**P**
#10	2.0	**82.6**			
#20	0.84	**69.5**	20	95	**P**
#40	0.42	**37.6**	10	85	**P**
#60	0.25	**10.6**	0	35	**P**
#100	0.149	**4.5**	0	10	**P**
#200	0.074	**2.0**	0	5	**P**



Water Content (%) =	4.3

SME
Sevee & Maher Engineers, Inc.

Constant Head Hydraulic Conductivity
ASTM D 2434

PROJECT: MEDECD - Phase III
Dolby Cover Upgrade

PROJECT No.: 220265
DATE: 06/27/23
TESTED BY: BDP [2]

SAMPLE No: BSGS-1
DEPTH (ft):

SAMPLE DESC: Brown medium to fine SAND

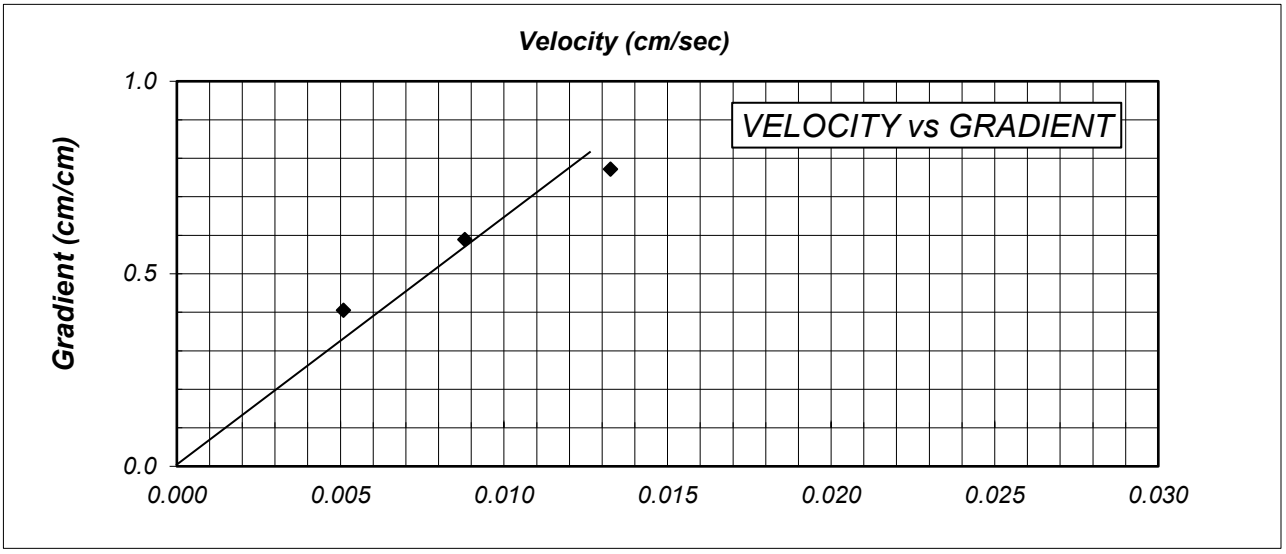
Initial Water Content = 4.0 %
Initial Total Unit Wt.= 105.9 pcf
Initial Dry Density = 101.8 pcf

Weight = 1425 gms
Length (L)= 10.363 cm
Area (A)= 81.073 cm^2

Temperature = 21.5 ^{O}C

RUN	HEAD (Δh) (cm)	TIME (sec)	H2O (gms)	GRADIENT (cm/cm)	V (cm/sec)	Q (cc/sec)	K (cm/sec)
1	4.2	180	74.32	0.405	0.0051	0.413	1.3E-02
2	6.1	120	85.67	0.589	0.0088	0.714	1.5E-02
3	8.0	90	96.70	0.772	0.0133	1.074	1.7E-02

$$\text{GRADIENT} = \frac{\Delta h}{L} \qquad Q = \frac{H_2 0}{T} \qquad \text{VELOCITY} = \frac{Q}{A} \qquad \text{PERMEABILITY (K)} = \frac{Q*L}{A\,\Delta h}$$



Average Permeability = 1.5E-02 cm/sec

REMARKS: 1) sample compacted at as-received water content
2) sample split on the 3/8" sieve

6/28/2023

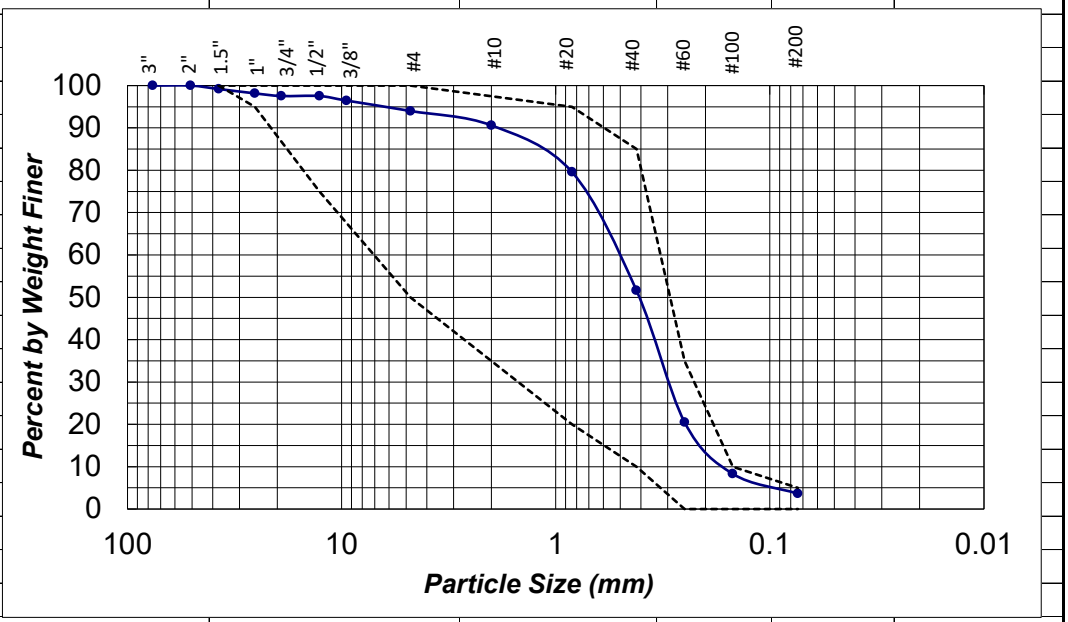
SME
SEVEE & MAHER
ENGINEERS

Grain Size Analysis - ASTM D421

PROJECT NAME:	MEDECD Phase III		PROJECT No:	220265.01
	Dolby Cover Upgrade		DATE:	26-May-23
SAMPLE SOURCE:	Gas Collection Sand		SAMPLE No:	BSGS-02
SAMPLE DESCRIP:	Brown medium to fine SAND,			

DATA

			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**			
2	50.8	**100.0**			
1.5	37.5	**99.2**	100	100	**F**
1	25.4	**98.2**	95	100	**P**
3/4	19.1	**97.5**			
1/2	12.7	**97.5**	75	100	**P**
3/8	9.5	**96.5**			
#4	4.76	**94.0**	50	100	**P**
#10	2.0	**90.6**			
#20	0.84	**79.6**	20	95	**P**
#40	0.42	**51.7**	10	85	**P**
#60	0.25	**20.5**	0	35	**P**
#100	0.149	**8.3**	0	10	**P**
#200	0.074	**3.6**	0	5	**P**



Water Content (%) =	5.4

SME
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Constant Head Hydraulic Conductivity
ASTM D 2434

PROJECT: MEDECD - Phase III
Dolby Cover Upgrade

PROJECT No.: 220265
DATE: 06/27/23
TESTED BY: BDP [2]

SAMPLE No: BSGS-2
DEPTH (ft):

SAMPLE DESC: Brown medium to fine SAND

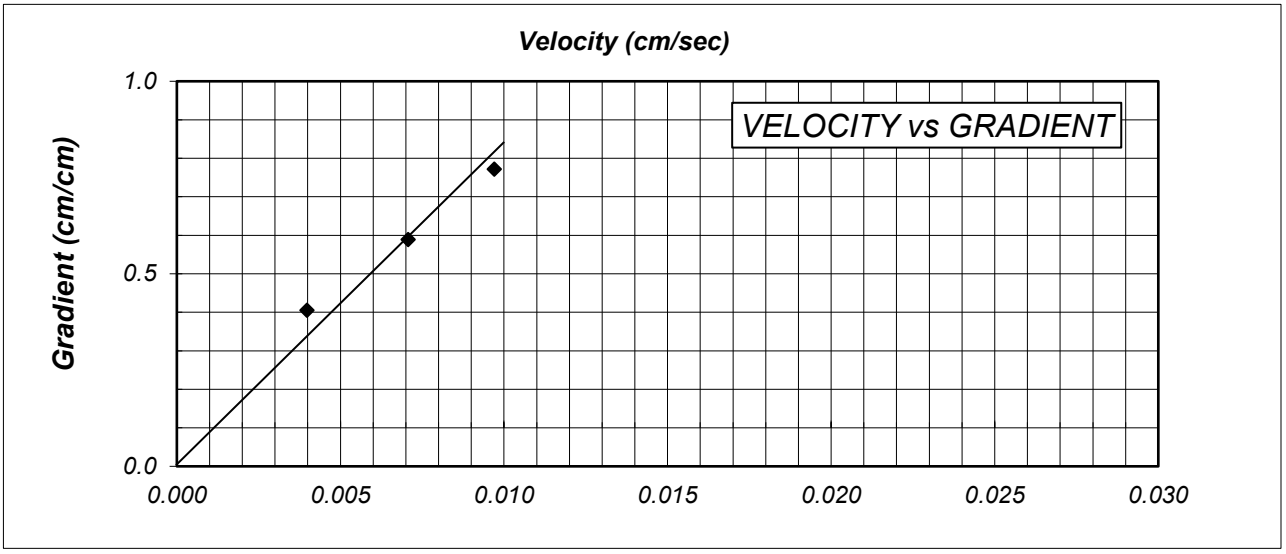
Initial Water Content = 4.0 %
Initial Total Unit Wt.= 105.6 pcf
Initial Dry Density = 101.5 pcf

Weight = 1421 gms
Length (L)= 10.363 cm
Area (A)= 81.073 cm^2

Temperature = 21 ^{O}C

RUN	HEAD (Δh) (cm)	TIME (sec)	H2O (gms)	GRADIENT (cm/cm)	V (cm/sec)	Q (cc/sec)	K (cm/sec)
1	4.2	180	58.03	0.405	0.0040	0.322	9.8E-03
2	6.1	120	68.76	0.589	0.0071	0.573	1.2E-02
3	8.0	90	70.79	0.772	0.0097	0.787	1.3E-02

$$\text{GRADIENT} = \frac{\Delta h}{L} \qquad Q = \frac{H_2 0}{T} \qquad \text{VELOCITY} = \frac{Q}{A} \qquad \text{PERMEABILITY (K)} = \frac{Q*L}{A\,\Delta h}$$



Average Permeability = 1.1E-02 cm/sec

REMARKS: 1) sample compacted at as-received water content
2) sample split on the 3/8" sieve

SME
SEVEE & MAHER ENGINEERS

- **COVER SOIL COMPACTION TESTING**

SME
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ENGINEERS

Nuclear Density Testing											
Phase 3 Cover Upgrade Cover Soil											
CQA Engineer: Trevor Michaud			Job No. 220265.01		Project Manager: Nick Thompson						
Date	Test No. ID	Lift No.	Yd max (Lab) (lb/ft^3)	w opt. (lab) (%)	Yd (Field) (lb/ft^3)	w (Field) (%)	Compaction (Field) (%)	Test Depth (in.)	Pass/Fail	Test Area	Remarks
7/14/2023	1	1	127.5	8.6	124.2	7.1	97.4	12	P	NW CORNER PHASE 3	
7/14/2023	2	1	127.5	8.6	122.8	9	96.3	12	P	NW CORNER PHASE 3	
7/14/2023	3	1	127.5	8.6	121.1	8.5	95.0	12	P	NW CORNER PHASE 3	
7/14/2023	4	1	127.5	8.6	119.2	7.8	93.5	12	P	NW CORNER PHASE 3	
7/14/2023	5	1	127.5	8.6	114.8	9.7	90.0	12	P	NW CORNER PHASE 3	
7/14/2023	6	1	127.5	8.6	119.2	9.9	93.5	12	P	NW CORNER PHASE 3	
7/14/2023	7	1	127.5	8.6	121.5	8.3	95.3	12	P	NW CORNER PHASE 3	
7/14/2023	8	1	127.5	8.6	121.0	8.9	94.9	12	P	NW CORNER PHASE 3	
7/14/2023	9	1	127.5	8.6	118.1	9.1	92.6	12	P	NW CORNER PHASE 3	
7/18/2023	10	1	127.5	8.6	122.3	11.3	95.9	12	P	WEST SLOPE PHASE 3	
7/18/2023	11	1	127.5	8.6	116.3	7.7	91.2	12	P	WEST SLOPE PHASE 3	
7/18/2023	12	1	127.5	8.6	116.9	9.9	91.7	12	P	WEST SLOPE PHASE 3	
7/18/2023	13	1	127.5	8.6	114.8	10.7	90.0	12	P	WEST SLOPE PHASE 3	
7/18/2023	14	1	127.5	8.6	114.8	10.0	90.0	12	P	WEST SLOPE PHASE 3	
7/18/2023	15	1	127.5	8.6	116.3	7.2	91.2	12	P	WEST SLOPE PHASE 3	
7/18/2023	16	1	127.5	8.6	123.7	9.3	97.0	12	P	WEST SLOPE PHASE 3	
7/21/2023	17	1	127.5	8.6	115.3	8.3	90.4	12	P	WEST SLOPE PHASE 3	
7/21/2023	18	1	127.5	8.6	118.2	11.5	92.7	12	P	WEST SLOPE PHASE 3	
7/21/2023	19	1	127.5	8.6	126.9	8.4	99.5	12	P	WEST SLOPE PHASE 3	
7/21/2023	20	1	127.5	8.6	127.5	9.7	100	12	P	WEST SLOPE PHASE 3	
7/21/2023	21	1	127.5	8.6	126.6	11.9	99.3	12	P	WEST SLOPE PHASE 3	
7/21/2023	22	1	127.5	8.6	117.7	14.3	92.3	12	P	WEST SLOPE PHASE 3	
7/21/2023	23	1	127.5	8.6	121.6	13.5	95.4	12	P	WEST SLOPE PHASE 3	
7/21/2023	24	1	127.5	8.6	118.3	12.5	92.8	12	P	WEST SLOPE PHASE 3	
7/21/2023	25	1	127.5	8.6	115.0	12.9	90.2	12	P	WEST SLOPE PHASE 3	
7/21/2023	26	1	127.5	8.6	116.5	13.7	91.4	12	P	WEST SLOPE PHASE 3	
7/21/2023	27	1	127.5	8.6	116.7	14	91.5	12	P	WEST SLOPE PHASE 3	
7/21/2023	28	1	127.5	8.6	115.4	13.1	90.5	12	P	WEST SLOPE PHASE 3	
7/27/2023	29	1	127.5	8.6	115.3	8.3	90.4	12	P	WEST SLOPE PHASE 3	
7/27/2023	30	1	123.9	10.8	113.6	8.1	91.7	12	P	Top Phase 3	
7/27/2023	31	1	123.9	10.8	122.2	7.8	98.6	12	P	Top Phase 3	
7/27/2023	32	1	127.5	8.6	127.5	7.3	100	12	P	Top Phase 3	
7/27/2023	33	1	127.5	8.6	116.4	8.5	91.3	12	P	Top Phase 3	
7/27/2023	34	1	123.9	10.8	114.5	9.7	92.4	12	P	Top Phase 3	
7/27/2023	35	1	123.9	10.8	111.5	8.8	90.0	12	P	West Slope N of Downspout	
7/27/2023	36	1	123.9	10.8	114.7	8.7	92.6	12	P	West Slope N of Downspout	
7/27/2023	37	1	123.9	10.8	115.8	10.0	93.5	12	P	West Slope N of Downspout	
7/27/2023	38	1	123.9	10.8	113.9	12.5	91.9	12	P	West Slope S of Downspout	
7/27/2023	39	1	127.5	8.6	122.9	8.2	96.4	12	P	West Slope S of Downspout	
7/27/2023	40	1	127.5	8.6	117.0	9.0	91.8	12	P	West Slope S of Downspout	
7/27/2023	41	1	123.9	10.8	114.6	8.9	92.5	12	P	West Slope S of Downspout	
7/27/2023	42	1	123.9	10.8	114.9	9.3	92.7	12	P	West Slope S of Downspout	
8/3/2023	43	1	123.9	10.8	113.1	13.7	91.3	12	P	West Slope S of Downspout	
8/3/2023	44	1	123.9	10.8	111.5	11.7	90	12	P	West Slope S of Downspout	
8/3/2023	45	1	123.9	10.8	112.3	10.8	90.6	12	P	West Slope S of Downspout	
8/3/2023	46	1	123.9	10.8	113.2	14.1	91.4	12	P	West Slope S of Downspout	
8/3/2023	47	1	123.9	10.8	111.5	16.6	90	12	P	West Slope S of Downspout	
8/3/2023	48	1	123.9	10.8	118.9	12.8	96	12	P	West Slope S of Downspout	
8/3/2023	49	1	123.9	10.8	115.4	10.4	93.1	12	P	West Slope S of Downspout	
8/28/2023	50	1	123.9	10.8	122.0	11.2	98.5	12	P	West Slope S of Downspout	

Nuclear Density Testing											
Phase 3 Cover Upgrade Cover Soil											
CQA Engineer: Trevor Michaud			Job No. 220265.01		Project Manager: Nick Thompson						
Date	Test No. ID	Lift No.	Yd max (Lab) (lb/ft^3)	w opt. (lab) (%)	Yd (Field) (lb/ft^3)	w (Field) (%)	Compaction (Field) (%)	Test Depth (in.)	Pass/Fail	Test Area	Remarks
8/28/2023	51	1	123.9	10.8	111.5	11.3	90	12	P	West Slope S of Downspout	
8/28/2023	52	1	123.9	10.8	114.6	10.6	92.5	12	P	West Slope S of Downspout	
8/28/2023	53	1	123.9	10.8	112.1	12.9	90.5	12	P	West Slope S of Downspout	
8/28/2023	54	1	123.9	10.8	121.2	11.1	97.8	12	P	West Slope S of Downspout	
8/28/2023	55	1	123.9	10.8	121.5	14.1	98.1	12	P	West Slope S of Downspout	
8/28/2023	56	1	123.9	10.8	114.9	14.7	92.7	12	P	West Slope S of Downspout	
8/28/2023	57	1	123.9	10.8	121.1	12.8	97.7	12	P	West Slope S of Downspout	
8/28/2023	58	1	123.9	10.8	121.8	11.4	98.3	12	P	West Slope S of Downspout	
9/15/2023	59	1	127.5	8.6	120.7	11.8	94.7	12	P	Top Phase 3	
9/15/2023	60	1	123.9	10.8	112.4	14.9	90.7	12	P	Top Phase 3	
9/15/2023	61	1	123.9	10.8	117.8	10.3	95.1	12	P	Top Phase 3	
9/15/2023	62	1	123.9	10.8	118.4	12.9	95.6	12	P	Top Phase 3	
9/15/2023	63	1	123.9	10.8	116.5	10.3	94.0	12	P	Top Phase 3	
9/15/2023	64	1	123.9	10.8	121.8	10.6	98.3	12	P	Top Phase 3	
9/15/2023	65	1	123.9	10.8	112.7	14.6	91.0	12	P	Top Phase 3	
9/15/2023	66	1	123.9	10.8	122.4	8.7	98.8	12	P	Top Phase 3	
9/15/2023	67	1	123.9	10.8	115.1	12.9	92.9	12	P	Top Phase 3	
9/15/2023	68	1	123.9	10.8	118.8	12.4	95.9	12	P	Top Phase 3	
9/15/2023	69	1	123.9	10.8	121.5	9.7	98.1	12	P	Top Phase 3	
9/15/2023	70	1	123.9	10.8	118.1	15.9	95.3	12	P	Top Phase 3	
9/15/2023	71	1	123.9	10.8	111.5	18.5	90.0	12	P	Top Phase 3	
9/15/2023	72	1	123.9	10.8	117.2	13.7	94.6	12	P	Top Phase 3	
9/15/2023	73	1	123.9	10.8	112.6	13.4	90.9	12	P	Top Phase 3	
9/21/2023	74	1	123.9	10.8	114.4	11.9	92.3	12	P	SW Corner Phase 3	
9/21/2023	75	1	123.9	10.8	117.4	10.1	94.8	12	P	SW Corner Phase 3	
9/21/2023	76	1	123.9	10.8	117.4	10.6	94.8	12	P	SW Corner Phase 3	
9/21/2023	77	1	123.9	10.8	116.2	11.8	93.8	12	P	SW Corner Phase 3	
9/21/2023	78	1	123.9	10.8	114.6	12.4	92.5	12	P	SW Corner Phase 3	
9/21/2023	79	1	123.9	10.8	119.6	11.3	96.5	12	P	SW Corner Phase 3	
9/26/2023	80	1	123.9	10.8	118.4	8.7	95.6	12	P	Top Phase 3	
9/26/2023	81	1	123.9	10.8	118.1	9.5	95.3	12	P	Top Phase 3	
9/26/2023	82	1	123.9	10.8	118.7	9.5	95.8	12	P	Top Phase 3	
9/26/2023	83	1	123.9	10.8	112.7	12.1	91.0	12	P	Top Phase 3	
9/26/2023	84	1	123.9	10.8	116.3	8.8	93.9	12	P	Top Phase 3	

Nuclear Density Testing											
Phase 3 Cover Upgrade Cover Soil											
CQA Engineer: Trevor Michaud			Job No. 220265.01		Project Manager: Nick Thompson						
Date	Test No. ID	Lift No.	Yd max (Lab) (lb/ft^3)	w opt. (lab) (%)	Yd (Field) (lb/ft^3)	w (Field) (%)	Compaction (Field) (%)	Test Depth (in.)	Pass/Fail	Test Area	Remarks
9/26/2023	85	1	123.9	10.8	122.5	9.3	98.9	12	P	Top Phase 3	
9/26/2023	86	1	123.9	10.8	115.5	8.9	93.2	12	P	Top Phase 3	
9/26/2023	87	1	123.9	10.8	119.4	9.7	96.4	12	P	Top Phase 3	
9/26/2023	88	1	123.9	10.8	118.7	10.6	95.8	12	P	Top Phase 3	
9/26/2023	89	1	123.9	10.8	117.3	8.8	94.7	12	P	Top Phase 3	
9/26/2023	90	1	123.9	10.8	118.4	8.3	95.6	12	P	Top Phase 3	
9/26/2023	91	1	123.9	10.8	119.8	9.8	96.7	12	P	Top Phase 3	
9/26/2023	92	1	123.9	10.8	116.0	11.5	93.6	12	P	Top Phase 3	
9/26/2023	93	1	123.9	10.8	123.9	9.9	100	12	P	Top Phase 3	
9/27/2023	94	1	123.9	10.8	119.6	10.4	96.5	12	P	South Slope	
9/27/2023	95	1	123.9	10.8	119.4	9.6	96.4	12	P	South Slope	
9/27/2023	96	1	123.9	10.8	120.3	9.3	97.1	12	P	South Slope	
9/27/2023	97	1	123.9	10.8	121.2	8.4	97.8	12	P	South Slope	
9/27/2023	98	1	123.9	10.8	113.6	12.2	91.7	12	P	South Slope	
9/27/2023	99	1	123.9	10.8	115.7	11.8	93.4	12	P	South Slope	
9/27/2023	100	1	123.9	10.8	120.6	10	97.3	12	P	South Slope	
9/27/2023	101	1	123.9	10.8	120.8	9.8	97.5	12	P	South Slope	
9/28/2023	102	1	123.9	10.8	117.8	11.1	95.1	12	P	South Slope	
9/28/2023	103	1	123.9	10.8	116.2	10.3	93.8	12	P	South Slope	
9/28/2023	104	1	123.9	10.8	119.4	10.7	96.4	12	P	South Slope	
9/28/2023	105	1	123.9	10.8	118.2	10	95.4	12	P	South Slope	
9/28/2023	106	1	123.9	10.8	111.9	11.7	90.3	12	P	South Slope	
9/28/2023	107	1	123.9	10.8	115.8	11.1	93.5	12	P	South Slope	

Lift Thickness Testing					
Phase 3 Cover Upgrade Cover Soil					
CQA Engineer: Trevor Michaud		Job No. 220265.01		Project Manager: Nick Thompson	
DATE	TEST NO.	TEST DEPTH (Inches)	PASS/FAIL	TESTING AREA	Remarks
7/13/2023	1	14	P	NW CORNER OF PHASE 3	
7/13/2023	2	14	P	NW CORNER OF PHASE 3	
7/13/2023	3	14	P	NW CORNER OF PHASE 3	
7/13/2023	4	14	P	NW CORNER OF PHASE 3	
7/13/2023	5	14	P	NW CORNER OF PHASE 3	
7/13/2023	6	14	P	NW CORNER OF PHASE 3	
7/13/2023	7	14	P	NW CORNER OF PHASE 3	
7/13/2023	8	14	P	NW CORNER OF PHASE 3	
7/13/2023	9	14	P	NW CORNER OF PHASE 3	
7/13/2023	10	14	P	NW CORNER OF PHASE 3	
7/13/2023	11	14	P	NW CORNER OF PHASE 3	
7/13/2023	12	14	P	NW CORNER OF PHASE 3	
7/14/2023	13	14	P	WEST SLOPE OF PHASE 3	
7/14/2023	14	14	P	WEST SLOPE OF PHASE 3	
7/14/2023	15	14	P	WEST SLOPE OF PHASE 3	
7/14/2023	16	14	P	WEST SLOPE OF PHASE 3	
7/14/2023	17	14	P	WEST SLOPE OF PHASE 3	
7/14/2023	18	14	P	WEST SLOPE OF PHASE 3	
7/17/2023	19	14	P	TOP OF WEST SLOPE	
7/17/2023	20	14	P	TOP OF WEST SLOPE	
7/17/2023	21	14	P	TOP OF WEST SLOPE	
7/17/2023	22	14	P	TOP OF WEST SLOPE	
7/17/2023	23	14	P	TOP OF WEST SLOPE	
7/21/2023	24	14	P	WEST SLOPE OF PHASE 3	
7/21/2023	25	14	P	WEST SLOPE OF PHASE 3	
7/21/2023	26	14	P	WEST SLOPE OF PHASE 3	
7/21/2023	27	14	P	WEST SLOPE OF PHASE 3	
7/21/2023	28	14	P	WEST SLOPE OF PHASE 3	
7/21/2023	29	14	P	WEST SLOPE OF PHASE 3	
7/21/2023	30	14	P	WEST SLOPE OF PHASE 3	
7/21/2023	31	14	P	WEST SLOPE OF PHASE 3	
7/21/2023	32	14	P	WEST SLOPE OF PHASE 3	
7/21/2023	33	14	P	WEST SLOPE OF PHASE 3	
7/21/2023	34	14	P	WEST SLOPE OF PHASE 3	
7/24/2023	35	14	P	WEST SLOPE OF PHASE 3	
7/24/2023	36	14	P	WEST SLOPE OF PHASE 3	
7/24/2023	37	14	P	Top of Phase 3	
7/24/2023	38	14	P	Top of Phase 3	
7/24/2023	39	14	P	West Slope North of Downspout	
7/24/2023	40	14	P	West Slope North of Downspout	

Lift Thickness Testing					
Phase 3 Cover Upgrade Cover Soil					
CQA Engineer: Trevor Michaud		Job No. 220265.01		Project Manager: Nick Thompson	
DATE	TEST NO.	TEST DEPTH (Inches)	PASS/FAIL	TESTING AREA	Remarks
7/24/2023	41	14	P	West Slope North of Downspout	
7/24/2023	42	14	P	West Slope North of Downspout	
7/24/2023	43	14	P	West Slope North of Downspout	
7/24/2023	44	14	P	West Slope North of Downspout	
7/24/2023	45	14	P	West Slope North of Downspout	
7/24/2023	46	14	P	West Slope North of Downspout	
7/24/2023	47	14	P	West Slope North of Downspout	
7/24/2023	48	14	P	West Slope North of Downspout	
7/24/2023	49	14	P	West Slope North of Downspout	
7/24/2023	50	14	P	West Slope North of Downspout	
7/25/2023	51	14	P	Top Phase 3	
7/25/2023	52	14	P	Top Phase 3	
7/25/2023	53	14	P	Top Phase 3	
7/25/2023	54	14	P	Top Phase 3	
7/25/2023	55	14	P	Top Phase 3	
7/25/2023	56	14	P	Top Phase 3	
7/26/2023	57	14	P	West Slope South of Downspout	
7/26/2023	58	14	P	West Slope South of Downspout	
7/26/2023	59	14	P	West Slope South of Downspout	
7/26/2023	60	14	P	West Slope South of Downspout	
7/26/2023	61	14	P	West Slope South of Downspout	
7/27/2023	62	14	P	West Slope South of Downspout	
7/27/2023	63	14	P	West Slope South of Downspout	
7/27/2023	64	14	P	West Slope South of Downspout	
7/27/2023	65	14	P	West Slope South of Downspout	
7/27/2023	66	14	P	West Slope South of Downspout	
7/27/2023	67	14	P	West Slope South of Downspout	
7/27/2023	68	14	P	West Slope South of Downspout	
7/27/2023	69	14	P	West Slope South of Downspout	
7/31/2023	70	14	P	West Slope South of Downspout	
7/31/2023	71	14	P	West Slope South of Downspout	
7/31/2023	72	14	P	West Slope South of Downspout	
7/31/2023	73	14	P	West Slope South of Downspout	
7/31/2023	74	14	P	West Slope South of Downspout	
7/31/2023	75	14	P	West Slope South of Downspout	
7/31/2023	76	14	P	West Slope South of Downspout	
7/31/2023	77	14	P	West Slope South of Downspout	
7/31/2023	78	14	P	West Slope South of Downspout	
7/31/2023	79	14	P	West Slope South of Downspout	
7/31/2023	80	14	P	West Slope South of Downspout	

Lift Thickness Testing					
Phase 3 Cover Upgrade Cover Soil					
CQA Engineer: Trevor Michaud		Job No. 220265.01		Project Manager: Nick Thompson	
DATE	TEST NO.	TEST DEPTH (Inches)	PASS/FAIL	TESTING AREA	Remarks
7/31/2023	81	14	P	West Slope South of Downspout	
8/28/2023	82	14	P	Top Phase 3	
8/28/2023	83	14	P	Top Phase 3	
8/28/2023	84	14	P	Top Phase 3	
8/28/2023	85	14	P	Top Phase 3	
8/28/2023	86	14	P	Top Phase 3	
8/28/2023	87	14	P	Top Phase 3	
8/28/2023	88	14	P	Top Phase 3	
8/28/2023	89	14	P	Top Phase 3	
8/28/2023	90	14	P	Top Phase 3	
9/7/2023	91	14	P	Top Phase 3	
9/7/2023	92	14	P	Top Phase 3	
9/7/2023	93	14	P	Top Phase 3	
9/7/2023	94	14	P	Top Phase 3	
9/7/2023	95	14	P	Top Phase 3	
9/7/2023	96	14	P	Top Phase 3	
9/7/2023	97	14	P	Top Phase 3	
9/7/2023	98	14	P	Top Phase 3	
9/7/2023	99	14	P	Top Phase 3	
9/7/2023	100	14	P	Top Phase 3	
9/7/2023	101	14	P	Top Phase 3	
9/7/2023	102	14	P	Top Phase 3	
9/7/2023	103	14	P	Top Phase 3	
9/7/2023	104	14	P	Top Phase 3	
9/7/2023	105	14	P	Top Phase 3	
9/14/2023	106	14	P	Top Phase 3 by South Slope Downspout	
9/14/2023	107	14	P	Top Phase 3 by South Slope Downspout	
9/14/2023	108	14	P	Top Phase 3 by South Slope Downspout	
9/14/2023	109	14	P	Top Phase 3 by South Slope Downspout	
9/14/2023	110	14	P	Top Phase 3 by South Slope Downspout	
9/14/2023	111	14	P	Top Phase 3	
9/14/2023	112	14	P	Top Phase 3	
9/14/2023	113	14	P	Top Phase 3	
9/14/2023	114	14	P	Top Phase 3	
9/14/2023	115	14	P	Top Phase 3	
9/15/2023	116	14	P	Top Phase 3	
9/15/2023	117	14	P	Top Phase 3	
9/15/2023	118	14	P	Top Phase 3	
9/15/2023	119	14	P	Top Phase 3	
9/15/2023	120	14	P	Top Phase 3	
9/15/2023	121	14	P	Top Phase 3	
9/15/2023	122	14	P	Top Phase 3	

Lift Thickness Testing					
Phase 3 Cover Upgrade Cover Soil					
CQA Engineer: Trevor Michaud		Job No. 220265.01		Project Manager: Nick Thompson	
DATE	TEST NO.	TEST DEPTH (Inches)	PASS/FAIL	TESTING AREA	Remarks
9/15/2023	123	14	P	Top Phase 3	
9/15/2023	124	14	P	Top Phase 3	
9/15/2023	125	14	P	Top Phase 3	
9/15/2023	126	14	P	Top Phase 3	
9/15/2023	127	14	P	Top Phase 3	
9/15/2023	128	14	P	Top Phase 3	
9/15/2023	129	14	P	Top Phase 3	
9/15/2023	130	14	P	Top Phase 3	
9/15/2023	131	14	P	Top Phase 3	
9/15/2023	132	14	P	Top Phase 3	
9/15/2023	133	14	P	Top Phase 3	
9/15/2023	134	14	P	Top Phase 3	
9/15/2023	135	14	P	Top Phase 3	
9/20/2023	136	14	P	SW Corner Phase 3	
9/20/2023	137	14	P	SW Corner Phase 3	
9/20/2023	138	14	P	SW Corner Phase 3	
9/20/2023	139	14	P	SW Corner Phase 3	
9/20/2023	140	14	P	SW Corner Phase 3	
9/20/2023	141	14	P	SW Corner Phase 3	
9/20/2023	142	14	P	SW Corner Phase 3	
9/20/2023	143	14	P	SW Corner Phase 3	
9/20/2023	144	14	P	SW Corner Phase 3	
9/20/2023	145	14	P	SW Corner Phase 3	
9/20/2023	146	14	P	SW Corner Phase 3	
9/20/2023	147	14	P	SW Corner Phase 3	
9/20/2023	148	14	P	SW Corner Phase 3	
9/20/2023	149	14	P	SW Corner Phase 3	
9/20/2023	150	14	P	SW Corner Phase 3	
9/20/2023	151	14	P	SW Corner Phase 3	
9/20/2023	152	14	P	SW Corner Phase 3	
9/20/2023	153	14	P	SW Corner Phase 3	
9/20/2023	154	14	P	SW Corner Phase 3	
9/20/2023	155	14	P	SW Corner Phase 3	
9/22/2023	156	14	P	Top Phase 3	
9/22/2023	157	14	P	Top Phase 3	
9/22/2023	158	14	P	Top Phase 3	
9/22/2023	159	14	P	Top Phase 3	
9/22/2023	160	14	P	Top Phase 3	
9/22/2023	161	14	P	Top Phase 3	
9/22/2023	162	14	P	Top Phase 3	

Lift Thickness Testing					
Phase 3 Cover Upgrade Cover Soil					
CQA Engineer: Trevor Michaud		Job No. 220265.01		Project Manager: Nick Thompson	
DATE	TEST NO.	TEST DEPTH (Inches)	PASS/FAIL	TESTING AREA	Remarks
9/22/2023	163	14	P	Top Phase 3	
9/22/2023	164	14	P	Top Phase 3	
9/22/2023	165	14	P	Top Phase 3	
9/22/2023	166	14	P	Top Phase 3	
9/22/2023	167	14	P	Top Phase 3	
9/22/2023	168	14	P	Top Phase 3	
9/22/2023	169	14	P	Top Phase 3	
9/22/2023	170	14	P	Top Phase 3	
9/22/2023	171	14	P	Top Phase 3	
9/22/2023	172	14	P	Top Phase 3	
9/22/2023	173	14	P	Top Phase 3	
9/22/2023	174	14	P	Top Phase 3	
9/22/2023	175	14	P	Top Phase 3	
9/25/2023	176	14	P	South Slope	
9/25/2023	177	14	P	South Slope	
9/25/2023	178	14	P	South Slope	
9/25/2023	179	14	P	South Slope	
9/25/2023	180	14	P	South Slope	
9/26/2023	181	14	P	South Slope	
9/26/2023	182	14	P	South Slope	
9/26/2023	183	14	P	South Slope	
9/26/2023	184	14	P	South Slope	
9/26/2023	185	14	P	South Slope	
9/26/2023	186	14	P	South Slope	
9/26/2023	187	14	P	South Slope	
9/26/2023	188	14	P	South Slope	
9/26/2023	189	14	P	Top Phase 3	
9/26/2023	190	14	P	Top Phase 3	
9/26/2023	191	14	P	Top Phase 3	
9/26/2023	192	14	P	Top Phase 3	
9/26/2023	193	14	P	Top Phase 3	
9/26/2023	194	14	P	Top Phase 3	
9/26/2023	195	14	P	Top Phase 3	
9/26/2023	196	14	P	Top Phase 3	
9/26/2023	197	14	P	Top Phase 3	
9/26/2023	198	14	P	Top Phase 3	
9/27/2023	199	14	P	South Slope	
9/27/2023	200	14	P	South Slope	
9/27/2023	201	14	P	South Slope	
9/27/2023	202	14	P	South Slope	
9/27/2023	203	14	P	South Slope	

Lift Thickness Testing					
Phase 3 Cover Upgrade Cover Soil					
CQA Engineer: Trevor Michaud		Job No. 220265.01		Project Manager: Nick Thompson	
DATE	TEST NO.	TEST DEPTH (Inches)	PASS/FAIL	TESTING AREA	Remarks
9/27/2023	204	14	P	South Slope	
9/27/2023	205	14	P	South Slope	
9/27/2023	206	14	P	South Slope	
9/27/2023	207	14	P	South Slope	
9/27/2023	208	14	P	South Slope	
9/27/2023	209	14	P	South Slope	
9/27/2023	210	14	P	South Slope	
9/27/2023	211	14	P	South Slope	
9/27/2023	212	14	P	South Slope	
9/27/2023	213	14	P	South Slope	
9/27/2023	214	14	P	South Slope	
9/28/2023	215	14	P	South Slope	
9/28/2023	216	14	P	South Slope	
9/28/2023	217	14	P	South Slope	
9/28/2023	218	14	P	South Slope	
9/28/2023	219	14	P	South Slope	
9/28/2023	220	14	P	South Slope	
9/28/2023	221	14	P	South Slope	
9/28/2023	222	14	P	South Slope	
9/28/2023	223	14	P	South Slope	
9/28/2023	224	14	P	South Slope	
9/28/2023	225	14	P	South Slope	
9/28/2023	226	14	P	South Slope	
9/28/2023	227	14	P	South Slope	
9/28/2023	228	14	P	South Slope	
9/28/2023	229	14	P	South Slope	
9/28/2023	230	14	P	South Slope	
9/28/2023	231	14	P	South Slope	
9/28/2023	232	14	P	South Slope	
9/28/2023	233	14	P	South Slope	
9/28/2023	234	14	P	South Slope	
9/28/2023	235	14	P	South Slope	
9/28/2023	236	14	P	South Slope	
9/28/2023	237	14	P	South Slope	
9/28/2023	238	14	P	South Slope	
9/28/2023	239	14	P	South Slope	

Lift Thickness Testing					
Phase 3 Cover Upgrade Topsoil					
CQA Engineer: Trevor Michaud		Project Number: 220265.01		Project Manager: Nick Thompson	
DATE	TEST NO.	TEST DEPTH (inches)	PASS/FAIL	TESTING AREA	REMARKS
7/13/2023	1	3	P	NW CORNER PHASE 3	
7/13/2023	2	4	P	NW CORNER PHASE 3	
7/13/2023	3	5	P	NW CORNER PHASE 3	
7/13/2023	4	5	P	NW CORNER PHASE 3	
7/13/2023	5	5	P	NW CORNER PHASE 3	
7/13/2023	6	3	P	NW CORNER PHASE 3	
7/13/2023	7	4	P	NW CORNER PHASE 3	
7/13/2023	8	5	P	NW CORNER PHASE 3	
7/13/2023	9	5	P	NW CORNER PHASE 3	
7/13/2023	10	4	P	NW CORNER PHASE 3	
7/13/2023	11	4	P	NW CORNER PHASE 3	
7/13/2023	12	4	P	NW CORNER PHASE 3	
7/14/2023	13	4	P	WEST SLOPE OF PHASE 3	
7/14/2023	14	4	P	WEST SLOPE OF PHASE 3	
7/14/2023	15	4	P	WEST SLOPE OF PHASE 3	
7/14/2023	16	4	P	WEST SLOPE OF PHASE 3	
7/14/2023	17	4	P	WEST SLOPE OF PHASE 3	
7/14/2023	18	4	P	WEST SLOPE OF PHASE 3	
7/17/2023	19	4	P	TOP OF WEST SLOPE	
7/17/2023	20	6	P	TOP OF WEST SLOPE	
7/17/2023	21	3	P	TOP OF WEST SLOPE	
7/17/2023	22	4	P	TOP OF WEST SLOPE	
7/17/2023	23	4	P	TOP OF WEST SLOPE	
7/21/2023	24	4	P	WEST SLOPE OF PHASE 3	
7/21/2023	25	4	P	WEST SLOPE OF PHASE 3	
7/21/2023	26	4	P	WEST SLOPE OF PHASE 3	
7/21/2023	27	4	P	WEST SLOPE OF PHASE 3	
7/21/2023	28	4	P	WEST SLOPE OF PHASE 3	
7/21/2023	29	4	P	WEST SLOPE OF PHASE 3	
7/21/2023	30	4	P	WEST SLOPE OF PHASE 3	
7/21/2023	31	4	P	WEST SLOPE OF PHASE 3	
7/21/2023	32	4	P	WEST SLOPE OF PHASE 3	
7/21/2023	33	4	P	WEST SLOPE OF PHASE 3	
7/21/2023	34	4	P	WEST SLOPE OF PHASE 3	
7/24/2023	35	4	P	WEST SLOPE OF PHASE 3	
7/24/2023	36	4	P	WEST SLOPE OF PHASE 3	
7/24/2023	37	4	P	Top of Phase 3	
7/24/2023	38	4	P	Top of Phase 3	
7/24/2023	39	4	P	West Slope North of Downspout	
7/24/2023	40	4	P	West Slope North of Downspout	
7/24/2023	41	4	P	West Slope North of Downspout	
7/24/2023	42	4	P	West Slope North of Downspout	
7/24/2023	43	4	P	West Slope North of Downspout	
7/24/2023	44	4	P	West Slope North of Downspout	

Lift Thickness Testing					
Phase 3 Cover Upgrade Topsoil					
CQA Engineer: Trevor Michaud		Project Number: 220265.01	Project Manager: Nick Thompson		
DATE	TEST NO.	TEST DEPTH (inches)	PASS/FAIL	TESTING AREA	REMARKS
7/24/2023	45	4	P	West Slope North of Downspout	
7/24/2023	46	4	P	West Slope North of Downspout	
7/24/2023	47	4	P	West Slope North of Downspout	
7/24/2023	48	4	P	West Slope North of Downspout	
7/24/2023	49	4	P	West Slope North of Downspout	
7/24/2023	50	4	P	West Slope North of Downspout	
7/25/2023	51	4	P	Top Phase 3	
7/25/2023	52	4	P	Top Phase 3	
7/25/2023	53	4	P	Top Phase 3	
7/25/2023	54	4	P	Top Phase 3	
7/25/2023	55	4	P	Top Phase 3	
7/25/2023	56	4	P	Top Phase 3	
7/26/2023	57	4	P	West Slope South of Downspout	
7/26/2023	58	4	P	West Slope South of Downspout	
7/26/2023	59	4	P	West Slope South of Downspout	
7/26/2023	60	4	P	West Slope South of Downspout	
7/26/2023	61	4	P	West Slope South of Downspout	
7/27/2023	62	4	P	West Slope South of Downspout	
7/27/2023	63	4	P	West Slope South of Downspout	
7/27/2023	64	4	P	West Slope South of Downspout	
7/27/2023	65	4	P	West Slope South of Downspout	
7/27/2023	66	4	P	West Slope South of Downspout	
7/27/2023	67	4	P	West Slope South of Downspout	
7/27/2023	68	4	P	West Slope South of Downspout	
7/27/2023	69	4	P	West Slope South of Downspout	
7/31/2023	70	4	P	West Slope South of Downspout	
7/31/2023	71	4	P	West Slope South of Downspout	
7/31/2023	72	4	P	West Slope South of Downspout	
7/31/2023	73	4	P	West Slope South of Downspout	
7/31/2023	74	4	P	West Slope South of Downspout	
7/31/2023	75	4	P	West Slope South of Downspout	
7/31/2023	76	4	P	West Slope South of Downspout	
7/31/2023	77	4	P	West Slope South of Downspout	
7/31/2023	78	4	P	West Slope South of Downspout	
7/31/2023	79	4	P	West Slope South of Downspout	
7/31/2023	80	4	P	West Slope South of Downspout	
7/31/2023	81	4	P	West Slope South of Downspout	
8/28/2023	82	4	P	Top Phase 3	
8/28/2023	83	4	P	Top Phase 3	
8/28/2023	84	4	P	Top Phase 3	
8/28/2023	85	4	P	Top Phase 3	
8/28/2023	86	4	P	Top Phase 3	
8/28/2023	87	4	P	Top Phase 3	
8/28/2023	88	4	P	Top Phase 3	

Lift Thickness Testing					
Phase 3 Cover Upgrade Topsoil					
CQA Engineer: Trevor Michaud		Project Number: 220265.01	Project Manager: Nick Thompson		
DATE	TEST NO.	TEST DEPTH (inches)	PASS/FAIL	TESTING AREA	REMARKS
8/28/2023	89	4	P	Top Phase 3	
8/28/2023	90	4	P	Top Phase 3	
9/7/2023	91	4	P	Top Phase 3	
9/7/2023	92	4	P	Top Phase 3	
9/7/2023	93	4	P	Top Phase 3	
9/7/2023	94	4	P	Top Phase 3	
9/7/2023	95	4	P	Top Phase 3	
9/7/2023	96	4	P	Top Phase 3	
9/7/2023	97	4	P	Top Phase 3	
9/7/2023	98	4	P	Top Phase 3	
9/7/2023	99	4	P	Top Phase 3	
9/7/2023	100	4	P	Top Phase 3	
9/7/2023	101	4	P	Top Phase 3	
9/7/2023	102	4	P	Top Phase 3	
9/7/2023	103	4	P	Top Phase 3	
9/7/2023	104	4	P	Top Phase 3	
9/7/2023	105	4	P	Top Phase 3	
9/14/2023	106	4	P	Top Phase 3	
9/14/2023	107	4	P	Top Phase 3	
9/14/2023	108	4	P	Top Phase 3	
9/14/2023	109	4	P	Top Phase 3	
9/14/2023	110	4	P	Top Phase 3	
9/14/2023	111	4	P	Top Phase 3 by South Slope Downspout	
9/14/2023	112	4	P	Top Phase 3 by South Slope Downspout	
9/14/2023	113	4	P	Top Phase 3 by South Slope Downspout	
9/14/2023	114	4	P	Top Phase 3 by South Slope Downspout	
9/14/2023	115	4	P	Top Phase 3 by South Slope Downspout	
9/15/2023	116	4	P	Top Phase 3	
9/15/2023	117	4	P	Top Phase 3	
9/15/2023	118	4	P	Top Phase 3	
9/15/2023	119	4	P	Top Phase 3	
9/15/2023	120	4	P	Top Phase 3	
9/15/2023	121	4	P	Top Phase 3	
9/15/2023	122	4	P	Top Phase 3	
9/15/2023	123	4	P	Top Phase 3	
9/15/2023	124	4	P	Top Phase 3	
9/15/2023	125	4	P	Top Phase 3	
9/15/2023	126	4	P	Top Phase 3	
9/15/2023	127	4	P	Top Phase 3	
9/15/2023	128	4	P	Top Phase 3	
9/15/2023	129	4	P	Top Phase 3	
9/15/2023	130	4	P	Top Phase 3	
9/15/2023	131	4	P	Top Phase 3	
9/15/2023	132	4	P	Top Phase 3	

Lift Thickness Testing					
Phase 3 Cover Upgrade Topsoil					
CQA Engineer: Trevor Michaud		Project Number: 220265.01		Project Manager: Nick Thompson	
DATE	TEST NO.	TEST DEPTH (inches)	PASS/FAIL	TESTING AREA	REMARKS
9/15/2023	133	4	P	Top Phase 3	
9/15/2023	134	4	P	Top Phase 3	
9/15/2023	135	4	P	Top Phase 3	
9/20/2023	136	4	P	SW Corner Phase 3	
9/20/2023	137	4	P	SW Corner Phase 3	
9/20/2023	138	4	P	SW Corner Phase 3	
9/20/2023	139	4	P	SW Corner Phase 3	
9/20/2023	140	4	P	SW Corner Phase 3	
9/20/2023	141	4	P	SW Corner Phase 3	
9/20/2023	142	4	P	SW Corner Phase 3	
9/20/2023	143	4	P	SW Corner Phase 3	
9/20/2023	144	4	P	SW Corner Phase 3	
9/20/2023	145	4	P	SW Corner Phase 3	
9/20/2023	146	4	P	SW Corner Phase 3	
9/20/2023	147	4	P	SW Corner Phase 3	
9/20/2023	148	4	P	SW Corner Phase 3	
9/20/2023	149	4	P	SW Corner Phase 3	
9/20/2023	150	4	P	SW Corner Phase 3	
9/20/2023	151	4	P	SW Corner Phase 3	
9/20/2023	152	4	P	SW Corner Phase 3	
9/20/2023	153	4	P	SW Corner Phase 3	
9/20/2023	154	4	P	SW Corner Phase 3	
9/20/2023	155	4	P	SW Corner Phase 3	
9/22/2023	156	4	P	Top Phase 3	
9/22/2023	157	4	P	Top Phase 3	
9/22/2023	158	4	P	Top Phase 3	
9/22/2023	159	4	P	Top Phase 3	
9/22/2023	160	4	P	Top Phase 3	
9/22/2023	161	4	P	Top Phase 3	
9/22/2023	162	4	P	Top Phase 3	
9/22/2023	163	4	P	Top Phase 3	
9/22/2023	164	4	P	Top Phase 3	
9/22/2023	165	4	P	Top Phase 3	
9/22/2023	166	4	P	Top Phase 3	
9/22/2023	167	4	P	Top Phase 3	
9/22/2023	168	4	P	Top Phase 3	
9/22/2023	169	4	P	Top Phase 3	
9/22/2023	170	4	P	Top Phase 3	
9/22/2023	171	4	P	Top Phase 3	
9/22/2023	172	4	P	Top Phase 3	
9/22/2023	173	4	P	Top Phase 3	
9/22/2023	174	4	P	Top Phase 3	
9/22/2023	175	4	P	Top Phase 3	
9/25/2023	176	4	P	South Slope	

Lift Thickness Testing					
Phase 3 Cover Upgrade Topsoil					
CQA Engineer: Trevor Michaud		Project Number: 220265.01	Project Manager: Nick Thompson		
DATE	TEST NO.	TEST DEPTH (inches)	PASS/FAIL	TESTING AREA	REMARKS
9/25/2023	177	4	P	South Slope	
9/25/2023	178	4	P	South Slope	
9/25/2023	179	4	P	South Slope	
9/25/2023	180	4	P	South Slope	
9/26/2023	181	4	P	South Slope	
9/26/2023	182	4	P	South Slope	
9/26/2023	183	4	P	South Slope	
9/26/2023	184	4	P	South Slope	
9/26/2023	185	4	P	South Slope	
9/26/2023	186	4	P	South Slope	
9/26/2023	187	4	P	South Slope	
9/26/2023	188	4	P	South Slope	
9/26/2023	189	4	P	Top Phase 3	
9/26/2023	190	4	P	Top Phase 3	
9/26/2023	191	4	P	Top Phase 3	
9/26/2023	192	4	P	Top Phase 3	
9/26/2023	193	4	P	Top Phase 3	
9/26/2023	194	4	P	Top Phase 3	
9/26/2023	195	4	P	Top Phase 3	
9/26/2023	196	4	P	Top Phase 3	
9/26/2023	197	4	P	Top Phase 3	
9/26/2023	198	4	P	Top Phase 3	
9/27/2023	199	4	P	South Slope	
9/27/2023	200	4	P	South Slope	
9/27/2023	201	4	P	South Slope	
9/27/2023	202	4	P	South Slope	
9/27/2023	203	4	P	South Slope	
9/27/2023	204	4	P	South Slope	
9/27/2023	205	4	P	South Slope	
9/27/2023	206	4	P	South Slope	
9/27/2023	207	4	P	South Slope	
9/27/2023	208	4	P	South Slope	
9/27/2023	209	4	P	South Slope	
9/27/2023	210	4	P	South Slope	
9/27/2023	211	4	P	South Slope	
9/27/2023	212	4	P	South Slope	
9/27/2023	213	4	P	South Slope	
9/27/2023	214	4	P	South Slope	
9/28/2023	215	4	P	South Slope	
9/28/2023	216	4	P	South Slope	
9/28/2023	217	4	P	South Slope	
9/28/2023	218	4	P	South Slope	
9/28/2023	219	4	P	South Slope	
9/28/2023	220	4	P	South Slope	

Lift Thickness Testing					
Phase 3 Cover Upgrade Topsoil					
CQA Engineer: Trevor Michaud		Project Number: 220265.01	Project Manager: Nick Thompson		
DATE	TEST NO.	TEST DEPTH (inches)	PASS/FAIL	TESTING AREA	REMARKS
9/28/2023	221	4	P	South Slope	
9/28/2023	222	4	P	South Slope	
9/28/2023	223	4	P	South Slope	
9/28/2023	224	4	P	South Slope	
9/28/2023	225	4	P	South Slope	
9/28/2023	226	4	P	South Slope	
9/28/2023	227	4	P	South Slope	
9/28/2023	228	4	P	South Slope	
9/28/2023	229	4	P	South Slope	
9/28/2023	230	4	P	South Slope	
9/28/2023	231	4	P	South Slope	
9/28/2023	232	4	P	South Slope	
9/28/2023	233	4	P	South Slope	
9/28/2023	234	4	P	South Slope	
9/28/2023	235	4	P	South Slope	
9/28/2023	236	4	P	South Slope	
9/28/2023	237	4	P	South Slope	
9/28/2023	238	4	P	South Slope	
9/28/2023	239	4	P	South Slope	

- **COVER SOIL AND TOPSOIL THICKNESS TESTING**

SME
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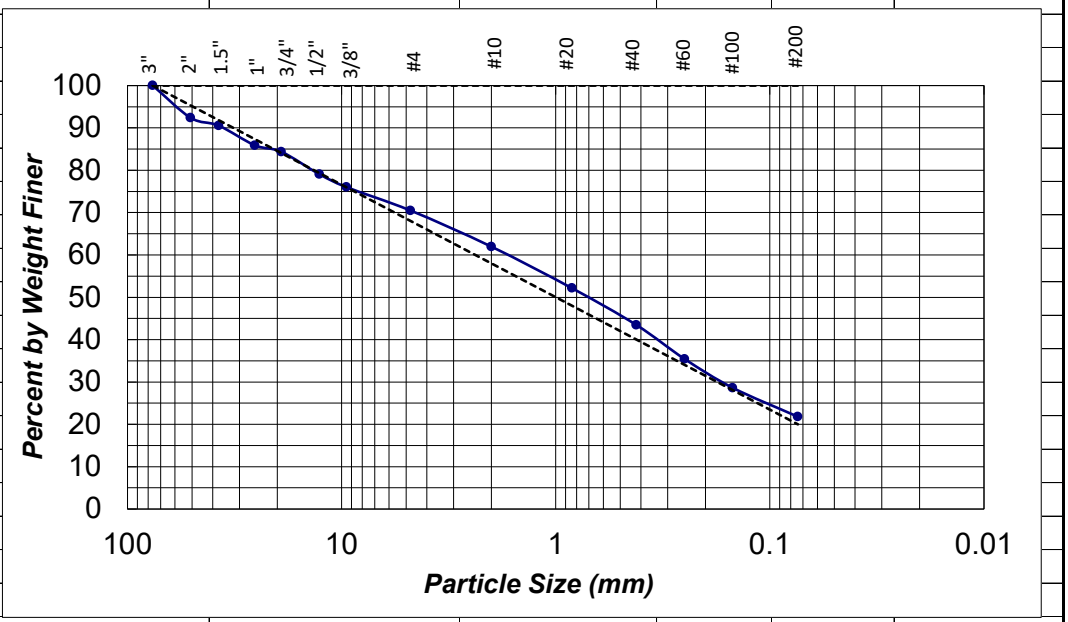
ENGINEERS

Grain Size Analysis - ASTM D6913

PROJECT NAME:	MEDECD Phase III		PROJECT No:		220265.01
	Dolby Cover Upgrade		DATE:		25-May-23
SAMPLE SOURCE:	West Slope Cover Soil		SAMPLE No:		WSCS-1
SAMPLE DESCRIP:	Brown gravelly SAND, some silt				
		DATA			
			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**	100	100	**P**
2	50.8	**92.4**			
1.5	37.5	**90.5**			
1	25.4	**85.9**			
3/4	19.1	**84.4**			
1/2	12.7	**79.1**			
3/8	9.5	**76.0**			
#4	4.76	**70.5**			
#10	2.0	**62.0**			
#20	0.84	**52.2**			
#40	0.42	**43.5**			
#60	0.25	**35.4**			
#100	0.149	**28.6**			
#200	0.074	**21.8**	20	100	**P**



Water Content (%) =	10.0

SME
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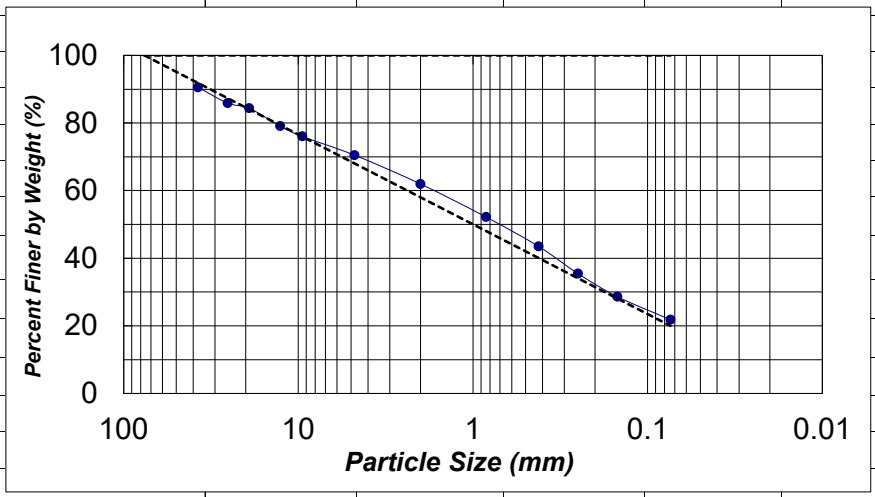
Grain Size Analysis and Moisture/Density

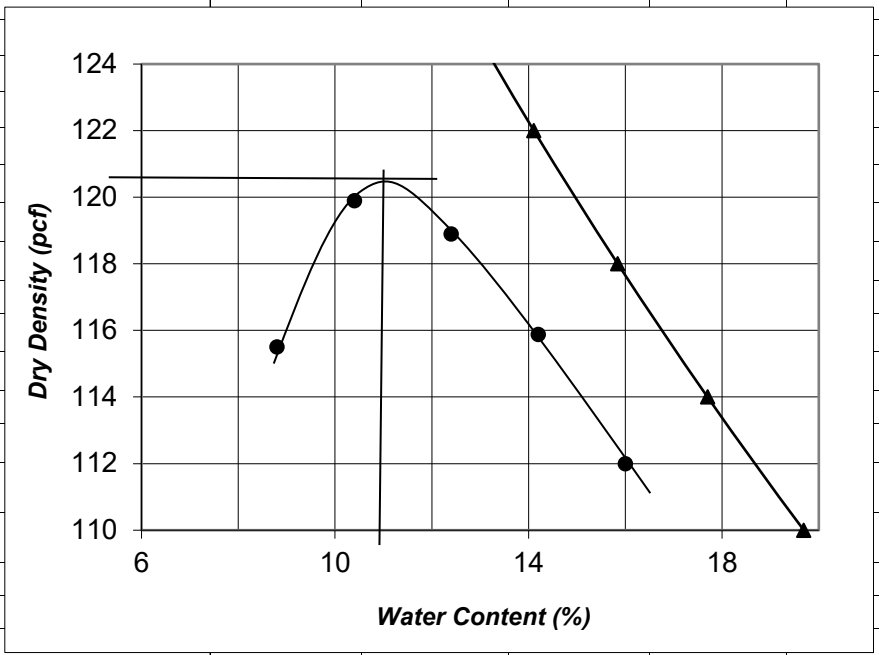
PROJECT NAME:	MEDECD Phase III	PROJECT No:	220265.01
	Dolby Cover Upgrade	DATE:	25-May-23
SAMPLE SOURCE:	West Slope Cover Soil	SAMPLE No:	WSCS-1
SAMPLE DESCRIP:	Brown gravelly SAND, some silt		

GRAIN SIZE ANALYSIS ASTM D 6913



ATTER. LIMITS (%)	
W_L =	
W_P =	
I_P =	
W_N =	10.0

MOISTURE-DENSITY ASTM D 698 B



MAXIMUM DRY DENSITY (pcf)	**120.5**
OPTIMUM W.C. (%)	**11**
CORRECTED	
$D.D._{max}$	**127.5**
$W.C._{opt}$	**8.6**

correction made for 24.0% oversize material

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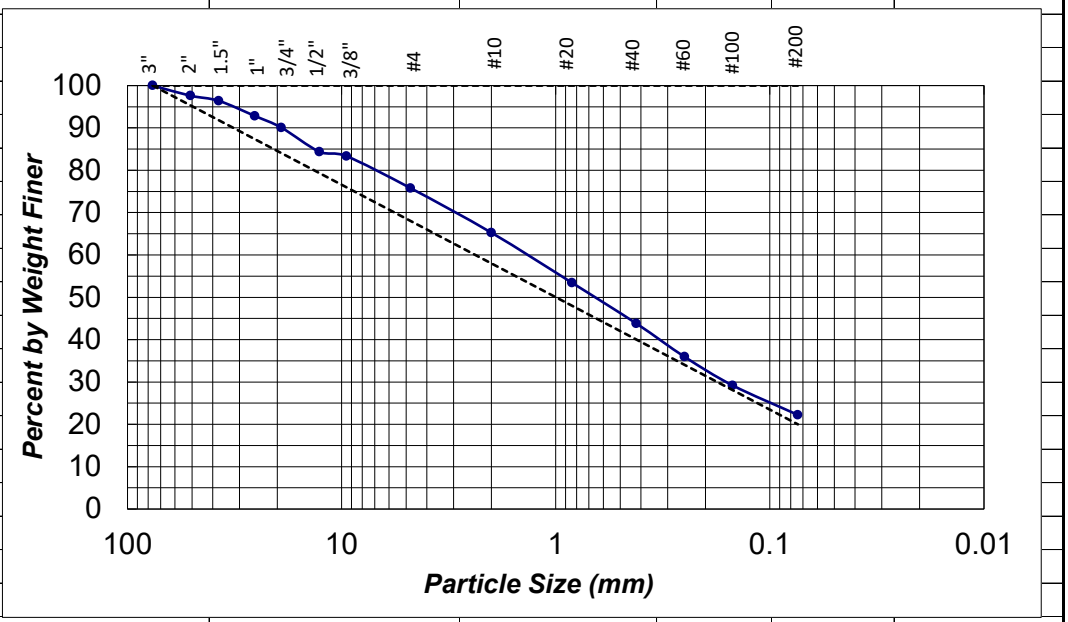
Grain Size Analysis - ASTM D6913

PROJECT NAME:	MEDECD Phase III		PROJECT No:		220265.01
	Dolby Cover Upgrade		DATE:		17-Jul-23
SAMPLE SOURCE:	South Slope Cover Soil		SAMPLE No:		SSCS-1
SAMPLE DESCRIP:	Brown gravelly SAND, some silt				
		DATA			
			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**	100	100	**P**
2	50.8	**97.6**			
1.5	37.5	**96.4**			
1	25.4	**92.8**			
3/4	19.1	**90.1**			
1/2	12.7	**84.4**			
3/8	9.5	**83.3**			
#4	4.76	**75.8**			
#10	2.0	**65.3**			
#20	0.84	**53.4**			
#40	0.42	**43.8**			
#60	0.25	**35.9**			
#100	0.149	**29.2**			
#200	0.074	**22.2**	20	100	**P**



Water Content (%) =	12.1

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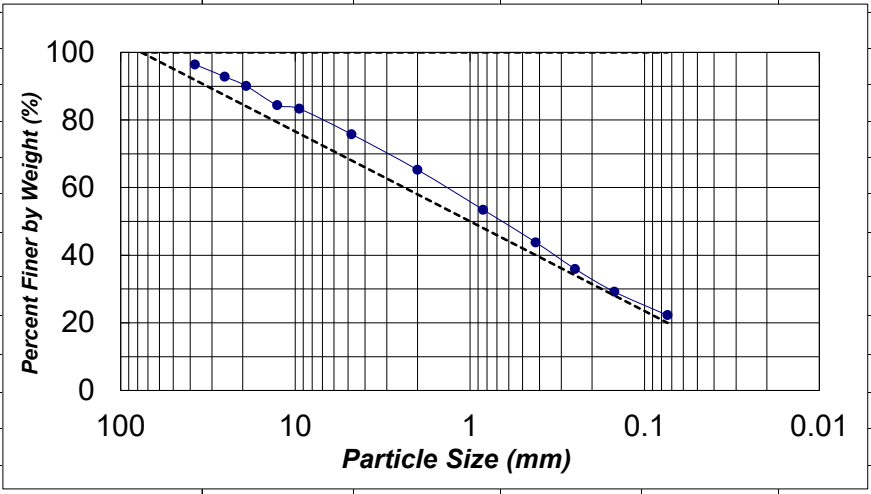
Grain Size Analysis and Moisture/Density

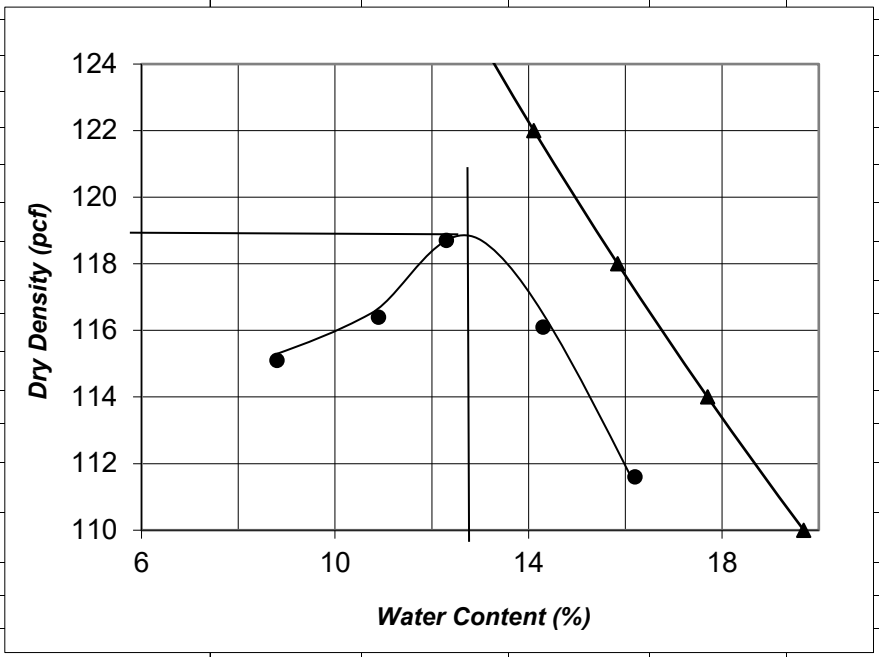
PROJECT NAME:	MEDECD Phase III	PROJECT No:	220265.01
	Dolby Cover Upgrade	DATE:	17-Jul-23
SAMPLE SOURCE:	South Slope Cover Soil	SAMPLE No:	SSCS-1
SAMPLE DESCRIP:	Brown gravelly SAND, some silt		

GRAIN SIZE ANALYSIS ASTM D 6913



ATTER. LIMITS (%)	
W_L =	
W_P =	
I_P =	
W_N =	12.1

MOISTURE-DENSITY ASTM D 698 B



MAXIMUM DRY DENSITY (pcf)	**119**
OPTIMUM W.C. (%)	**12.8**
CORRECTED	
$D.D._{max}$	**123.9**
$W.C._{opt}$	**10.8**

correction made for 16.7% oversize material

SME
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- **ON-SITE COVER SOIL TESTING**

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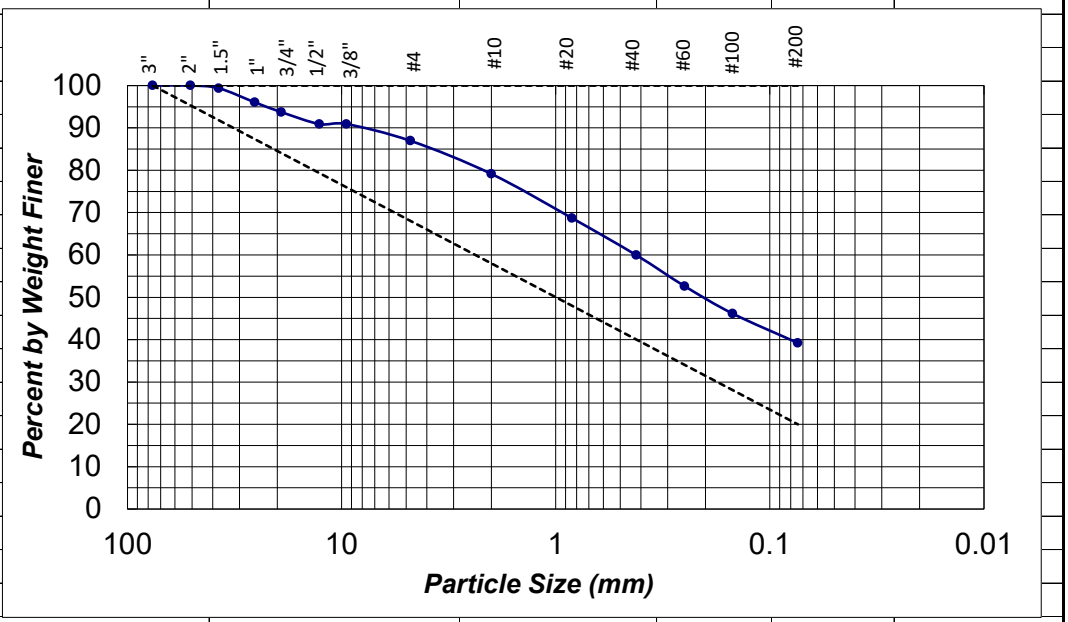
Grain Size Analysis - ASTM D421

PROJECT NAME:	MEDECD Phase III		PROJECT No:		220265.01
	Dolby Cover Upgrade		DATE:		16-May-23
SAMPLE SOURCE:	Borrow Source Cover Soil		SAMPLE No:		TP-1
SAMPLE DESCRIP:	Brown silty SAND, little gravel				
		DATA			
			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**	100	100	**P**
2	50.8	**100.0**			
1.5	37.5	**99.4**			
1	25.4	**96.0**			
3/4	19.1	**93.7**			
1/2	12.7	**90.9**			
3/8	9.5	**90.9**			
#4	4.76	**86.9**			
#10	2.0	**79.1**			
#20	0.84	**68.7**			
#40	0.42	**59.9**			
#60	0.25	**52.6**			
#100	0.149	**46.1**			
#200	0.074	**39.2**	20	100	**P**



Water Content (%) =	11.1

SME
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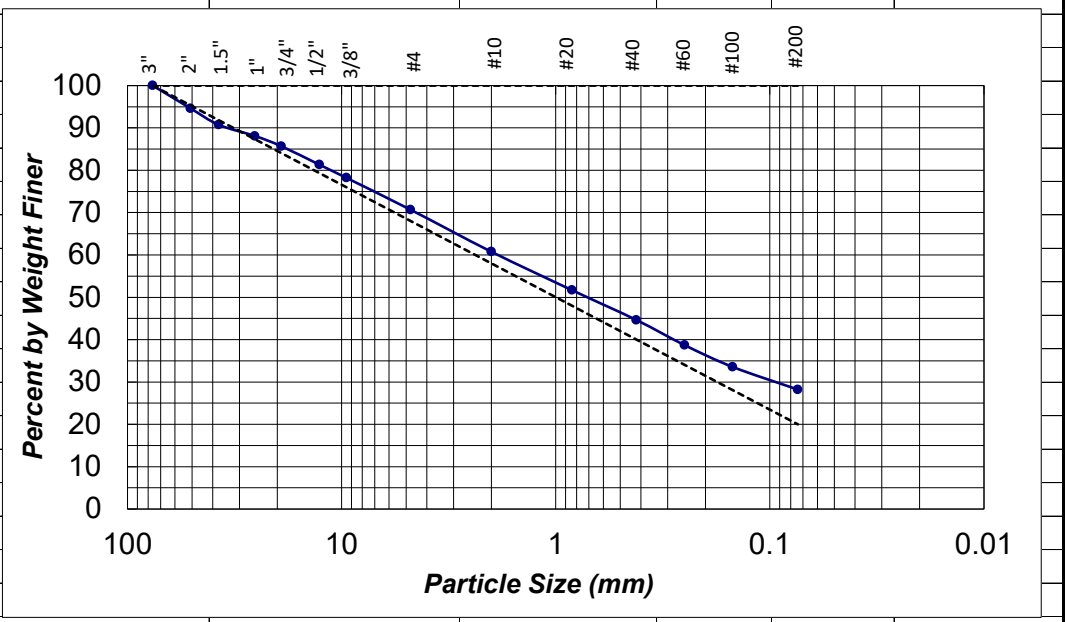
Grain Size Analysis - ASTM D421

PROJECT NAME:	MEDECD Phase III		PROJECT No:		220265.01
	Dolby Cover Upgrade		DATE:		16-May-23
SAMPLE SOURCE:	Borrow Source Cover Soil		SAMPLE No:		TP-2
SAMPLE DESCRIP:	Brown gravelly SAND, some silt				
		DATA			
			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**	100	100	**P**
2	50.8	**94.6**			
1.5	37.5	**90.7**			
1	25.4	**88.1**			
3/4	19.1	**85.7**			
1/2	12.7	**81.3**			
3/8	9.5	**78.2**			
#4	4.76	**70.7**			
#10	2.0	**60.8**			
#20	0.84	**51.7**			
#40	0.42	**44.6**			
#60	0.25	**38.7**			
#100	0.149	**33.5**			
#200	0.074	**28.2**	20	100	**P**



Water Content (%) =	11.3

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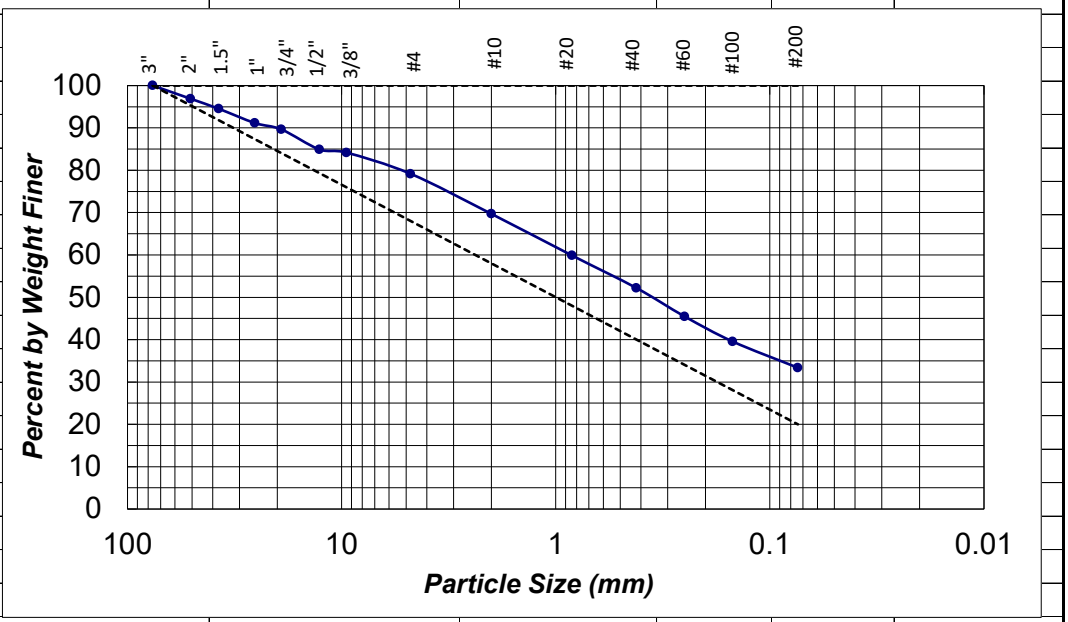
Grain Size Analysis - ASTM D421

PROJECT NAME:	MEDECD Phase III		PROJECT No:		220265.01
	Dolby Cover Upgrade		DATE:		16-May-23
SAMPLE SOURCE:	Borrow Source Cover Soil		SAMPLE No:		TP-3
SAMPLE DESCRIP:	Brown silty SAND, some gravel				
		DATA			
			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**	100	100	**P**
2	50.8	**96.9**			
1.5	37.5	**94.5**			
1	25.4	**91.2**			
3/4	19.1	**89.6**			
1/2	12.7	**84.9**			
3/8	9.5	**84.2**			
#4	4.76	**79.2**			
#10	2.0	**69.7**			
#20	0.84	**59.9**			
#40	0.42	**52.2**			
#60	0.25	**45.5**			
#100	0.149	**39.5**			
#200	0.074	**33.4**	20	100	**P**



	Water Content (%) =	11.0		

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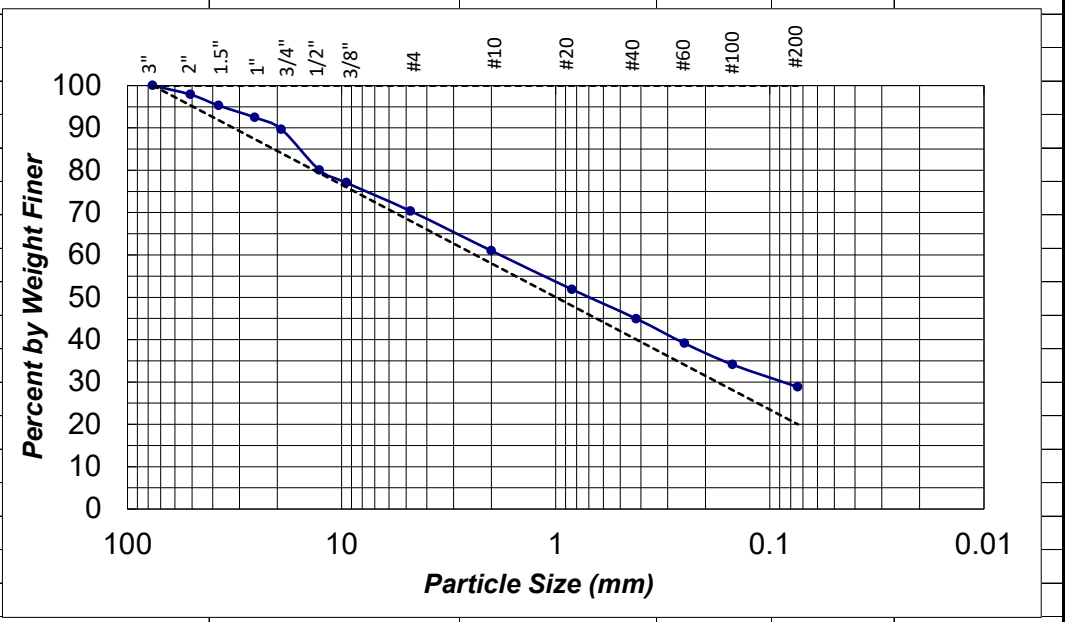
Grain Size Analysis - ASTM D421

PROJECT NAME:	MEDECD Phase III		PROJECT No:		220265.01
	Dolby Cover Upgrade		DATE:		16-May-23
SAMPLE SOURCE:	Borrow Source Cover Soil		SAMPLE No:		TP-4
SAMPLE DESCRIP:	Brown silty SAND, some gravel				
		DATA			
			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**	100	100	**P**
2	50.8	**97.9**			
1.5	37.5	**95.3**			
1	25.4	**92.5**			
3/4	19.1	**89.7**			
1/2	12.7	**80.0**			
3/8	9.5	**77.0**			
#4	4.76	**70.4**			
#10	2.0	**61.0**			
#20	0.84	**51.9**			
#40	0.42	**44.9**			
#60	0.25	**39.1**			
#100	0.149	**34.1**			
#200	0.074	**28.8**	20	100	**P**



Water Content (%) =	12.5

SME
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ATTACHMENT 6

GEOSYNTHETIC THIRD-PARTY TEST RESULTS

- **40-MIL. HDPE TEXTURED GEOMEMBRANE CONFORMANCE TESTING**
- **INTERFACE SHEAR TESTING**

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- **40-MIL. HDPE TEXTURED GEOMEMBRANE CONFORMANCE TESTING**

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Product Name	GMB HD TMT 40MIL B/B E 24.6x427 GRI
Supplier	ATARFIL MIDDLE EAST FZE
Manufacturing Liner	K1
Project	Dolby LF Phase 2 and Phase 3

Properties per roll	**Units**	**Value**
Length	f ±2%	427
Width	f ±0,7%	24.6
Area	sqf	10405.2
Nominal Thickness	mils	40

ATARFIL geomembranes

	Methods			ASTM D 5994		ASTM D 792	ASTM D 6693, Type IV								ASTM D 1238 (190/2.16)	ASTM D 1004		ASTM D 4833	ASTM D 1204	ASTM D 1204	ASTM D 4218	ASTM D 5596	ASTM D 5397	ASTM D 8117	ASTM D 5885	ASTM D 7466	ASTM D7238 & ASTM D5885	ASTM D5721 & ASTM D 5885	ASTM D 792	ASTM D 1238 (190/2.16)
	Properties			Thickness	Lowest individual thickness	Geomembrane Density	Yield Elongation, GL 1.3 inches-MD	Yield Elongation, GL 1.3 inches-CMD	Tensile Strength at Yield-MD	Tensile Strength at Yield-CMD	Elongation at Break, GL 2.0 inches-MD	Elongation at Break, GL 2.0 inches-CMD	Tensile Strength at Break-MD	Tensile Strength at Break-CMD	Melt Flow Index	Tear Resistance-MD	Tear Resistance-CMD	Puncture Resistance	Dimensional Stability-MD	Dimensional Stability-CMD	Carbon Black Content	Carbon Black Dispersion	Stress Crack Resistance/SP-NCTL	O.I.T. Standard	High Pressure OIT	Asperity Height	UV resistance (HP OIT, % retained)	Oven Aging at 85Sc (HP OIT % retained)	Resin Material Density	Resin Melt Flow Index
	Units			mil	mil	g/cm3	%	%	lb/in	lb/in	%	%	lb/in	lb/in	gr/10 min	lb	lb	lb	%	%	%	views Cat1/2	h	min	min	mil	%	%	g/cm3	gr/10 min
Roll Count	**Frequency**			1/roll		1/lot	1/20000lb								Per batch	1/45000lb			1/day		1/roll	1/45000lb	1/200000lb			2nd roll	Per Formulation		-	Per batch
	Number Roll	Manufac. Date	Weight (lbs)																												
1	C4K123176T	6/11/2022	2273	40	39	0.943	>= 13	>= 13	88	90	471	620	119	154	0.24	34	37	95	-0.54	-0.46	2.22	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
2	C4K123177T	6/11/2022	2277	41	38	0.943	>= 13	>= 13	88	90	471	620	119	154	0.24	34	37	95	-0.54	-0.46	2.26	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
3	C4K123178T	6/11/2022	2275	41	39	0.943	>= 13	>= 13	88	90	471	620	119	154	0.24	34	37	95	-0.54	-0.46	2.21	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
4	C1K123179T	6/11/2022	2284	41	39	0.943	>= 13	>= 13	88	90	471	620	119	154	0.24	34	37	95	-0.54	-0.46	2.25	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
5	C1K123180T	6/11/2022	2286	40	39	0.943	>= 13	>= 13	88	90	471	620	119	154	0.24	34	37	95	-0.54	-0.46	2.26	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
6	C1K123181T	6/11/2022	2277	40	39	0.943	>= 13	>= 13	88	90	471	620	119	154	0.24	34	37	95	-0.54	-0.46	2.24	10	>= 3,000	>= 120	>= 500	29	>= 75	>= 80	>= 0.932	<= 0.30
7	C1K123182T	6/11/2022	2249	41	39	0.943	>= 13	>= 13	89	90	438	611	112	152	0.24	34	37	95	-0.54	-0.46	2.21	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
8	C1K123183T	6/11/2022	2238	40	39	0.943	>= 13	>= 13	89	90	438	611	112	152	0.24	34	37	95	-0.54	-0.46	2.29	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
9	C1K123184T	6/11/2022	2222	41	39	0.943	>= 13	>= 13	89	90	438	611	112	152	0.24	34	37	95	-0.54	-0.46	2.2	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
10	C1K123189T	6/11/2022	2216	40	38	0.943	>= 13	>= 13	89	90	438	611	112	152	0.24	34	37	95	-0.54	-0.46	2.35	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
11	C1K123190T	6/11/2022	2216	40	38	0.943	>= 13	>= 13	89	90	438	611	112	152	0.24	34	37	95	-0.54	-0.46	2.38	10	>= 3,000	>= 120	>= 500	24	>= 75	>= 80	>= 0.932	<= 0.30
12	C1K123191T	6/11/2022	2213	40	38	0.943	>= 13	>= 13	89	90	438	611	112	152	0.24	34	37	95	-0.54	-0.46	2.31	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
13	C1K123192T	6/11/2022	2216	41	39	0.943	>= 13	>= 13	87	87	445	611	112	140	0.24	32	33	94	-0.54	-0.46	2.24	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
14	C1K123193T	6/11/2022	2224	41	39	0.943	>= 13	>= 13	87	87	445	611	112	140	0.24	32	33	94	-0.54	-0.46	2.25	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
15	C3K123194T	6/11/2022	2224	41	40	0.943	>= 13	>= 13	87	87	445	611	112	140	0.24	32	33	94	-0.54	-0.46	2.31	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
16	C3K123195T	6/11/2022	2216	41	38	0.943	>= 13	>= 13	87	87	445	611	112	140	0.24	32	33	94	-0.54	-0.46	2.24	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
17	C3K123198T	6/11/2022	2191	41	38	0.943	>= 13	>= 13	87	87	445	611	112	140	0.24	32	33	94	-0.54	-0.46	2.25	10	>= 3,000	>= 120	>= 500	24	>= 75	>= 80	>= 0.932	<= 0.30
18	C3K123199T	6/11/2022	2194	40	38	0.943	>= 13	>= 13	87	87	445	611	112	140	0.24	32	33	94	-0.54	-0.46	2.29	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
19	C3K123200T	6/11/2022	2191	41	38	0.943	>= 13	>= 13	86	87	454	627	114	152	0.24	32	33	94	-0.54	-0.46	2.24	10	>= 3,000	>= 120	>= 500	24	>= 75	>= 80	>= 0.932	<= 0.30
20	C3K123201T	6/11/2022	2187	41	40	0.943	>= 13	>= 13	86	87	454	627	114	152	0.24	32	33	94	-0.54	-0.46	2.26	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
21	C3K123202T	6/11/2022	2185	42	39	0.943	>= 13	>= 13	86	87	454	627	114	152	0.24	32	33	94	-0.54	-0.46	2.27	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
22	C3K123203T	6/11/2022	2183	41	39	0.943	>= 13	>= 13	86	87	454	627	114	152	0.24	32	33	94	-0.54	-0.46	2.22	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
23	C3K123204T	6/11/2022	2189	40	38	0.943	>= 13	>= 13	86	87	454	627	114	152	0.24	32	33	94	-0.54	-0.46	2.28	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
24	C3K123205T	6/11/2022	2194	41	38	0.943	>= 13	>= 13	86	87	454	627	114	152	0.24	32	33	94	-0.54	-0.46	2.27	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
25	C3K123207T	6/11/2022	2202	41	38	0.943	>= 13	>= 13	85	89	440	605	113	147	0.24	35	35	96	-0.54	-0.46	2.31	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
26	C3K123208T	6/11/2022	2211	41	40	0.943	>= 13	>= 13	85	89	440	605	113	147	0.24	35	35	96	-0.54	-0.46	2.18	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
27	C4K123209T	6/12/2022	2213	40	38	0.943	>= 13	>= 13	85	89	440	605	113	147	0.24	35	35	96	-0.54	-0.46	2.16	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
28	C4K123210T	6/12/2022	2207	40	39	0.943	>= 13	>= 13	85	89	440	605	113	147	0.24	35	35	96	-0.54	-0.46	2.16	10	>= 3,000	>= 120	>= 500	29	>= 75	>= 80	>= 0.932	<= 0.30
29	C4K123211T	6/12/2022	2218	40	38	0.943	>= 13	>= 13	85	89	440	605	113	147	0.24	35	35	96	-0.54	-0.46	2.1	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
30	C4K123212T	6/12/2022	2216	40	38	0.943	>= 13	>= 13	85	89	440	605	113	147	0.24	35	35	96	-0.54	-0.46	2.14	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
31	C4K123213T	6/12/2022	2211	40	38	0.943	>= 13	>= 13	89	90	413	652	106	166	0.24	35	35	96	-0.54	-0.46	2.16	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
32	C4K123214T	6/12/2022	2207	40	38	0.943	>= 13	>= 13	89	90	413	652	106	166	0.24	35	35	96	-0.54	-0.46	2.13	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
33	C4K123215T	6/12/2022	2211	40	39	0.943	>= 13	>= 13	89	90	413	652	106	166	0.24	35	35	96	-0.54	-0.46	2.1	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
34	C4K123216T	6/12/2022	2216	40	38	0.943	>= 13	>= 13	89	90	413	652	106	166	0.24	35	35	96	-0.54	-0.46	2.15	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
35	C4K123217T	6/12/2022	2198	40	38	0.943	>= 13	>= 13	89	90	413	652	106	166	0.24	35	35	96	-0.54	-0.46	2.21	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
36	C4K123218T	6/12/2022	2202	40	39	0.943	>= 13	>= 13	89	90	413	652	106	166	0.24	35	35	96	-0.54	-0.46	2.18	10	>= 3,000	>= 120	>= 500	29	>= 75	>= 80	>= 0.932	<= 0.30
37	C4K123219T	6/12/2022	2205	40	38	0.943	>= 13	>= 13	85	89	424	590	107	142	0.24	33	34	96	-0.72	-0.36	2.16	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
38	C4K123220T	6/12/2022	2200	40	39	0.943	>= 13	>= 13	85	89	424	590	107	142	0.24	33	34	96	-0.72	-0.36	2.26	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
39	C4K123221T	6/12/2022	2205	40	39	0.943	>= 13	>= 13	85	89	424	590	107	142	0.24	33	34	96	-0.72	-0.36	2.25	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
40	C4K123222T	6/12/2022	2205	40	38	0.943	>= 13	>= 13	85	89	424	590	107	142	0.24	33	34	96	-0.72	-0.36	2.18	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
41	C4K123223T	6/12/2022	2207	40	39	0.943	>= 13	>= 13	85	89	424	590	107	142	0.24	33	34	96	-0.72	-0.36	2.24	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
42	C1K123224T	6/12/2022	2209	40	38	0.943	>= 13	>= 13	85	89	424	590	107	142	0.24	33	34	96	-0.72	-0.36	2.06	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
43	C1K123225T	6/12/2022	2202	40	38	0.943	>= 13	>= 13	88	87	434	608	109	148	0.24	33	34	96	-0.72	-0.36	2.18	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30

44	C1K123226T	6/12/2022	2200	40	38	0.943	>= 13	>= 13	88	87	434	608	109	148	0.24	33	34	96	-0.72	-0.36	2.18	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
45	C1K123227T	6/12/2022	2207	40	38	0.943	>= 13	>= 13	88	87	434	608	109	148	0.24	33	34	96	-0.72	-0.36	2.19	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
46	C1K123228T	6/12/2022	2202	41	39	0.943	>= 13	>= 13	88	87	434	608	109	148	0.24	33	34	96	-0.72	-0.36	2.34	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
47	C1K123229T	6/12/2022	2209	40	39	0.943	>= 13	>= 13	88	87	434	608	109	148	0.24	33	34	96	-0.72	-0.36	2.14	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
48	C1K123230T	6/12/2022	2207	40	39	0.943	>= 13	>= 13	88	87	434	608	109	148	0.24	33	34	96	-0.72	-0.36	2.25	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
49	C1K123231T	6/12/2022	2207	42	40	0.943	>= 13	>= 13	85	87	437	607	110	147	0.24	33	36	95	-0.72	-0.36	2.15	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
50	C1K123233T	6/12/2022	2233	41	39	0.943	>= 13	>= 13	85	87	437	607	110	147	0.24	33	36	95	-0.72	-0.36	2.22	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
51	C1K123234T	6/12/2022	2255	41	39	0.943	>= 13	>= 13	85	87	437	607	110	147	0.24	33	36	95	-0.72	-0.36	2.17	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
52	C1K123235T	6/12/2022	2255	41	38	0.943	>= 13	>= 13	85	87	437	607	110	147	0.24	33	36	95	-0.72	-0.36	2.35	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
53	C1K123236T	6/12/2022	2211	41	38	0.943	>= 13	>= 13	85	87	437	607	110	147	0.24	33	36	95	-0.72	-0.36	2.27	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
54	C1K123237T	6/12/2022	2247	41	38	0.943	>= 13	>= 13	85	87	437	607	110	147	0.24	33	36	95	-0.72	-0.36	2.21	10	>= 3,000	>= 120	>= 500	23	>= 75	>= 80	>= 0.932	<= 0.30
55	C1K123238T	6/12/2022	2222	41	38	0.943	>= 13	>= 13	87	89	436	615	108	150	0.24	33	36	95	-0.72	-0.36	2.28	10	>= 3,000	>= 120	>= 500	24	>= 75	>= 80	>= 0.932	<= 0.30
56	C3K123239T	6/12/2022	2205	41	39	0.943	>= 13	>= 13	87	89	436	615	108	150	0.24	33	36	95	-0.72	-0.36	2.2	10	>= 3,000	>= 120	>= 500	24	>= 75	>= 80	>= 0.932	<= 0.30
57	C3K123240T	6/12/2022	2209	41	38	0.943	>= 13	>= 13	87	89	436	615	108	150	0.24	33	36	95	-0.72	-0.36	2.25	10	>= 3,000	>= 120	>= 500	23	>= 75	>= 80	>= 0.932	<= 0.30
58	C3K123241T	6/12/2022	2198	40	38	0.943	>= 13	>= 13	87	89	436	615	108	150	0.24	33	36	95	-0.72	-0.36	2.22	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
59	C3K123242T	6/12/2022	2209	41	39	0.943	>= 13	>= 13	87	89	436	615	108	150	0.24	33	36	95	-0.72	-0.36	2.25	10	>= 3,000	>= 120	>= 500	23	>= 75	>= 80	>= 0.932	<= 0.30
60	C3K123243T	6/12/2022	2207	41	38	0.943	>= 13	>= 13	87	89	436	615	108	150	0.24	33	36	95	-0.72	-0.36	2.27	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
61	C3K123244T	6/12/2022	2200	40	38	0.943	>= 13	>= 13	88	88	464	618	115	149	0.24	33	35	95	-0.72	-0.36	2.28	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
62	C3K123245T	6/12/2022	2209	41	37	0.943	>= 13	>= 13	88	88	464	618	115	149	0.24	33	35	95	-0.72	-0.36	2.21	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
63	C3K123246T	6/12/2022	2205	41	38	0.943	>= 13	>= 13	88	88	464	618	115	149	0.24	33	35	95	-0.72	-0.36	2.24	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
64	C3K123247T	6/12/2022	2216	41	39	0.943	>= 13	>= 13	88	88	464	618	115	149	0.24	33	35	95	-0.72	-0.36	2.18	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
65	C3K123248T	6/12/2022	2229	41	40	0.943	>= 13	>= 13	88	88	464	618	115	149	0.24	33	35	95	-0.72	-0.36	2.17	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
66	C3K123249T	6/12/2022	2222	41	40	0.943	>= 13	>= 13	88	88	464	618	115	149	0.24	33	35	95	-0.72	-0.36	2.25	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
67	C3K123250T	6/12/2022	2231	41	39	0.943	>= 13	>= 13	87	88	454	615	114	151	0.24	33	35	95	-0.72	-0.36	2.18	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
68	C3K123251T	6/12/2022	2209	40	38	0.943	>= 13	>= 13	87	88	454	615	114	151	0.24	33	35	95	-0.72	-0.36	2.15	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
69	C3K123252T	6/12/2022	2216	40	39	0.943	>= 13	>= 13	87	88	454	615	114	151	0.24	33	35	95	-0.72	-0.36	2.18	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
70	C3K123253T	6/12/2022	2220	41	39	0.943	>= 13	>= 13	87	88	454	615	114	151	0.24	33	35	95	-0.72	-0.36	2.25	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
71	C4K124001T	6/13/2022	2211	41	39	0.943	>= 13	>= 13	87	88	454	615	114	151	0.24	33	35	95	-0.72	-0.36	2.29	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
72	C4K124002T	6/13/2022	2205	41	40	0.943	>= 13	>= 13	87	88	454	615	114	151	0.24	33	35	95	-0.72	-0.36	2.2	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
73	C4K124004T	6/13/2022	2191	41	39	0.943	>= 13	>= 13	89	87	434	593	107	141	0.24	34	32	91	-0.7	-0.27	2.31	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
74	C4K124005T	6/13/2022	2202	40	38	0.943	>= 13	>= 13	89	87	434	593	107	141	0.24	34	32	91	-0.7	-0.27	2.16	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
75	C4K124006T	6/13/2022	2198	40	38	0.943	>= 13	>= 13	89	87	434	593	107	141	0.24	34	32	91	-0.7	-0.27	2.09	10	>= 3,000	>= 120	>= 500	28	>= 75	>= 80	>= 0.932	<= 0.30
76	C4K124007T	6/13/2022	2189	41	39	0.943	>= 13	>= 13	89	87	434	593	107	141	0.24	34	32	91	-0.7	-0.27	2.3	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
77	C4K124008T	6/13/2022	2200	41	38	0.943	>= 13	>= 13	89	87	434	593	107	141	0.24	34	32	91	-0.7	-0.27	2.32	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
78	C4K124009T	6/13/2022	2202	41	39	0.943	>= 13	>= 13	89	87	434	593	107	141	0.24	34	32	91	-0.7	-0.27	2.29	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
79	C4K124010T	6/13/2022	2209	41	38	0.943	>= 13	>= 13	86	86	415	592	104	142	0.23	34	32	91	-0.7	-0.27	2.2	10	>= 3,000	>= 120	>= 500	24	>= 75	>= 80	>= 0.932	<= 0.30
80	C4K124011T	6/13/2022	2211	40	38	0.943	>= 13	>= 13	86	86	415	592	104	142	0.23	34	32	91	-0.7	-0.27	2.3	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
81	C4K124012T	6/13/2022	2216	41	39	0.943	>= 13	>= 13	86	86	415	592	104	142	0.23	34	32	91	-0.7	-0.27	2.25	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
82	C4K124013T	6/13/2022	2207	41	38	0.943	>= 13	>= 13	86	86	415	592	104	142	0.23	34	32	91	-0.7	-0.27	2.28	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
83	C4K124014T	6/13/2022	2189	40	38	0.943	>= 13	>= 13	86	86	415	592	104	142	0.23	34	32	91	-0.7	-0.27	2.31	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
84	C4K124015T	6/13/2022	2211	41	39	0.943	>= 13	>= 13	86	86	415	592	104	142	0.23	34	32	91	-0.7	-0.27	2.22	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
85	C1K124016T	6/13/2022	2202	40	38	0.943	>= 13	>= 13	87	88	413	610	103	148	0.23	33	33	94	-0.7	-0.27	2.24	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
86	C1K124017T	6/13/2022	2220	40	38	0.943	>= 13	>= 13	87	88	413	610	103	148	0.23	33	33	94	-0.7	-0.27	2.22	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
87	C1K124018T	6/13/2022	2211	41	39	0.943	>= 13	>= 13	87	88	413	610	103	148	0.23	33	33	94	-0.7	-0.27	2.16	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
88	C1K124019T	6/13/2022	2205	41	38	0.943	>= 13	>= 13	87	88	413	610	103	148	0.23	33	33	94	-0.7	-0.27	2.23	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
89	C1K124020T	6/13/2022	2213	41	39	0.943	>= 13	>= 13	87	88	413	610	103	148	0.23	33	33	94	-0.7	-0.27	2.18	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
90	C1K124022T	6/13/2022	2216	40	39	0.943	>= 13	>= 13	87	88	413	610	103	148	0.23	33	33	94	-0.7	-0.27	2.29	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
91	C1K124023T	6/13/2022	2207	41	38	0.943	>= 13	>= 13	88	86	435	633	106	151	0.23	33	33	94	-0.7	-0.27	2.3	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
92	C1K124024T	6/13/2022	2216	40	38	0.943	>= 13	>= 13	88	86	435	633	106	151	0.23	33	33	94	-0.7	-0.27	2.33	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30
93	C1K124025T	6/13/2022	2220	40	38	0.943	>= 13	>= 13	88	86	435	633	106	151	0.23	33	33	94	-0.7	-0.27	2.3	10	>= 3,000	>= 120	>= 500	25	>= 75	>= 80	>= 0.932	<= 0.30
94	C1K124027T	6/13/2022	2271	40	38	0.943	>= 13	>= 13	88	86	435	633	106	151	0.23	33	33	94	-0.7	-0.27	2.15	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
95	C1K124028T	6/13/2022	2222	41	38	0.943	>= 13	>= 13	88	86	435	633	106	151	0.23	33	33	94	-0.7	-0.27	2.18	10	>= 3,000	>= 120	>= 500	26	>= 75	>= 80	>= 0.932	<= 0.30
96	C1K124029T	6/13/2022	2224	41	37	0.943	>= 13	>= 13	88	86	435	633	106	151	0.23	33	33	94	-0.7	-0.27	2.27	10	>= 3,000	>= 120	>= 500	27	>= 75	>= 80	>= 0.932	<= 0.30

- **INTERFACE SHEAR TESTING**

SME
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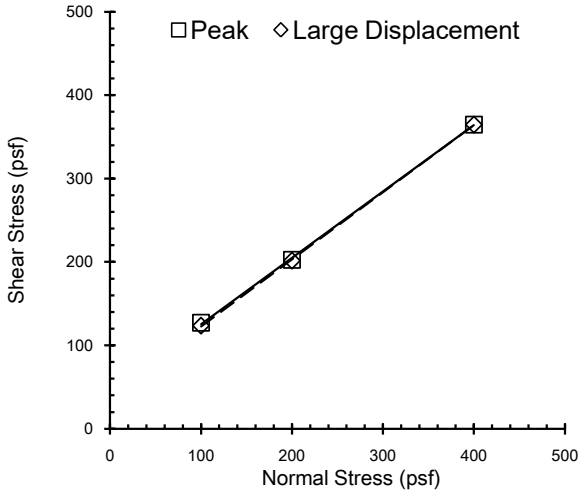
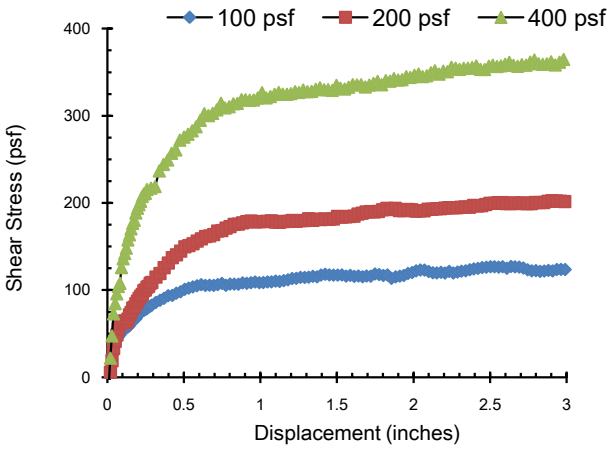
Shear Strength of Soil-Geosynthetic Interface by Direct Shear (ASTM D5321)

Client: Sevee & Maher Engineers
Project: Dolby Landfill Phase 3

TRI Log #: IF22023-3A
Richard S. Lacey, P.E. 8/5/2022
Analysis & Quality Review/Date

Phase 3 Barrier Soil vs SKAPS TN330-2-6 DS Geocomposite





Test Results, Linear Regression			
Mohr-Coulomb Parameters		Peak	Large Displacement
Friction Angle	Degrees	38.5	38.8
Y-intercept or Adhesion	psf	46	42
Minimum Secant Angle	Degrees	42.4	42.4

Note - Large Displacement Values Reported for 3.0 inches of Displacement

Test Conditions		
Upper Box	Phase 3 Barrier Soil ω = 10.5%, γ_d = 116.1 pcf	
Lower Box	SKAPS TN270-2-6 DS Geocomposite Roll # 115381020117	
Conditioning	Geocomposite soaked for 2 hours at 0.5 psi. Interface soaked and loading applied for 4 hours prior to shear.	
Shearing Rate	inches/minute	0.2

Test Notes

Specimen No.		-	1	2	3
Normal Stress		psf	100	200	400
Box Edge Dimension		in	12	12	12
Equivalent Bearing Slide Resist. Correction		psf	9	10	12
Peak	Shear Stress	psf	127	203	365
	Secant Angle	deg.	51.8	45.4	42.4
Large Displacement	Shear Stress	psf	124	202	365
	Secant Angle	deg.	51.0	45.2	42.4

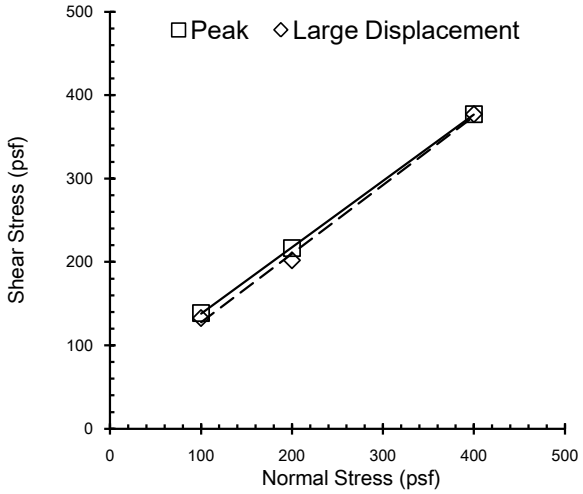
The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior app

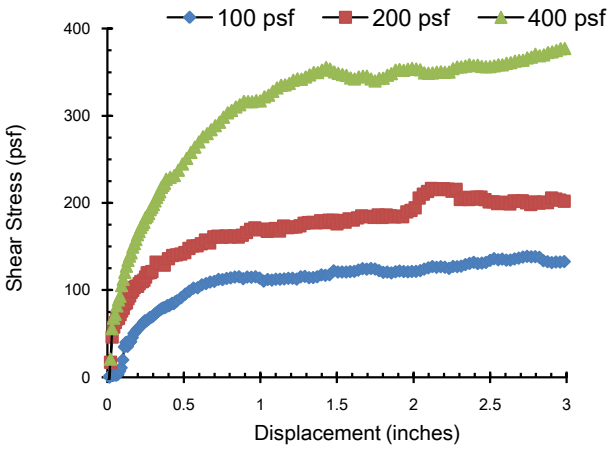
Shear Strength of Soil-Geosynthetic Interface by Direct Shear (ASTM D5321)

Client: Sevee & Maher Engineers
Project: Dolby Landfill Phase 3

TRI Log #: IF22023-3B
Richard S. Lacey, P.E. 8/5/2022
Analysis & Quality Review/Date

Phase 3 Barrier Soil vs SKAPS TN330-2-6 DS Geocomposite





Test Results, Linear Regression			
Mohr-Coulomb Parameters		Peak	Large Displacement
Friction Angle	Degrees	38.5	39.5
Y-intercept or Adhesion	psf	58	45
Minimum Secant Angle	Degrees	43.3	43.3

Note - Large Displacement Values Reported for 3.0 inches of Displacement

Test Conditions		
Upper Box	Phase 3 Barrier Soil ω = 10.5%, γ_d = 116.1 pcf	
Lower Box	SKAPS TN330-2-6 DS Geocomposite Roll # 115381010232	
Conditioning	Geocomposite soaked for 2 hours at 0.5 psi. Interface soaked and loading applied for 4 hours prior to shear.	
Shearing Rate	inches/minute	0.2

Test Notes

Specimen No.		-	1	2	3
Normal Stress		psf	100	200	400
Box Edge Dimension		in	12	12	12
Equivalent Bearing Slide Resist. Correction		psf	9	10	12
Peak	Shear Stress	psf	139	217	377
	Secant Angle	deg.	54.2	47.3	43.3
Large Displacement	Shear Stress	psf	133	202	377
	Secant Angle	deg.	53.0	45.3	43.3

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior app

ATTACHMENT 7

GEOSYNTHETIC INSPECTION REPORTS

- **ROLL GOODS CHECKLIST**
- **SUBGRADE ACCEPTANCE FORMS**
- **SME FIELD LOGS**
- **40-MIL HDPE DESTRUCTIVE TEST RESULTS**
- **40-MIL HDPE AS-BUILT PANEL LAYOUT**

SME
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ENGINEERS

- **ROLL GOODS CHECKLIST**

SME
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ENGINEERS

ROLL GOODS CHECKLIST
GEOMEMBRANE

PROJECT: Dolby Phase 3 Cover Upgrade | **QUALITY ASSURANCE MONITOR: TJM** | **MATERIAL DESCRIPTION: 40 mil HDPE**

ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	RESIN NO.	MANUFACTURE DATE	CERTIFICATE PASS/FAIL	DATE OF INSTALLATION	DATE SAMPLED	CQA LOT NO.	COMMENTS Project Number: 220265.01	MANF. CERTS. Yield STRENGTH TD - ppi	MANF. CERTS. Yield STRENGTH MD - ppi	CONFORMANCE YIELD STRENGTH TD - ppi (avg)	CONFORMANCE YIELD STRENGTH MD - ppi (avg)
9/27/2022	C4K123176T	4222095	6/11/2022	P	6/13/2023				90.00	88.0		
9/26/2022	C4K123177T	4222095	6/11/2022	P	6/12/2023	6/17/2022	CA220689-A C#164235		90.00	88.0	102.0	102.0
9/29/2022	C4K123178T	4222095	6/11/2022	P	7/21/2023				90.00	88.0		
9/27/2022	C1K123179T	4222095	6/11/2022	P	7/21/2023				90.00	88.0		
9/27/2022	C1K123180T	4222095	6/11/2022	P	7/19/2023				90.00	88.0		
9/27/2022	C1K123181T	4222095	6/11/2022	P	6/12/2023				90.00	88.0		
9/26/2022	C1K123182T	4222095	6/11/2022	P	*Roll Remaining				90.00	89.0		
9/26/2022	C1K123183T	4222095	6/11/2022	P	7/6/2023				90.00	89.0		
9/26/2022	C1K123184T	4222095	6/11/2022	P	7/7/2023				90.00	89.0		
9/26/2022	C1K123189T	4222095	6/11/2022	P	7/21/2023				90.00	89.0		
9/28/2022	C1K123190T	4222095	6/11/2022	P	8/16/2023	6/17/2022	CA220689-A C#164236		90.00	89.0	102.0	99.0
9/27/2022	C1K123191T	4222095	6/11/2022	P	6/13/2023				90.00	89.0		
9/27/2022	C1K123192T	4222095	6/11/2022	P	8/17/2023				87.00	87.0		
9/27/2022	C1K123193T	4222095	6/11/2022	P	6/12/2023				87.00	87.0		
9/26/2022	C3K123194T	4222095	6/11/2022	P	6/12/2023				87.00	87.0		
9/27/2022	C3K123195T	4222095	6/11/2022	P	6/23/2023				87.00	87.0		
9/26/2022	C3K123198T	4222095	6/11/2022	P	8/18/2023				87.00	87.0		
9/26/2022	C3K123199T	4222095	6/11/2022	P	7/6/2023				87.00	87.0		
9/26/2022	C3K123200T	4222095	6/11/2022	P	8/16/2023				87.00	86.0		
9/29/2022	C3K123201T	4222095	6/11/2022	P	8/17/2023	6/17/2024	CA220689-A C#164237		87.00	86.0	100.0	98.0
9/27/2022	C3K123202T	4222095	6/11/2022	P	7/19/2023				87.00	86.0		
9/26/2022	C3K123203T	4222095	6/11/2022	P	6/12/2023				87.00	86.0		
9/26/2022	C3K123204T	4222095	6/11/2022	P	8/18/2023				87.00	86.0		
9/29/2022	C3K123205T	4222095	6/11/2022	P	6/13/2023				87.00	86.0		
9/28/2022	C3K123207T	4222095	6/11/2022	P	8/16/2023				89.00	85.0		
9/29/2022	C3K123208T	4222095	6/11/2022	P	*Roll Remaining				89.00	85.0		
9/29/2022	C4K123209T	4222095	6/12/2022	P	*Roll Remaining				89.00	85.0		

ROLL GOODS CHECKLIST
GEOMEMBRANE

PROJECT: Dolby Phase 3 Cover Upgrade | **QUALITY ASSURANCE MONITOR: TJM** | **MATERIAL DESCRIPTION: 40 mil HDPE**

ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	RESIN NO.	MANUFACTURE DATE	CERTIFICATE PASS/FAIL	DATE OF INSTALLATION	DATE SAMPLED	CQA LOT NO.	COMMENTS Project Number: 220265.01	MANF. CERTS. Yield STRENGTH TD - ppi	MD - ppi	CONFORMANCE YIELD STRENGTH TD - ppi (avg)	MD - ppi (avg)
9/29/2022	C4K123210T	4222095	6/12/2022	P	8/17/2023				89.00	85.0		
9/27/2022	C4K123211T	4222095	6/12/2022	P	6/13/2023				89.00	85.0		
9/29/2022	C4K123212T	4222095	6/12/2022	P	8/17/2023	6/17/2022	CA220689-A C#164238		89.00	85.0	100	99
9/27/2022	C4K123213T	4222095	6/12/2022	P	6/13/2023				90.00	89.0		
9/29/2022	C4K123214T	4222095	6/12/2022	P	8/18/2023				90.00	89.0		
9/27/2022	C4K123215T	4222095	6/12/2022	P	6/13/2023				90.00	89.0		
9/27/2022	C4K123216T	4222095	6/12/2022	P	6/12/2023				90.00	89.0		
9/27/2022	C4K123217T	4222095	6/12/2022	P	7/19/2023				90.00	89.0		
9/27/2022	C4K123218T	4222095	6/12/2022	P	6/12/2023				90.00	89.0		
9/29/2022	C4K123219T	4222095	6/12/2022	P	8/17/2023				89.00	85.0		
9/26/2022	C4K123220T	4222095	6/12/2022	P	8/17/2023				89.00	85.0		
9/28/2022	C4K123221T	4222095	6/12/2022	P	8/18/2023	6/17/2022	CA220689-A C#164239		89.00	85.0	102	100
9/29/2022	C4K123222T	4222095	6/12/2022	P	8/21/2023				89.00	85.0		
9/26/2022	C4K123223T	4222095	6/12/2022	P	7/6/2023				89.00	85.0		
9/26/2022	C1K123224T	4222095	6/12/2022	P	7/7/2023				89.00	85.0		
9/29/2022	C1K123225T	4222095	6/12/2022	P	*Roll Remaining				87.00	88.0		
9/26/2022	C1K123226T	4222095	6/12/2022	P	6/12/2023				87.00	88.0		
9/26/2022	C1K123227T	4222095	6/12/2022	P	7/6/2023				87.00	88.0		
9/27/2022	C1K123228T	4222095	6/12/2022	P	6/23/2023				87.00	88.0		
9/27/2022	C1K123229T	4222095	6/12/2022	P	6/23/2023				87.00	88.0		
9/29/2022	C1K123230T	4222095	6/12/2022	P	8/18/2023	6/17/2022	A220689-A C#164240		87.00	88.0	99	99
9/29/2022	C1K123231T	4222095	6/12/2022	P	8/18/2023				87.00	85.0		
9/29/2022	C1K123233T	4222095	6/12/2022	P	6/23/2023				87.00	85.0		
9/29/2022	C1K123234T	4222228	6/12/2022	P	8/18/2023				87.00	85.0		
9/27/2022	C1K123235T	4222228	6/12/2022	P	7/6/2023				87.00	85.0		
9/28/2022	C1K123236T	4222228	6/12/2022	P	6/23/2023				87.00	85.0		
9/29/2022	C1K123237T	4222228	6/12/2022	P	8/17/2023				87.00	85.0		

ROLL GOODS CHECKLIST
GEOMEMBRANE

PROJECT: Dolby Phase 3 Cover Upgrade | **QUALITY ASSURANCE MONITOR: TJM** | **MATERIAL DESCRIPTION: 40 mil HDPE**

ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	RESIN NO.	MANUFACTURE DATE	CERTIFICATE PASS/FAIL	DATE OF INSTALLATION	DATE SAMPLED	CQA LOT NO.	COMMENTS Project Number: 220265.01	MANF. CERTS. Yield STRENGTH TD - ppi	MANF. CERTS. Yield STRENGTH MD - ppi	CONFORMANCE YIELD STRENGTH TD - ppi (avg)	CONFORMANCE YIELD STRENGTH MD - ppi (avg)
9/26/2022	C1K123238T	4222228	6/12/2022	P	7/6/2023				89.00	87.0		
9/29/2022	C3K123239T	4222228	6/12/2022	P	8/21/2023	6/17/2022	CA220689-A C#164241		89.00	87.0	103	98
9/28/2022	C3K123240T	4222228	6/12/2022	P	8/17/2023				89.00	87.0		
9/26/2022	C3K123241T	4222228	6/12/2022	P	6/23/2023				89.00	87.0		
9/29/2022	C3K123242T	4222228	6/12/2022	P	6/23/2023				89.00	87.0		
9/29/2022	C3K123243T	4222228	6/12/2022	P	*Roll Remaining				89.00	87.0		
9/29/2022	C3K123244T	4222228	6/12/2022	P	*Roll Remaining				88.00	88.0		
9/29/2022	C3K123245T	4222228	6/12/2022	P	6/12/2023				88.00	88.0		
9/29/2022	C3K123246T	4222228	6/12/2022	P	7/19/2023				88.00	88.0		
9/29/2022	C3K123247T	4222228	6/12/2022	P	6/23/2023				88.00	88.0		
9/28/2022	C3K123248T	4222228	6/12/2022	P	8/16/2023				88.00	88.0		
9/29/2022	C3K123249T	4222228	6/12/2022	P	6/12/2023	6/17/2022	CA220689-A C#164242		88.00	88.0	99	95
9/29/2022	C3K123250T	4222228	6/12/2022	P	6/13/2023				88.00	87.0		
9/28/2022	C3K123251T	4222228	6/12/2022	P	6/12/2023				88.00	87.0		
9/29/2022	C3K123252T	4222228	6/12/2022	P	6/13/2023				88.00	87.0		
9/29/2022	C3K123253T	4222228	6/12/2022	P	7/19/2023				88.00	87.0		
9/29/2022	C4K124001T	4222228	6/13/2022	P	8/17/2023				88.00	87.0		
9/29/2022	C4K124002T	4222228	6/13/2022	P	8/21/2023				88.00	87.0		
9/29/2022	C4K124004T	4222228	6/13/2022	P	6/13/2023				87.00	89.0		
9/28/2022	C4K124005T	4222228	6/13/2022	P	6/23/2023	6/17/2022	CA220689-A C#164243		87.00	89.0	97	96
9/29/2022	C4K124006T	4222228	6/13/2022	P	8/21/2023				87.00	89.0		
9/29/2022	C4K124007T	4222228	6/13/2022	P	6/23/2023				87.00	89.0		
9/28/2022	C4K124008T	4222228	6/13/2022	P	8/16/2023				87.00	89.0		
9/28/2022	C4K124009T	4222228	6/13/2022	P	6/13/2023				87.00	89.0		
9/29/2022	C4K124010T	4222228	6/13/2022	P	6/23/2023				86.00	86.0		
9/28/2022	C4K124011T	4222228	6/13/2022	P	7/6/2023				86.00	86.0		
9/29/2022	C4K124012T	4222228	6/13/2022	P	6/13/2023				86.00	86.0		

ROLL GOODS CHECKLIST
GEOMEMBRANE

PROJECT: Dolby Phase 3 Cover Upgrade | **QUALITY ASSURANCE MONITOR: TJM** | **MATERIAL DESCRIPTION: 40 mil HDPE**

ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	RESIN NO.	MANUFACTURE DATE	CERTIFICATE PASS/FAIL	DATE OF INSTALLATION	DATE SAMPLED	CQA LOT NO.	COMMENTS Project Number: 220265.01	MANF. CERTS. Yield STRENGTH TD - ppi	MANF. CERTS. Yield STRENGTH MD - ppi	CONFORMANCE YIELD STRENGTH TD - ppi (avg)	CONFORMANCE YIELD STRENGTH MD - ppi (avg)
9/29/2022	C4K124013T	4222228	6/13/2022	P	6/12/2023				86.00	86.0		
9/28/2022	C4K124014T	4222228	6/13/2022	P	6/12/2023	6/17/2022	CA220689-A C#164244		86.00	86.0	100	95
9/28/2022	C4K124015T	4222228	6/13/2022	P	8/16/2023				86.00	86.0		
9/29/2022	C1K124016T	4222228	6/13/2022	P	*Roll Remaining				88.00	87.0		
9/28/2022	C1K124017T	4222228	6/13/2022	P	8/16/2023				88.00	87.0		
9/28/2022	C1K124018T	4222228	6/13/2022	P	7/19/2023				88.00	87.0		
9/28/2022	C1K124019T	4222228	6/13/2022	P	8/17/2023				88.00	87.0		
9/29/2022	C1K124020T	4222228	6/13/2022	P	6/13/2023				88.00	87.0		
9/29/2022	C1K124022T	4222228	6/13/2022	P	6/12/2023				88.00	87.0		
9/29/2022	C1K124023T	4222228	6/13/2022	P	8/17/2023				86.00	88.0		
9/28/2022	C1K124024T	4222228	6/13/2022	P	8/16/2023	6/17/2022	A220689-A C#164245		86.00	88.0	99	97
9/29/2022	C1K124025T	4222228	6/13/2022	P	8/18/2023				86.00	88.0		
9/29/2022	C1K124027T	4222228	6/13/2022	P	8/21/2023				86.00	88.0		
9/29/2022	C1K124028T	4222228	6/13/2022	P	8/18/2023				86.00	88.0		
9/29/2022	C1K124029T	4222228	6/13/2022	P	8/18/2023				86.00	88.0		

PROJECT MINIMUM (ppi)	**84.0**	
AVERAGE ROLL (ppi)	87.1	98.0
90%	78.4	88.2
60%	52.3	58.8
STD DEV	1.3	1.2
2 STD DEV	2.7	2.3
SHEAR	78.4	88.2
PEEL	52.3	58.8
EXTRUSION	52.3	58.8

PROPOSED SEAM STRENGTH VALUES

	SEAM STRENGTH (ppi)
PARENT MATERIAL = AVERAGE MANF. CERT VALUE IN MD	87.1
90%	78.4
60%	52.3
SHEAR	**78**
PEEL	**52**
EXTRUSION-PEEL	**44**

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade	Quality Assurance Monitor: TJM	PROJECT NUMBER: 220265.01	MATERIAL DESCRIPTION: SKAPS TN 330-2-6

ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/13/2022	115381010001	FPAX980337	N/A	8/29/2022			Phase 2	2610	980
7/13/2022	115381010002	FPAX980337	N/A	8/29/2022			Phase 2	2610	980
7/7/2022	115381010003	FPAX980337	N/A	7/19/2022			Phase 2	2610	980
7/7/2022	115381010004	FPAX980337	N/A	7/19/2022	5/6/22	CA220453 C#163133	Phase 2	2610	980
7/7/2022	115381010005	FPAX980337	N/A	8/29/2022			Phase 2	2610	980
7/7/2022	115381010006	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/7/2022	115381010007	FPAX980337	N/A	7/18/2022			Phase 2	2610	980
7/7/2022	115381010008	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/7/2022	115381010009	FPAX980337	N/A	7/19/2022			Phase 2	2610	980
7/7/2022	115381010010	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/7/2022	115381010011	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/7/2022	115381010012	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/7/2022	115381010013	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/7/2022	115381010014	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/7/2022	115381010015	FPAX980337	N/A	8/2/2022			Phase 2	2610	980
7/7/2022	115381010016	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/7/2022	115381010017	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/7/2022	115381010018	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/7/2022	115381010019	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/7/2022	115381010020	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/7/2022	115381010021	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/7/2022	115381010022	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/7/2022	115381010023	FPAX980337	N/A	7/19/2022			Phase 2	2610	980
7/7/2022	115381010024	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/13/2022	115381010025	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010026	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/13/2022	115381010027	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/7/2022	115381010028	FPAX980337	N/A	6/28/2023			Phase 2	2610	980
7/7/2022	115381010029	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/13/2022	115381010030	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/13/2022	115381010031	FPAX980337	N/A	9/12/2022			Phase 2	2610	980

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 330-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/13/2022	115381010032	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010033	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010034	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/13/2022	115381010035	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/13/2022	115381010036	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/13/2022	115381010037	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010038	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010039	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/13/2022	115381010040	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/13/2022	115381010041	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010042	FPAX980337	N/A	9/9/2022	5/6/22	CA220453 C#163134	Phase 2	2610	980
7/13/2022	115381010043	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/13/2022	115381010044	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/13/2022	115381010045	FPAX980337	N/A	8/29/2022			Phase 2	2610	980
7/13/2022	115381010046	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010047	FPAX980337	N/A	9/13/2022			Phase 2	2610	980
7/13/2022	115381010048	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/13/2022	115381010049	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010050	FPAX980337	N/A	8/29/2022			Phase 2	2610	980
7/13/2022	115381010051	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010052	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/13/2022	115381010053	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/13/2022	115381010054	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010055	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010056	FPAX980337	N/A	9/15/2022			Phase 2	2610	980
7/11/2022	115381010057	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010058	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010059	FPAX980337	N/A	6/28/2023			Phase 2	2610	980
7/13/2022	115381010060	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010061	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010062	FPAX980337	N/A	9/13/2022			Phase 2	2610	980

ROLL GOODS CHECKLIST
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PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 330-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/13/2022	115381010063	FPAX980337	N/A	8/29/2022			Phase 2	2610	980
7/13/2022	115381010064	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010065	FPAX980337	N/A	9/10/2022			Phase 2	2610	980
7/13/2022	115381010066	FPAX980337	N/A	9/13/2022			Phase 2	2610	980
7/13/2022	115381010067	FPAX980337	N/A	9/8/2022			Phase 2	2610	980
7/13/2022	115381010068	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/13/2022	115381010069	FPAX980337	N/A	8/29/2022			Phase 2	2610	980
7/13/2022	115381010070	FPAX980337	N/A	9/15/2022			Phase 2	2610	980
7/13/2022	115381010071	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010072	FPAX980337	N/A	9/15/2022			Phase 2	2610	980
7/13/2022	115381010073	FPAX980337	N/A	8/29/2022			Phase 2	2610	980
7/13/2022	115381010074	FPAX980337	N/A	8/29/2022			Phase 2	2610	980
7/13/2022	115381010075	FPAX980337	N/A	8/19/2022			Phase 2	2610	980
7/13/2022	115381010076	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010077	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010078	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010079	FPAX980337	N/A	9/7/2023			Phase 2	2610	980
7/13/2022	115381010080	FPAX980337	N/A	9/14/2022	5/6/22	CA220453 C#163135	Phase 2	2610	980
7/7/2022	115381010081	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/8/2022	115381010082	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/8/2022	115381010083	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/8/2022	115381010084	FPAX980337	N/A	9/8/2022			Phase 2	2610	980
7/13/2022	115381010085	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/8/2022	115381010086	FPAX980337	N/A	9/13/2022			Phase 2	2610	980
7/13/2022	115381010087	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/7/2022	115381010088	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/8/2022	115381010089	FPAX980337	N/A	9/8/2022			Phase 2	2610	980
7/7/2022	115381010090	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/13/2022	115381010091	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010092	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/13/2022	115381010093	FPAX980337	N/A	9/8/2022			Phase 2	2610	980

ROLL GOODS CHECKLIST
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PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 330-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/13/2022	115381010094	FPAX980337	N/A	9/15/2022			Phase 2	2610	980
7/8/2022	115381010095	FPAX980337	N/A	8/2/2022			Phase 2	2610	980
7/13/2022	115381010096	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/13/2022	115381010097	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010098	FPAX980337	N/A	9/15/2022			Phase 2	2610	980
7/11/2022	115381010099	FPAX980337	N/A	8/19/2022			Phase 2	2610	980
7/11/2022	115381010100	FPAX980337	N/A	7/22/2022			Phase 2	2610	980
7/13/2022	115381010101	FPAX980337	N/A	9/13/2022			Phase 2	2610	980
7/13/2022	115381010102	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010103	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010104	FPAX980337	N/A	9/16/2022			Phase 2	2610	980
7/13/2022	115381010105	FPAX980337	N/A	6/28/2023			Phase 2	2610	980
7/13/2022	115381010106	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/13/2022	115381010107	FPAX980337	N/A	9/15/2022			Phase 2	2610	980
7/11/2022	115381010108	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010109	FPAX980337	N/A	8/19/2022			Phase 2	2610	980
7/11/2022	115381010110	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010111	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/11/2022	115381010112	FPAX980337	N/A	8/2/2022			Phase 2	2610	980
7/11/2022	115381010113	FPAX980337	N/A	7/22/2022			Phase 2	2610	980
7/11/2022	115381010114	FPAX980337	N/A	8/2/2022			Phase 2	2610	980
7/11/2022	115381010115	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010116	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010117	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010118	FPAX980337	N/A	8/2/2022	5/6/22	CA220454 C#163145	Phase 2	2610	980
7/11/2022	115381010119	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010120	FPAX980337	N/A	7/19/2022			Phase 2	2610	980
7/11/2022	115381010121	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010122	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010123	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010124	FPAX980337	N/A	7/21/2022			Phase 2	2610	980

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 330-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/11/2022	115381010125	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010126	FPAX980337	N/A	8/2/2022			Phase 2	2610	980
7/11/2022	115381010127	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010128	FPAX980337	N/A	8/2/2022			Phase 2	2610	980
7/11/2022	115381010129	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/13/2022	115381010130	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/13/2022	115381010131	FPAX980337	N/A	9/8/2022			Phase 2	2610	980
7/13/2022	115381010132	FPAX980337	N/A	9/10/2022			Phase 2	2610	980
7/13/2022	115381010133	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010134	FPAX980337	N/A	9/16/2022			Phase 2	2610	980
7/13/2022	115381010135	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010136	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010137	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010138	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010139	FPAX980337	N/A	8/29/2022			Phase 2	2610	980
7/8/2022	115381010140	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/13/2022	115381010141	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010142	FPAX980337	N/A	8/29/2022			Phase 2	2610	980
7/13/2022	115381010143	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010144	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010145	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010146	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/13/2022	115381010147	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010148	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010149	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/13/2022	115381010150	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010151	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/13/2022	115381010152	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010153	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010154	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/13/2022	115381010155	FPAX980337	N/A	8/1/2022			Phase 2	2610	980

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 330-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/11/2022	115381010156	FPAX980337	N/A	7/22/2022	5/6/22	CA220454 C#163146	Phase 2	2610	980
7/13/2022	115381010157	FPAX980337	N/A	9/13/2022			Phase 2	2610	980
7/13/2022	115381010158	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/11/2022	115381010159	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010160	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010161	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010162	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010163	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010164	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010165	FPAX980337	N/A	7/18/2022			Phase 2	2610	980
7/11/2022	115381010166	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010167	FPAX980337	N/A	8/19/2022			Phase 2	2610	980
7/11/2022	115381010168	FPAX980337	N/A	7/19/2022			Phase 2	2610	980
7/11/2022	115381010169	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010170	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010171	FPAX980337	N/A	8/19/2022			Phase 2	2610	980
7/11/2022	115381010172	FPAX980337	N/A	8/19/2022			Phase 2	2610	980
7/11/2022	115381010173	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/11/2022	115381010174	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010175	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/11/2022	115381010176	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/11/2022	115381010177	FPAX980337	N/A	8/1/2022			Phase 2	2610	980
7/11/2022	115381010178	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/11/2022	115381010179	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/11/2022	115381010180	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/8/2022	115381010181	FPAX980337	N/A	7/22/2022			Phase 2	2610	980
7/11/2022	115381010182	FPAX980337	N/A	7/21/2022			Phase 2	2610	980
7/8/2022	115381010183	FPAX980337	N/A	8/2/2022			Phase 2	2610	980
7/8/2022	115381010184	FPAX980337	N/A	8/2/2022			Phase 2	2610	980
7/8/2022	115381010185	FPAX980337	N/A	9/8/2022			Phase 2	2610	980
7/8/2022	115381010186	FPAX980337	N/A	8/2/2022			Phase 2	2610	980

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 330-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/8/2022	115381010187	FPAX980337	N/A	9/8/2022			Phase 2	2610	980
7/11/2022	115381010188	FPAX980337	N/A	8/19/2022			Phase 2	2610	980
7/11/2022	115381010189	FPAX980337	N/A	8/2/2022			Phase 2	2610	980
7/8/2022	115381010190	FPAX980337	N/A	8/2/2022			Phase 2	2610	980
7/8/2022	115381010191	FPAX980337	N/A	7/22/2022			Phase 2	2610	980
7/8/2022	115381010192	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/8/2022	115381010193	FPAX980337	N/A	8/2/2022			Phase 2	2610	980
7/8/2022	115381010194	FPAX980337	N/A	8/2/2022	5/6/22	CA220454 C#163147	Phase 2	2610	980
7/13/2022	115381010195	FPAX980337	N/A	6/27/2023			Phase 2	2610	980
7/8/2022	115381010196	FPAX980337	N/A	9/15/2022			Phase 2	2610	980
7/8/2022	115381010197	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/8/2022	115381010198	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/8/2022	115381010199	FPAX980337	N/A	9/10/2022			Phase 2	2610	980
7/8/2022	115381010200	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/8/2022	115381010201	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/8/2022	115381010202	FPAX980337	N/A	9/8/2022			Phase 2	2610	980
7/8/2022	115381010203	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/8/2022	115381010204	FPAX980337	N/A	9/9/2022			Phase 2	2610	980
7/8/2022	115381010205	FPAX980337	N/A	8/3/2022			Phase 2	2610	980
7/13/2022	115381010206	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010207	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010208	FPAX980337	N/A	9/16/2022			Phase 2	2610	980
7/13/2022	115381010209	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
7/13/2022	115381010210	FPAX980337	N/A	9/13/2022			Phase 2	2610	980
7/13/2022	115381010211	FPAX980337	N/A	9/13/2022			Phase 2	2610	980
7/13/2022	115381010212	FPAX980337	N/A	9/13/2022			Phase 2	2610	980
7/13/2022	115381010213	FPAX980337	N/A	9/14/2022			Phase 2	2610	980
7/13/2022	115381010214	FPAX980337	N/A	9/13/2022			Phase 2	2610	980
7/13/2022	115381010215	FPAX980337	N/A	9/12/2022			Phase 2	2610	980
6/7/2023	115381010216	FPAX980337	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010217	FPAX980337	N/A	9/7/2023			Phase 3	2610	

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 330-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381010218	FPAX980337	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010219	FPAX980337	N/A	9/7/2023			Phase 3	2610	
6/7/2023	115381010220	FPAX980337	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010221	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010222	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010223	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010224	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010225	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010226	CPCX817254	N/A	8/29/2023			Phase 3	2610	
6/7/2023	115381010227	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010228	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010229	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010230	CPCX817254	N/A	8/29/2023			Phase 3	2610	
6/7/2023	115381010231	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010232	CPCX817254	N/A	*Roll Remaining	7/14/22	CA220800 C#164793	Phase 3	2610	
6/7/2023	115381010233	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010234	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010235	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010236	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010237	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010238	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010239	CPCX817254	N/A	8/29/2023			Phase 3	2610	
6/7/2023	115381010240	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010241	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010242	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010243	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010244	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010245	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010246	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010247	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010248	CPCX817254	N/A	9/9/2023			Phase 3	2610	

ROLL GOODS CHECKLIST
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PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 330-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381010249	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010250	CPCX817254	N/A	9/7/2023			Phase 3	2610	
6/7/2023	115381010251	CPCX817254	N/A	8/29/2023			Phase 3	2610	
6/7/2023	115381010252	CPCX817254	N/A	9/7/2023			Phase 3	2610	
6/7/2023	115381010253	CPCX817254	N/A	8/29/2023			Phase 3	2610	
6/7/2023	115381010254	CPCX817254	N/A	8/29/2023			Phase 3	2610	
6/7/2023	115381010255	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010256	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010257	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010258	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010259	CPCX817254	N/A	9/7/2023			Phase 3	2610	
6/7/2023	115381010260	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010261	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010262	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010263	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010264	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010265	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010266	CPCX817254	N/A	9/7/2023			Phase 3	2610	
6/7/2023	115381010267	CPCX817254	N/A	9/6/2023			Phase 3	2610	
6/7/2023	115381010268	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010269	CPCX817254	N/A	9/7/2023			Phase 3	2610	
6/7/2023	115381010270	CPCX817254	N/A	9/7/2023	7/14/22	CA220800 C#164794	Phase 3	2610	
6/7/2023	115381010271	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010272	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010273	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010274	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010275	CPCX817254	N/A	8/29/2023			Phase 3	2610	
6/7/2023	115381010276	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010277	CPCX817254	N/A	7/21/2023			Phase 3	2610	
6/7/2023	115381010278	CPCX817254	N/A	8/29/2023			Phase 3	2610	
6/7/2023	115381010279	CPCX817254	N/A	7/20/2023			Phase 3	2610	

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade	Quality Assurance Monitor: TJM	PROJECT NUMBER: 220265.01	MATERIAL DESCRIPTION: SKAPS TN 330-2-6

ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381010280	CPCX817254	N/A	*Roll Remaining			Phase 3	2610	
6/7/2023	115381010281	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010282	CPCX817254	N/A	8/29/2023			Phase 3	2610	
6/7/2023	115381010283	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010284	CPCX817254	N/A	9/6/2023			Phase 3	2610	
6/7/2023	115381010285	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010286	CPCX817254	N/A	8/29/2023			Phase 3	2610	
6/7/2023	115381010287	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010288	CPCX817254	N/A	7/21/2023			Phase 3	2610	
6/7/2023	115381010289	CPCX817254	N/A	7/20/2023			Phase 3	2610	
6/7/2023	115381010290	CPCX817254	N/A	7/21/2023			Phase 3	2610	
6/7/2023	115381010291	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010292	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010293	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010294	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010295	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010296	CPCX817254	N/A	9/9/2023			Phase 3	2610	
6/7/2023	115381010297	CPCX817254	N/A	8/29/2023			Phase 3	2610	
6/7/2023	115381010298	CPCX817254	N/A	7/20/2023			Phase 3	2610	
6/7/2023	115381010299	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010300	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010301	CPCX817254	N/A	7/21/2023			Phase 3	2610	
6/7/2023	115381010302	CPCX817254	N/A	9/7/2023			Phase 3	2610	
6/7/2023	115381010303	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010304	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010305	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010306	CPCX817254	N/A	9/7/2023			Phase 3	2610	
6/7/2023	115381010307	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010308	CPCX817254	N/A	9/7/2023	7/14/22	CA220800 C#164795	Phase 3	2610	
6/7/2023	115381010309	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010310	CPCX817254	N/A	6/28/2023			Phase 3	2610	

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade	Quality Assurance Monitor: TJM	PROJECT NUMBER: 220265.01	MATERIAL DESCRIPTION: SKAPS TN 330-2-6

ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381010311	CPCX817254	N/A	7/20/2023			Phase 3	2610	
6/7/2023	115381010312	CPCX817254	N/A	9/7/2023			Phase 3	2610	
6/7/2023	115381010313	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010314	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010315	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010316	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010317	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010318	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010319	CPCX817254	N/A	7/20/2023			Phase 3	2610	
6/7/2023	115381010320	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010321	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010322	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010323	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010324	CPCX817254	N/A	7/20/2023			Phase 3	2610	
6/7/2023	115381010325	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010326	CPCX817254	N/A	7/20/2023			Phase 3	2610	
6/7/2023	115381010327	CPCX817254	N/A	7/20/2023			Phase 3	2610	
6/7/2023	115381010328	CPCX817254	N/A	7/20/2023			Phase 3	2610	
6/7/2023	115381010329	CPCX817254	N/A	7/20/2023			Phase 3	2610	
6/7/2023	115381010330	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010331	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010332	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010333	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010334	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010335	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010336	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010337	CPCX817254	N/A	6/27/2023			Phase 3	2610	
6/7/2023	115381010338	CPCX817254	N/A	7/21/2023			Phase 3	2610	
6/7/2023	115381010339	CPCX817254	N/A	7/21/2023			Phase 3	2610	
6/7/2023	115381010340	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010341	CPCX817254	N/A	6/28/2023			Phase 3	2610	

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 330-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381010342	CPCX817254	N/A	9/8/2023			Phase 3	2610	
6/7/2023	115381010343	CPCX817254	N/A	9/7/2023			Phase 3	2610	
6/7/2023	115381010344	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010345	CPCX817254	N/A	9/8/2023	7/14/22	CA220800 C#164796	Phase 3	2610	
6/7/2023	115381010346	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010347	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010348	CPCX817254	N/A	6/28/2023			Phase 3	2610	
6/7/2023	115381010349	CPCX817254	N/A	6/28/2023			Phase 3	2610	
							Totals	910890	

ROLL GOODS CHECKLIST
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PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/7/2022	115381020001	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020002	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020003	EQUX621521	N/A	7/18/2022	5/6/2022	CA220451 C#163117	Phase 2	2900	480
7/7/2022	115381020004	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020005	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020006	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020007	EQUX621521	N/A	7/18/2022			Phase 2	2900	480
7/7/2022	115381020008	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020009	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/8/2022	115381020010	EQUX621521	N/A	8/3/2022			Phase 2	2900	480
7/8/2022	115381020011	EQUX621521	N/A	8/2/2022			Phase 2	2900	480
7/11/2022	115381020012	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/11/2022	115381020013	EQUX621521	N/A	8/19/2022			Phase 2	2900	480
7/11/2022	115381020014	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/11/2022	115381020015	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/11/2022	115381020016	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/11/2022	115381020017	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/11/2022	115381020018	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/11/2022	115381020019	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/11/2022	115381020020	EQUX621521	N/A	6/29/2023			Phase 2	2900	480
7/13/2022	115381020021	EQUX621521	N/A	6/29/2023			Phase 2	2900	480
7/11/2022	115381020022	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/13/2022	115381020023	EQUX621521	N/A	9/1/2023			Phase 2	2900	480
7/11/2022	115381020024	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/11/2022	115381020025	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/11/2022	115381020026	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/11/2022	115381020027	EQUX621521	N/A	9/12/2022			Phase 2	2900	480
7/11/2022	115381020028	EQUX621521	N/A	8/29/2022			Phase 2	2900	480
7/7/2022	115381020029	EQUX621521	N/A	7/18/2022			Phase 2	2900	480
7/7/2022	115381020030	EQUX621521	N/A	7/18/2022			Phase 2	2900	480

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/7/2022	115381020031	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020032	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020033	EQUX621521	N/A	7/19/2022			Phase 2	2900	480
7/7/2022	115381020034	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020035	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/8/2022	115381020036	EQUX621521	N/A	8/2/2022			Phase 2	2900	480
7/8/2022	115381020037	EQUX621521	N/A	8/3/2022			Phase 2	2900	480
7/7/2022	115381020038	EQUX621521	N/A	7/19/2022			Phase 2	2900	480
7/8/2022	115381020039	EQUX621521	N/A	8/2/2022			Phase 2	2900	480
7/8/2022	115381020040	EQUX621521	N/A	8/3/2022			Phase 2	2900	480
7/8/2022	115381020041	EQUX621521	N/A	7/30/2022	5/6/2022	CA220451 C#163118	Phase 2	2900	480

ROLL GOODS CHECKLIST
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PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/8/2022	115381020042	EQUX621521	N/A	8/3/2022			Phase 2	2900	480
7/7/2022	115381020043	EQUX621521	N/A	7/18/2022			Phase 2	2900	480
7/7/2022	115381020044	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/8/2022	115381020045	EQUX621521	N/A	8/3/2022			Phase 2	2900	480
7/7/2022	115381020046	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020047	EQUX621521	N/A	7/19/2022			Phase 2	2900	480
7/7/2022	115381020048	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020049	EQUX621521	N/A	7/19/2022			Phase 2	2900	480
7/7/2022	115381020050	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/7/2022	115381020051	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/8/2022	115381020052	EQUX621521	N/A	8/19/2022			Phase 2	2900	480
7/8/2022	115381020053	EQUX621521	N/A	8/3/2022			Phase 2	2900	480
7/8/2022	115381020054	EQUX621521	N/A	8/3/2022			Phase 2	2900	480
7/7/2022	115381020055	EQUX621521	N/A	7/19/2022			Phase 2	2900	480
7/7/2022	115381020056	EQUX621521	N/A	7/19/2022			Phase 2	2900	480
7/11/2022	115381020057	EQUX621521	N/A	8/2/2022			Phase 2	2900	480
7/11/2022	115381020058	EQUX621521	N/A	9/8/2022			Phase 2	2900	480
7/11/2022	115381020059	EQUX621521	N/A	8/1/2022			Phase 2	2900	480
7/11/2022	115381020060	EQUX621521	N/A	7/20/2022			Phase 2	2900	480
7/11/2022	115381020061	EQUX621521	N/A	8/1/2022			Phase 2	2900	480
7/11/2022	115381020062	EQUX621521	N/A	7/30/2022			Phase 2	2900	480
7/11/2022	115381020063	EQUX621521	N/A	8/2/2022			Phase 2	2900	480
7/11/2022	115381020064	EQUX621521	N/A	8/3/2022			Phase 2	2900	480
7/11/2022	115381020065	EQUX621521	N/A	7/30/2022			Phase 2	2900	480
7/11/2022	115381020066	EQUX621521	N/A	8/29/2022			Phase 2	2900	480
7/11/2022	115381020067	EQUX621521	N/A	8/29/2022			Phase 2	2900	480
7/11/2022	115381020068	EQUX621521	N/A	7/30/2022			Phase 2	2900	480
7/11/2022	115381020069	EQUX621521	N/A	8/19/2022			Phase 2	2900	480
7/11/2022	115381020070	EQUX621521	N/A	8/2/2022			Phase 2	2900	480
7/11/2022	115381020071	EQUX621521	N/A	8/2/2022			Phase 2	2900	480

ROLL GOODS CHECKLIST
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PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/11/2022	115381020072	EQUX621521	N/A	8/1/2022			Phase 2	2900	480
7/11/2022	115381020073	EQUX621521	N/A	8/1/2022			Phase 2	2900	480
7/11/2022	115381020074	EQUX621521	N/A	7/30/2022			Phase 2	2900	480
7/11/2022	115381020075	EQUX621521	N/A	8/29/2022			Phase 2	2900	480
7/11/2022	115381020076	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
7/11/2022	115381020077	EQUX621521	N/A	9/4/2023			Phase 3	2900	480
7/11/2022	115381020078	EQUX621521	N/A	9/6/2023			Phase 3	2900	480
7/11/2022	115381020079	EQUX621521	N/A	6/29/2023	5/12/22	CA220452 C#163125	Phase 3	2900	480
7/11/2022	115381020080	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
7/11/2022	115381020081	EQUX621521	N/A	9/7/2023			Phase 3	2900	480
7/11/2022	115381020082	EQUX621521	N/A	9/6/2023			Phase 3	2900	480
7/11/2022	115381020083	EQUX621521	N/A	9/2/2023			Phase 3	2900	480
7/11/2022	115381020084	EQUX621521	N/A	9/2/2023			Phase 3	2900	480
7/11/2022	115381020085	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
7/11/2022	115381020086	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
7/11/2022	115381020087	EQUX621521	N/A	9/7/2023			Phase 3	2900	480
7/11/2022	115381020088	EQUX621521	N/A	9/6/2023			Phase 3	2900	480
7/11/2022	115381020089	EQUX621521	N/A	6/22/2023			Phase 3	2900	480
7/11/2022	115381020090	EQUX621521	N/A	9/2/2023			Phase 3	2900	480
7/11/2022	115381020091	EQUX621521	N/A	9/6/2023			Phase 3	2900	480

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
7/11/2022	115381020092	EQUX621521	N/A	9/7/2023			Phase 3	2900	480
7/8/2022	115381020093	EQUX621521	N/A	8/29/2023			Phase 3	2900	480
7/8/2022	115381020094	EQUX621521	N/A	9/7/2023			Phase 3	2900	480
7/8/2022	115381020095	EQUX621521	N/A	8/19/2022			Phase 3	2900	480
7/8/2022	115381020096	EQUX621521	N/A	6/16/2023			Phase 3	2900	480
7/8/2022	115381020097	EQUX621521	N/A	6/16/2023			Phase 3	2900	480
7/8/2022	115381020098	EQUX621521	N/A	6/22/2023			Phase 3	2900	480
7/13/2022	115381020099	EQUX621521	N/A	9/12/2022			Phase 3	2900	480
7/11/2022	115381020100	EQUX621521	N/A	6/16/2023			Phase 3	2900	480
7/11/2022	115381020101	EQUX621521	N/A	6/16/2023			Phase 3	2900	480
7/8/2022	115381020102	EQUX621521	N/A	9/7/2023			Phase 3	2900	480
7/8/2022	115381020103	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020104	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
7/8/2022	115381020105	EQUX621521	N/A	9/7/2023			Phase 3	2900	480
7/8/2022	115381020106	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
7/11/2022	115381020107	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
7/8/2022	115381020108	EQUX621521	N/A	9/7/2023			Phase 3	2900	480
6/7/2023	115381020109	EQUX621521	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020110	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020111	EQUX621521	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020112	EQUX621521	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020113	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020114	EQUX621521	N/A	7/18/2023			Phase 3	2900	480
6/7/2023	115381020115	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020116	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020117	EQUX621521	N/A	7/18/2023	5/12/22	CA220452 C#163126	Phase 3	2900	480
6/7/2023	115381020118	EQUX621521	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020119	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020120	EQUX621521	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020121	GPLX001038	N/A	6/22/2023			Phase 3	2900	480

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381020122	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020123	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020124	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020125	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020126	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020127	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020128	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020129	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020130	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020131	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020132	GPLX001038	N/A	8/29/2023			Phase 3	2900	480
6/7/2023	115381020133	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020134	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020135	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020136	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020137	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020138	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020139	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020140	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020141	GPLX001038	N/A	9/2/2023			Phase 3	2900	480

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381020142	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020143	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020144	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020145	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020146	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020147	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020148	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020149	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020150	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020151	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020152	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020153	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020154	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020155	GPLX001038	N/A	9/6/2023	7/14/22	CA220799 C#164777	Phase 3	2900	480
6/7/2023	115381020156	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020157	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020158	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020159	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020160	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020161	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020162	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020163	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020164	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020165	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020166	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020167	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020168	GPLX001038	N/A	7/18/2023			Phase 3	2900	480
6/7/2023	115381020169	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020170	GPLX001038	N/A	7/18/2023			Phase 3	2900	480
6/7/2023	115381020171	GPLX001038	N/A	7/18/2023			Phase 3	2900	480

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381020172	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020173	GPLX001038	N/A	7/18/2023			Phase 3	2900	480
6/7/2023	115381020174	GPLX001038	N/A	7/18/2023			Phase 3	2900	480
6/7/2023	115381020175	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020176	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020177	GPLX001038	N/A	8/29/2023			Phase 3	2900	480
6/7/2023	115381020178	GPLX001038	N/A	9/7/2023			Phase 3	2900	480
6/7/2023	115381020179	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020180	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020181	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020182	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020183	GPLX001038	N/A	7/21/2023			Phase 3	2900	480
6/7/2023	115381020184	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020185	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020186	GPLX001038	N/A	7/18/2023			Phase 3	2900	480
6/7/2023	115381020187	GPLX001038	N/A	7/18/2023			Phase 3	2900	480
6/7/2023	115381020188	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020189	GPLX001038	N/A	7/18/2023			Phase 3	2900	480
6/7/2023	115381020190	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020191	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020192	GPLX001038	N/A	6/29/2023			Phase 3	2900	480

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381020193	GPLX001038	N/A	6/22/2023	7/14/22	CA220799 C#164778	Phase 3	2900	480
6/7/2023	115381020194	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020195	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020196	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020197	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020198	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020199	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020200	GPLX001038	N/A	8/30/2023			Phase 3	2900	480
6/7/2023	115381020201	GPLX001038	N/A	7/18/2023			Phase 3	2900	480
6/7/2023	115381020202	GPLX001038	N/A	8/30/2023			Phase 3	2900	480
6/7/2023	115381020203	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020204	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020205	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020206	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020207	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020208	GPLX001038	N/A	8/30/2023			Phase 3	2900	480
6/7/2023	115381020209	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020210	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020211	GPLX001038	N/A	8/30/2023			Phase 3	2900	480
6/7/2023	115381020212	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020213	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020214	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020215	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020216	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020217	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020218	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020219	GPLX001038	N/A	8/30/2023			Phase 3	2900	480
6/7/2023	115381020220	GPLX001038	N/A	7/19/2023			Phase 3	2900	480
6/7/2023	115381020221	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020222	GPLX001038	N/A	9/2/2023			Phase 3	2900	480

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381020223	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020224	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020225	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020226	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020227	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020228	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020229	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020230	GPLX001038	N/A	8/30/2023			Phase 3	2900	480
6/7/2023	115381020231	GPLX001038	N/A	7/18/2023	7/14/22	CA220799 C#164779	Phase 3	2900	480
6/7/2023	115381020232	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020233	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020234	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020235	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020236	GPLX001038	N/A	6/23/2023			Phase 3	2900	480
6/7/2023	115381020237	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020238	GPLX001038	N/A	6/16/2023			Phase 3	2900	480
6/7/2023	115381020239	GPLX001038	N/A	8/30/2023			Phase 3	2900	480
6/7/2023	115381020240	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020241	GPLX001038	N/A	6/16/2023			Phase 3	2900	480

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381020242	GPLX001038	N/A	7/19/2023			Phase 3	2900	480
6/7/2023	115381020243	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020244	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020245	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020246	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020247	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020248	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020249	GPLX001038	N/A	7/19/2023			Phase 3	2900	480
6/7/2023	115381020250	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020251	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020252	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020253	GPLX001038	N/A	8/30/2023			Phase 3	2900	480
6/7/2023	115381020254	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020255	GPLX001038	N/A	9/6/2023			Phase 3	2900	480
6/7/2023	115381020256	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020257	GPLX001038	N/A	8/30/2023			Phase 3	2900	480
6/7/2023	115381020258	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020259	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020260	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020261	GPLX001038	N/A	6/22/2023			Phase 3	2900	480
6/7/2023	115381020262	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020263	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020264	GPLX001038	N/A	8/30/2023			Phase 3	2900	480
6/7/2023	115381020265	GPLX001038	N/A	6/29/2023			Phase 3	2900	480
6/7/2023	115381020266	GPLX001038	N/A	9/1/2023			Phase 3	2900	480
6/7/2023	115381020267	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020268	GPLX001038	N/A	7/18/2023			Phase 3	2900	480
6/7/2023	115381020269	GPLX001038	N/A	9/6/2023	7/14/22	CA220799 C#164780	Phase 3	2900	480
6/7/2023	115381020270	GPLX001038	N/A	9/2/2023			Phase 3	2900	480
6/7/2023	115381020271	GPLX001038	N/A	7/20/2023			Phase 3	2900	480

ROLL GOODS CHECKLIST
GEOCOMPOSITE

PROJECT: Dolby Phase 2/3 Cover Upgrade			Quality Assurance Monitor: TJM			PROJECT NUMBER: 220265.01		MATERIAL DESCRIPTION: SKAPS TN 270-2-6	
ON SITE DELIVERY DATE	MANUFACTURE ROLL NO.	MANUFACTURE RESIN BATCH NO.	MANUFACTURE DATE	INSTALLATION DATE	SAMPLE DATE	CQA CONTROL NO.	COMMENTS	Area (ft^2)	Weight (lb)
6/7/2023	115381020272	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020273	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
6/7/2023	115381020274	GPLX001038	N/A	7/20/2023			Phase 3	2900	480
								794600	

- **SUBGRADE ACCEPTANCE FORMS**

SME
SEVEE & MAHER
ENGINEERS

Integrity Lining Systems LLC

Certificate of Soil Subgrade Acceptance

Project Name: Dolby Landfill
Date: Various
ILS Representative: T. Parks
Job Number: 22-05

Description of area to be accepted:
Subgrade For: 6-12-23 (P1-P31); 6-13-23 (P32-P62); 6-23-23 (P63-P92); 7-6-23 (P93-P106); 7-7-23 (P107-P114); 7-19-23 (P115-P129); 7-21-23 (P130-P137); 8-16-23 (P134-P146); 8-17-23 (P147-P163); 8-18-23 (P164-P181); 8-21-23 (P182-P192)

I, the undersigned, as an authorized representative of Integrity Lining Systems LLC, accept the soil subgrade to be free of visible rocks or protrusions which could damage the geomembrane. I, we (ILS) do not accept any responsibility for the subsurface soil or its conditions, and any effects it may have on the geosynthetics system.

Below is a list of exceptions which ILS does not accept responsibility:

N/A

Accepted By:
ILS Representative: _____ Date: 10-16-23

- **SME FIELD LOGS**

SME
SEVEE & MAHER
ENGINEERS

Panel Placement Log							
PROJECT: Dolby Phase 3 Cover Upgrade			**QUALITY ASSURANCE MONITOR: TJM**			**Material: 40 mil HDPE**	
Installation Date	Panel Number	Roll Number	Panel Length (feet)	Panel Width (feet)	Panel Location	Panel Visual Inspection	Comments
6/12/2023	1	C3K123245	273	24.6	West Slope	Good	-
6/12/2023	2	C3K123245	53	24.6	West Slope	Good	-
6/12/2023	3	C3K123245	31	6.5	West Slope	Good	-
6/12/2023	4	C1K123193	185	24.6	West Slope	Good	-
6/12/2023	5	C1K123193	210	24.6	West Slope	Good	-
6/12/2023	6	C1K123193	31	24.6	West Slope	Good	-
6/12/2023	7	C3K123249	161	24.6	West Slope	Good	-
6/12/2023	8	C3K123249	112	11	West Slope	Good	-
6/12/2023	9	C3K123249	124	24.6	West Slope	Good	-
6/12/2023	10	C4K123218	209	24.6	West Slope	Good	-
6/12/2023	11	C4K123218	180	24.6	West Slope	Good	-
6/12/2023	12	C4K123177	191	24.6	West Slope	Good	-
6/12/2023	13	C4K123177	206	24.6	West Slope	Good	-
6/12/2023	14	C1K124022	163	24.6	West Slope	Good	-
6/12/2023	15	C1K124022	237	24.6	West Slope	Good	-
6/12/2023	16	C3K123194	124	24.6	West Slope	Good	-
6/12/2023	17	C3K123194	285	24.6	West Slope	Good	-
6/12/2023	18	C1K123181	72	24.6	West Slope	Good	-
6/12/2023	19	C1K123181	346	24.6	West Slope	Good	-
6/12/2023	20	C4K123216	17	24.6	West Slope	Good	-
6/12/2023	21	C4K123216	357	24.6	West Slope	Good	-
6/12/2023	22	C4K123216	39	24.6	West Slope	Good	-
6/12/2023	23	C1K123226	320	24.6	West Slope	Good	-
6/12/2023	24	C1K123226	92	24.6	West Slope	Good	-
6/12/2023	25	C4K124013	270	24.6	West Slope	Good	-
6/12/2023	26	C4K124013	141	24.6	West Slope	Good	-
6/12/2023	27	C3K123203	225	24.6	West Slope	Good	-
6/12/2023	28	C3K123203	177	24.6	West Slope	Good	-
6/12/2023	29	C4K124014	199	24.6	West Slope	Good	-
6/12/2023	30	C4K124014	209	24.6	West Slope	Good	-
6/12/2023	31	C3K123251	175	24.6	West Slope	Good	-
6/13/2023	32	C3K123251	245	24.6	West Slope	Good	-
6/13/2023	33	C4K124009	146	24.6	West Slope	Good	-
6/13/2023	34	C4K124009	278	24.6	West Slope	Good	-
6/13/2023	35	C4K123176	114	24.6	West Slope	Good	-
6/13/2023	36	C4K123176	173	24.6	West Slope	Good	-
6/13/2023	37	C4K123176	95	24.6	West Slope	Good	-
6/13/2023	38	C3K123252	56	24.6	West Slope	Good	-
6/13/2023	39	C3K123252	113	24.6	West Slope	Good	-
6/13/2023	40	C3K123252	83	24.6	West Slope	Good	-
6/13/2023	41	C3K123252	42	24.6	West Slope	Good	-
6/13/2023	42	C3K123252	26	13	West Slope	Good	-
6/13/2023	43	C3K123205	200	24.6	West Slope	Good	-
6/13/2023	44	C3K123205	193	24.6	West Slope	Good	-
6/13/2023	45	C4K124004	30	24.6	West Slope	Good	-
6/13/2023	46	C4K124004	240	24.6	West Slope	Good	-
6/13/2023	47	C4K124004	128	24.6	West Slope	Good	-
6/13/2023	48	C3K123250	133	24.6	West Slope	Good	-
6/13/2023	49	C3K123250	258	24.6	West Slope	Good	-
6/13/2023	50	C4K124012	18	24.6	West Slope	Good	-
6/13/2023	51	C4K124012	262	24.6	West Slope	Good	-
6/13/2023	52	C4K124012	103	24.6	West Slope	Good	-
6/13/2023	53	C4K123215	207	24.6	West Slope	Good	-

Panel Placement Log							
PROJECT: Dolby Phase 3 Cover Upgrade			**QUALITY ASSURANCE MONITOR: TJM**			**Material: 40 mil HDPE**	
Installation Date	Panel Number	Roll Number	Panel Length (feet)	Panel Width (feet)	Panel Location	Panel Visual Inspection	Comments
6/13/2023	54	C4K123215	184	24.6	West Slope	Good	-
6/13/2023	55	C4K213213	123	24.6	West Slope	Good	-
6/13/2023	56	C4K213213	296	24.6	West Slope	Good	-
6/13/2023	57	C4K123211	287	24.6	West Slope	Good	-
6/13/2023	58	C4K123211	126	24.6	West Slope	Good	-
6/13/2023	59	C1K123191	152	24.6	West Slope	Good	-
6/13/2023	60	C1K123191	256	24.6	West Slope	Good	-
6/13/2023	61	C1K124020	12	24.6	West Slope	Good	-
6/13/2023	62	C1K124020	260	24.6	West Slope	Good	-
6/23/2023	63	C4K124007	238	24.6	TOP PHASE 3	Good	-
6/23/2023	64	C4K124007	172	24.6	TOP PHASE 3	Good	-
6/23/2023	65	C1K123233	60	24.6	TOP PHASE 3	Good	-
6/23/2023	66	C1K123233	169	24.6	TOP PHASE 3	Good	-
6/23/2023	67	C1K123233	35	24.6	TOP PHASE 3	Good	-
6/23/2023	68	C1K123233	175	24.6	TOP PHASE 3	Good	-
6/23/2023	69	C3K123247	74	24.6	TOP PHASE 3	Good	-
6/23/2023	70	C3K123247	261	24.6	TOP PHASE 3	Good	-
6/23/2023	71	C3K123247	77	24.6	TOP PHASE 3	Good	-
6/23/2023	72	C4K124010	183	24.6	TOP PHASE 3	Good	-
6/23/2023	73	C4K124010	238	24.6	TOP PHASE 3	Good	-
6/23/2023	74	C1K123229	32	24.6	TOP PHASE 3	Good	-
6/23/2023	75	C1K123229	280	24.6	TOP PHASE 3	Good	-
6/23/2023	76	C1K123229	108	24.6	TOP PHASE 3	Good	-
6/23/2023	77	C4K124005	168	24.6	TOP PHASE 3	Good	-
6/23/2023	78	C4K124005	234	24.6	TOP PHASE 3	Good	-
6/23/2023	79	C3K123195	57	24.6	TOP PHASE 3	Good	-
6/23/2023	80	C3K123195	287	24.6	TOP PHASE 3	Good	-
6/23/2023	81	C3K123195	75	24.6	TOP PHASE 3	Good	-
6/23/2023	82	C3K123242	212	24.6	TOP PHASE 3	Good	-
6/23/2023	83	C3K123242	205	24.6	TOP PHASE 3	Good	-
6/23/2023	84	C3K123241	94	24.6	TOP PHASE 3	Good	-
6/23/2023	85	C3K123241	298	24.6	TOP PHASE 3	Good	-
6/23/2023	86	C3K123241	24	24.6	TOP PHASE 3	Good	-
6/23/2023	87	C1K123228	267	24.6	TOP PHASE 3	Good	-
6/23/2023	88	C1K123228	152	24.6	TOP PHASE 3	Good	-
6/23/2023	89	C1K123236	140	24.6	TOP PHASE 3	Good	-
6/23/2023	90	C1K123233	36	15	TOP PHASE 3	Good	-
6/23/2023	91	C1K123233	22	10	TOP PHASE 3	Good	-
6/23/2023	92	C1K123233	13	10	TOP PHASE 3	Good	-
7/6/2023	93	C1K123235	269	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	94	C1K123183	106	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	95	C1K123183	89	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	96	C1K123183	39	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	97	C1K123183	125	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	98	C4K123223	288	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	99	C4K123223	96	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	100	C3K123199	366	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	101	C4K124011	403	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	102	C1K123238	100	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	103	C1K123238	296	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	104	C1K123227	111	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	105	C1K123227	247	24.6	SW CORNER PHASE 3	Good	-
7/6/2023	106	C1K123227	63	24.6	SW CORNER PHASE 3	Good	-

Panel Placement Log							
PROJECT: Dolby Phase 3 Cover Upgrade			**QUALITY ASSURANCE MONITOR: TJM**			**Material: 40 mil HDPE**	
Installation Date	Panel Number	Roll Number	Panel Length (feet)	Panel Width (feet)	Panel Location	Panel Visual Inspection	Comments
7/7/2023	107	C1K123184	113	24.6	SW CORNER PHASE 3	Good	-
7/7/2023	108	C1K123184	114	24.6	SW CORNER PHASE 3	Good	-
7/7/2023	109	C1K123184	88	24.6	SW CORNER PHASE 3	Good	-
7/7/2023	110	C1K123184	54	24.6	SW CORNER PHASE 3	Good	-
7/7/2023	111	C3K123199	39	23	SW CORNER PHASE 3	Good	-
7/7/2023	112	C1K123224	12	14	SW CORNER PHASE 3	Good	-
7/7/2023	113	C1K123224	150	24.6	SW CORNER PHASE 3	Good	-
7/7/2023	114	C1K123224	113	24.6	SW CORNER PHASE 3	Good	-
7/19/2023	115	C1K124018	145	24.6	SW CORNER PHASE 3	Good	-
7/19/2023	116	C1K123224	94	24.6	SW CORNER PHASE 3	Good	-
7/19/2023	117	C1K124018	42	24.6	SW CORNER PHASE 3	Good	-
7/19/2023	118	C1K124018	180	24.6	SW CORNER PHASE 3	Good	-
7/19/2023	119	C3K123202	188	24.6	SW CORNER PHASE 3	Good	-
7/19/2023	120	C3K123202	203	24.6	SW CORNER PHASE 3	Good	-
7/19/2023	121	C1K123180	237	24.6	SOUTH SLOPE PHASE 3	Good	-
7/19/2023	122	C1K123180	149	24.6	SOUTH SLOPE PHASE 3	Good	-
7/19/2023	123	C4K123217	96	24.6	SOUTH SLOPE PHASE 3	Good	-
7/19/2023	124	C4K123217	253	24.6	SOUTH SLOPE PHASE 3	Good	-
7/19/2023	125	C3K123246	214	24.6	SOUTH SLOPE PHASE 3	Good	-
7/19/2023	126	C4K123217	46	24.6	SOUTH SLOPE PHASE 3	Good	-
7/19/2023	127	C3K123246	200	24.6	SOUTH SLOPE PHASE 3	Good	-
7/19/2023	128	C3K123253	70	24.6	SOUTH SLOPE PHASE 3	Good	-
7/19/2023	129	C3K123253	278	24.6	SOUTH SLOPE PHASE 3	Good	-
7/21/2023	130	C3K123253	60	24.6	SOUTH SLOPE PHASE 3	Good	-
7/21/2023	131	C1K123179	225	24.6	SOUTH SLOPE PHASE 3	Good	-
7/21/2023	132	C1K123178	178	24.6	SOUTH SLOPE PHASE 3	Good	-
7/21/2023	133	C1K123189	115	24.6	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	134	C1K123189	280	24.6	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	135	C1K123190	25	24.6	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	136	C1K123190	312	24.6	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	137	C1K123190	51	24.6	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	138	C1K124024	271	24.6	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	139	C3K123207	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	140	C1K124024	12	40	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	141	C1K124024	427	42	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	142	C3K123248	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	143	C3K123200	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	144	C4K124008	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	145	C4K124015	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/16/2023	146	C1K124017	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	147	C3K123240	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	148	C3K123201	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	149	C1K124023	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	150	C4K123212	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	151	C4K123210	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	152	C1K123192	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	153	C1K124019	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	154	C1K123182	427	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	155	C1K123236	287	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	156	C4K123219	383	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	157	C4K124001	313	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	158	C4K123219	30	16	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	159	C4K124001	17	9	SOUTH SLOPE PHASE 3	Good	-

Panel Placement Log							
PROJECT: Dolby Phase 3 Cover Upgrade			**QUALITY ASSURANCE MONITOR: TJM**			**Material: 40 mil HDPE**	
Installation Date	Panel Number	Roll Number	Panel Length (feet)	Panel Width (feet)	Panel Location	Panel Visual Inspection	Comments
8/17/2023	160	C4K124001	107	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	161	C4K123220	171	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	162	C4K123220	233	24.6	SOUTH SLOPE PHASE 3	Good	-
8/17/2023	163	C1K123237	163	24.6	SOUTH SLOPE PHASE 3	Good	-
8/18/2023	164	C1K123237	143	24.6	TOP PHASE 3	Good	-
8/18/2023	165	C3K123198	226	24.6	TOP PHASE 3	Good	-
8/18/2023	166	C3K123198	166	24.6	TOP PHASE 3	Good	-
8/18/2023	167	C3K123204	217	24.6	TOP PHASE 3	Good	-
8/18/2023	168	C3K123204	194	24.6	TOP PHASE 3	Good	-
8/18/2023	169	C1K123230	299	24.6	TOP PHASE 3	Good	-
8/18/2023	170	C1K124029	390	24.6	TOP PHASE 3	Good	-
8/18/2023	171	C1K123230	99	24.6	TOP PHASE 3	Good	-
8/18/2023	172	C1K123231	419	24.6	TOP PHASE 3	Good	-
8/18/2023	173	C1K124028	63	24.6	TOP PHASE 3	Good	-
8/18/2023	174	C1K124028	340	24.6	TOP PHASE 3	Good	-
8/18/2023	175	C4K123214	135	24.6	TOP PHASE 3	Good	-
8/18/2023	176	C4K123214	281	24.6	TOP PHASE 3	Good	-
8/18/2023	177	C4K124025	188	24.6	TOP PHASE 3	Good	-
8/18/2023	178	C4K124025	219	24.6	TOP PHASE 3	Good	-
8/18/2023	179	C4K123221	249	24.6	TOP PHASE 3	Good	-
8/18/2023	180	C4K123221	162	24.6	TOP PHASE 3	Good	-
8/18/2023	181	C1K123234	297	24.6	TOP PHASE 3	Good	-
8/21/2023	182	C1K123234	115	24.6	TOP PHASE 3	Good	-
8/21/2023	183	C4K123222	328	24.6	TOP PHASE 3	Good	-
8/21/2023	184	C4K123222	67	24.6	TOP PHASE 3	Good	-
8/21/2023	185	C3K123239	370	24.6	TOP PHASE 3	Good	-
8/21/2023	186	C3K123239	37	24.6	TOP PHASE 3	Good	-
8/21/2023	187	C4K124006	399	24.6	TOP PHASE 3	Good	-
8/21/2023	188	C1K124027	398	24.6	TOP PHASE 3	Good	-
8/21/2023	189	C1K124027	50	8	TOP PHASE 3	Good	-
8/21/2023	190	C4K124002	75	8	TOP PHASE 3	Good	-
8/21/2023	191	C4K124002	68	11	TOP PHASE 3	Good	-
8/21/2023	192	C4K124002	162	21	TOP PHASE 3	Good	-

TRIAL WELD INFORMATION															
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM									MATERIAL: 40 MIL HDPE		
					EXTRUSION WELDS		FUSION WELDS								
DATE	TIME	AMBIENT TEMP (°F)	SEAMER INITIALS	MACHINE NUMBER	BARREL TEMP. (°F)	PREHEAT TEMP. (°F)	WEDGE TEMP. (°F)	MEASURED SPEED (FT/MIN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	SHEAR VALUES (LB/IN)	SHEAR VALUES (LB/IN)	PASS/FAIL	COMMENTS
6/7/2023	0750	50	CS	X-9	500	500	-	-	80	79	95	104	108	P	Text/Text
6/8/2023	0720	50	KP	X-13	500	500	-	-	105	102	103	112	113	P	Text/Text
6/12/2023	0822	65	KP	W-8	-	-	860	650	90/90	103/97	95/91	115	112	P	Smooth/Smooth
6/12/2023	0832	65	JK	W-7	-	-	860	650	80/71	82/62	78/92	104	110	P	Smooth/Smooth
6/12/2023	0902	65	KP	W-8	-	-	860	550	74/83	86/62	87/65	95	98	P	Text/Text
6/12/2023	0905	65	JK	W-7	-	-	860	600	79/81	77/77	74/80	89	91	P	Text/Text
6/12/2023	1330	80	KP	W-8	-	-	860	650	84/82	87/79	77/77	94	102	P	Smooth/Smooth
6/12/2023	1345	80	KP	W-8	-	-	860	650	69/77	74/77	77/61	88	89	P	Text/Text
6/12/2023	1418	80	JK	W-7	-	-	860	650	93/79	99/85	81/92	99	94	P	Smooth/Smooth
6/12/2023	1422	80	JK	W-7	-	-	860	650	74/76	74/69	79/77	88	85	P	Text/Text Parent @85, Shear =77
6/13/2023	0750	70	KP	W-8	-	-	860	650	103/96	97/96	98/87	102	111	P	Smooth/Smooth
6/13/2023	0800	70	KP	W-8	-	-	860	650	84/92	85/88	81/82	88	91	P	Text/Text
6/13/2023	0820	70	JK	W-7	-	-	860	550	80/89	86/86	79/78	92	91	P	Text/Text
6/13/2023	0840	70	JK	W-7	-	-	860	650	78/76	73/76	75/72	92	92	P	Smooth/Smooth
6/13/2023	0930	70	JK	W-7	-	-	860	550	80/85	76/82	62/75	90	88	P	S/T
6/13/2023	1302	74	JK	W-7	-	-	860	650	80/86	79/80	79/81	95	97	P	Smooth/Smooth
6/13/2023	1320	74	JK	W-7	-	-	860	570	87/87	85/85	92/88	93	94	P	Text/Text
6/13/2023	1330	74	KP	W-8	-	-	860	650	101/92	108/100	98/99	109	112	P	Smooth/Smooth
6/13/2023	1340	74	KP	W-8	-	-	860	550	89/84	82/88	91/82	98	98	P	Text/Text
6/13/2023	1900	70	TP	X-9	475	475	-	-	77	70	74	91	92	P	Text/Text
6/13/2023	1902	70	JK	W-7	-	-	860	575	68/75	68/75	85/78	89	94	P	S/T
6/14/2023	0904	60	CS	X-9	480	480	-	-	92	94	91	105	94	P	Text/Text
6/14/2023	0915	60	JK	X-13	475	475	-	-	90	92	99	100	101	P	Text/Text
6/14/2023	0930	60	AB	X-3	485	480	-	-	83	98	97	97	96	P	Text/Text
6/14/2023	1230	60	JK	X-13	475	475	-	-	92	90	90	91	94	P	Text/Text
6/14/2023	1245	60	AB	X-3	480	475	-	-	88	85	87	90	95	P	Text/Text
6/14/2023	1300	60	CS	X-9	480	480	-	-	86	87	74	92	91	P	Text/Text
6/15/2023	0750	60	JK	X-13	475	475	-	-	91	95	88	100	103	P	Text/Text
6/15/2023	0800	60	AB	X-9	480	480	-	-	77	93	97	102	100	P	Text/Text
6/15/2023	1315	67	AB	X-9	480	480	-	-	82	81	86	92	91	P	Text/Text

TRIAL WELD INFORMATION															
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM									MATERIAL: 40 MIL HDPE		
					EXTRUSION WELDS		FUSION WELDS								
DATE	TIME	AMBIENT TEMP (°F)	SEAMER INITIALS	MACHINE NUMBER	BARREL TEMP. (°F)	PREHEAT TEMP. (°F)	WEDGE TEMP. (°F)	MEASURED SPEED (FT/MIN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	SHEAR VALUES (LB/IN)	SHEAR VALUES (LB/IN)	PASS/FAIL	COMMENTS
6/15/2023	1320	67	JK	X-13	475	475	-	-	93	86	82	96	95	P	Text/Text
6/16/2023	0722	60	JK	X-13	475	475	-	-	94	92	79	101	102	P	Text/Text
6/16/2023	0728	60	KP	X-9	475	475	-	-	94	97	97	105	105	P	Text/Text
6/19/2023	1445	64	JK	X-3	475	475	-	-	90	90	81	95	93	P	Text/Text
6/19/2023	1650	64	JK	X-9	475	475	-	-	86	76	83	95	93	P	Text/Text
6/20/2023	0800	58	JK	X-13	475	475	-	-	94	90	94	91	109	P	Text/Text
6/20/2023	0810	58	KP	X-9	475	475	-	-	77	93	88	109	105	P	Text/Text
6/20/2023	1252	66	KP	X-9	475	475	-	-	91	85	88	105	101	P	Text/Text
6/20/2023	1302	66	JK	X-13	475	475	-	-	82	90	91/93	93	90	P	Text/Text
6/21/2023	0735	59	KP	X-9	475	475	-	-	97	104	87/91	107	109	P	Text/Text
6/21/2023	0744	59	JK	X-13	475	475	-	-	92	100	102/102	98	98	P	Text/Text
6/21/2023	1258	77	KP	X-9	475	475	-	-	85	93	93/93	92	91	P	Text/Text
6/21/2023	1305	77	JK	X-13	475	475	-	-	86	88	92/89	89	90	P	Text/Text
6/22/2023	0725	60	KP	X-9	475	475	-	-	86	94	86/95	102	102	P	Text/Text
6/22/2023	0736	60	JK	X-13	475	475	-	-	94	95	94/96	100	101	P	Text/Text
6/23/2023	0820	65	JK	W-7	-	-	860	650	90/87	87/91	91/92	108	110	P	Smooth/Smooth
6/23/2023	0830	65	JK	W-7	-	-	860	550	86/84	86/80	90/84	102	97	P	Text/Text
6/23/2023	0845	65	KP	W-8	-	-	860	650	82/85	92/86	86/86	100	111	P	Smooth/Smooth
6/23/2023	0855	65	KP	W-8	-	-	860	550	84/87	73/85	89/80	93	94	P	Text/Text
6/23/2023	1317	83	JK	W-7	-	-	860	700	78/87	86/82	80/87	99	96	P	Smooth/Smooth
6/23/2023	1331	83	KP	W-8	-	-	860	700	94/72	84/78	64/73	93	92	P	Smooth/Smooth
6/23/2023	1345	83	KP	W-8	-	-	860	650	84/82	85/83	83/82	82	84	P	Text/Text
6/23/2023	1357	83	JK	W-7	-	-	860	575	74/70	76/80	82/66	84	80	P	Text/Text PARENT = 77 SHEAR = 69 PEEL = 46
6/24/2023	0743	64	JK	X-13	475	475	-	-	90	90	90	100	99	P	Text/Text
6/24/2023	1302	64	JK	X-13	475	475	-	-	83	85	86	89	88	P	Text/Text
6/27/2023	0735	65	RF	X-9	475	475	-	-	74	86	84	104	111	P	Text/Text
6/27/2023	0744	65	KD	X-13	475	475	-	-	94	99	96	109	110	P	Text/Text
6/27/2023	1054	65	JK	X-13	475	475	-	-	90	75	90	100	100	P	Text/Text
6/27/2023	1330	65	RF	X-4	475	475	-	-	84	87	82	104	101	P	Text/Text
6/28/2023	0730	66	JK	X-13	475	475	-	-	87	90	88	96	96	P	Text/Text

TRIAL WELD INFORMATION															
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM									MATERIAL: 40 MIL HDPE		
					EXTRUSION WELDS		FUSION WELDS								
DATE	TIME	AMBIENT TEMP (°F)	SEAMER INITIALS	MACHINE NUMBER	BARREL TEMP. (°F)	PREHEAT TEMP. (°F)	WEDGE TEMP. (°F)	MEASURED SPEED (FT/MIN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	SHEAR VALUES (LB/IN)	SHEAR VALUES (LB/IN)	PASS/FAIL	COMMENTS
6/28/2023	0735	66	RF	X-4	475	475	-	-	72	75	65	103	104	P	Text/Text
6/28/2023	0945	70	AB	X-9	475	475	-	-	91	91	87	97	90	P	Text/Text
6/29/2023	0740	65	RF	X-13	485	475	-	-	77	83	70	112	109	P	Text/Text
6/29/2023	0750	65	KD	X-4	475	475	-	-	86	83	98	96	101	P	Text/Text
6/29/2023	1105	70	RF	X-13	475	475	-	-	91	94	95	98	99	P	Text/Text
6/30/2023	0726	56	KP	X-13	475	475	-	-	85	91	90	97	96	P	Text/Text
7/6/2023	1415	93	RF	W-18	-	-	860	850	83/86	86/88	89/85	96	98	P	Smooth/Smooth
7/6/2023	1431	93	KP	W-8	-	-	860	850	84/71	78/76	82/85	89	88	P	Smooth/Smooth
7/6/2023	1444	93	KP	W-8	-	-	860	650	89/73	91/67	88/80	95	91	P	Text/Text
7/6/2023	1458	93	JK	W-7	-	-	860	850	59/78	90/63	80/78	89	89	P	Smooth/Smooth
7/6/2023	1510	93	JK	W-7	-	-	860	650	70/73	78/67	73/67	78	78	P	Text/Text PARENT = 80 SHEAR =72 PEEL = 48
7/7/2023	0730	70	RF	X-3	475	475	-	-	68	92	88/93	95	95	P	Text/Text
7/7/2023	0736	70	JK	W-7	-	-	860	650	103/84	96/87	102/91	107	105	P	Smooth/Smooth
7/7/2023	0745	70	JK	W-7	-	-	860	550	70/62	82/86	86/85	93	92	P	Text/Text
7/7/2023	0753	70	KP	W-8	-	-	860	650	70/96	84/96	83/93	103	104	P	Smooth/Smooth
7/7/2023	0800	70	KP	W-8	-	-	860	550	90/84	86/85	86/74	92	91	P	Text/Text
7/7/2023	1305	90	RF	X-3	475	450	-	-	80	83	83	87	86	P	Text/Text PARENT = 90 SHEAR = 81 PEEL = 54
7/18/2023	0747	60	JK	X13	550	530	-	-	82	76	77	93	93	P	Text/Text
7/18/2023	0930	70	AS	X3	475	450	-	-	81	82	87	95	100	P	Text/Text
7/18/2023	1258	70	JK	X13	550	530	-	-	80	80	79	90	91	P	Text/Text
7/19/2023	0730	68	JK	X13	450	430	-	-	67	73	87	99	96	P	Text/Text
7/19/2023	1045	75	AS	W-8	-	-	860	750	85/80	96/90	87/95	100	97	P	Smooth/Smooth
7/19/2023	1100	75	AS	W-8	-	-	860	550	85/87	84/80	80/79	89	91	P	Text/Text
7/19/2023	1100	75	JK	W-7	-	-	860	650	87/68	76/88	79/83	107	101	P	Smooth/Smooth
7/19/2023	1110	75	JK	W-7	-	-	860	550	82/67	83/84	72/81	89	88	P	Text/Text
7/19/2023	1257	81	JK	W-7	-	-	860	750	74/85	74/87	70/86	96	95	P	Sm/Sm PARENT=84 SHEAR=76 PEEL=50
7/19/2023	1307	81	JK	W-7	-	-	860	550	79/72	69/69	79/68	84	83	P	Text/Text
7/19/2023	1325	81	AS	W-8	-	-	860	750	90/87	88/91	91/88	93	93	P	Smooth/Smooth
7/19/2023	1342	81	AS	W-8	-	-	860	550	86/85	79/96	88/86	88	88	P	Text/Text
7/19/2023	1530	81	AS	W-8	-	-	860	550	75/78	78/78	75/80	81	80	P	S/T

TRIAL WELD INFORMATION															
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM									MATERIAL: 40 MIL HDPE		
					EXTRUSION WELDS		FUSION WELDS								
DATE	TIME	AMBIENT TEMP (°F)	SEAMER INITIALS	MACHINE NUMBER	BARREL TEMP. (°F)	PREHEAT TEMP. (°F)	WEDGE TEMP. (°F)	MEASURED SPEED (FT/MIN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	SHEAR VALUES (LB/IN)	SHEAR VALUES (LB/IN)	PASS/FAIL	COMMENTS
7/19/2023	1545	81	JK	W-7	-	-	860	550	76/81	74/84	64/80	93	90	P	S/T
7/20/2023	0745	78	AS	X3	450	475	-	-	79	93	93	101	101	P	Text/Text
7/20/2023	0755	78	JK	X13	450	450	-	-	91	87	94	102	101	P	Text/Text
7/20/2023	1306	80	JK	X13	450	450	-	-	77	75	82	82	68	P	Text/Text PARENT=59 SHEAR=53 PEEL=35
7/20/2023	1325	80	AS	X3	450	475	-	-	78	80	79	82	85	P	Text/Text
7/21/2023	0742	66	JK	W-7	-	-	860		81/79	83/78	65/75	108	104	P	Sm/Sm PARENT=87 SHEAR=78 PEEL= 52
7/21/2023	0742	66	JK	W-7	-	-	860		83/83	76/84	77/80	88	87	P	Text/Text
7/21/2023	0742	66	JK	X3	450	450	-	-	83	77	82	82	87	P	Text/Text
7/21/2023	1111	70	JK	W-7	-	-	860		82/86	93/69	86/76	91	92	P	S/T
7/21/2023	1300	70	JK	X3	450	450	-	-	77	81	82	90	88	P	Text/Text
8/16/2023	0830	65	KW	W-7	-	-	860	650	68/76	78/77	78/78	107	91	P	Smooth/Smooth
8/16/2023	0840	65	KW	W-7	-	-	860	550	92/93	85/71	82/72	93	103	P	Text/Text
8/16/2023	0850	65	KP	W-8	-	-	860	650	95/96	96/90	88/98	113	115	P	Smooth/Smooth
8/16/2023	0858	65	KP	W-8	-	-	860	450	98/93	99/95	95/97	103	100	P	Text/Text
8/16/2023	1300	70	KW	W-7	-	-	860	550	70/78	76/74	73/85	88	88	P	Text/Text
8/16/2023	1255	70	KW	W-7	-	-	860	650	86/87	77/90	88/89	98	88	P	Smooth/Smooth
8/16/2023	1313	70	KP	W-8	-	-	860	650	100/93	98/95	96/95	114	117	P	Smooth/Smooth
8/16/2023	1320	70	KP	W-8	-	-	860	550	91/88	90/85	88/86	90	90	P	Text/Text
8/17/2023	0737	63	KP	W-8	-	-	860	650	99/80	81/101	90/82	121	126	P	Smooth/Smooth
8/17/2023	0747	63	KP	W-8	-	-	860	450	90/81	70/87	92/81	90	105	P	Text/Text
8/17/2023	0802	63	KW	W-7	-	-	860	650	91/91	90/92	92/89	107	110	P	Smooth/Smooth
8/17/2023	0810	63	KW	W-7	-	-	860	550	85/87	81/88	77/86	96	96	P	Text/Text
8/17/2023	1305	73	KW	W-7	-	-	860	650	78/85	93/73	87/79	105	101	P	Smooth/Smooth
8/17/2023	1312	73	KW	W-7	-	-	860	450	86/86	78/78	84/86	92	94	P	Text/Text
8/17/2023	1320	73	KP	W-8	-	-	860	650	84/83	78/86	86/93	90	106	P	Smooth/Smooth
8/17/2023	1327	73	KP	W-8	-	-	860	450	72/80	75/83	76/86	89	95	P	Text/Text
8/18/2023	0722	60	KP	W-8	-	-	860	550	100/105	92/105	102/104	123	117	P	Smooth/Smooth
8/18/2023	0730	60	KP	W-8	-	-	860	450	85/83	82/78	88/79	100	99	P	Text/Text
8/18/2023	0740	60	KW	W-7	-	-	860	600	98/92	94/93	83/84	112	102	P	Smooth/Smooth
8/18/2023	0749	60	KW	W-7	-	-	860	450	78/76	94/71	86/94	93	90	P	Text/Text

TRIAL WELD INFORMATION															
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM									MATERIAL: 40 MIL HDPE		
					EXTRUSION WELDS		FUSION WELDS								
DATE	TIME	AMBIENT TEMP (°F)	SEAMER INITIALS	MACHINE NUMBER	BARREL TEMP. (°F)	PREHEAT TEMP. (°F)	WEDGE TEMP. (°F)	MEASURED SPEED (FT/MIN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	SHEAR VALUES (LB/IN)	SHEAR VALUES (LB/IN)	PASS/FAIL	COMMENTS
8/18/2023	1220	70	KW	W-7	-	-	860	600	87/96	101/97	98/86	115	119	P	Smooth/Smooth
8/18/2023	1245	70	KP	W-8	-	-	860	550	96/92	104/98	94/107	122	125	P	Smooth/Smooth
8/18/2023	1257	70	KP	W-8	-	-	860	450	98/98	75/94	97/94	96	98	P	Text/Text
8/18/2023	1300	70	TP	W-18	-	-	860	550	94/76	91/89	96/94	110	111	P	Smooth/Smooth
8/19/2023	1000	70	BM	X3	450	475	-	-	99	73	85	95	98	P	Text/Text
8/19/2023	1300	75	BM	X3	460	475	-	-	79	78	84	89	89	P	Text/Text
8/19/2023	1350	75	CP	X9	475	475	-	-	75	70	68	88	89	P	Text/Text
8/21/2023	0800	67	KP	W-8	-	-	860	550	100/83	101/89	100/88	118	121	P	Smooth/Smooth
8/21/2023	0806	67	KP	W-8	-	-	860	450	90/96	93/97	85/81	104	106	P	Text/Text
8/21/2023	0821	67	KW	W-7	-	-	860	650	98/76	96/86	89/92	113	115	P	Smooth/Smooth
8/21/2023	0826	67	KW	W-7	-	-	860	450	101/74	90/68	76/102	108	107	P	Text/Text
8/21/2023	1337	67	KW	W-7	-	-	860	650	90/87	92/86	86/91	95	94	P	Smooth/Smooth
8/21/2023	1346	67	KW	W-7	-	-	860	450	86/85	88/79	92/79	90	105	P	Text/Text
8/21/2023	1445	72	CP	X3	475	475	-	-	80	88	84	94	95	P	EXTRUSION
8/21/2023	1530	75	BM	X9	475	475	-	-	86	80	83	93	88	P	EXTRUSION
8/22/2023	0750	70	CP	X3	470	475	-	-	78	94	82	93	96	P	EXTRUSION
8/22/2023	0800	70	GG	X9	475	475	-	-	92	100	80	101	103	P	EXTRUSION
8/22/2023	0810	70	BM	X9	475	475	-	-	95	89	88	99	96	P	EXTRUSION
8/22/2023	0811	70	KP	W-8	-	-	860	550	97/92	94/92	92/96	99	103	P	Text/Text
8/22/2023	1305	71	KP	W-8	-	-	860	650	107/93	90/93	97/97	89	103	P	Text/Text
8/22/2023	1500	75	BM	X9	460	470	-	-	85	86	87	91	89	P	EXTRUSION
8/23/2023	0740	60	CP	X3	470	470	-	-	93	102	97	108	118	P	EXTRUSION
8/23/2023	0800	60	BM	X9	460	470	-	-	89	88	101	108	107	P	EXTRUSION
8/23/2023	1245	75	BM	X9	460	470	-	-	89	92	94	93	96	P	EXTRUSION
8/23/2023	1312	75	CP	X3	470	475	-	-	79	81	87	90	90	P	EXTRUSION
8/24/2023	0800	70	BM	X9	460	475	-	-	85	83	81	88	88	P	EXTRUSION
8/24/2023	1145	75	CP	X3	470	470	-	-	92	78	87	90	91	P	EXTRUSION
8/24/2023	1340	75	BM	X9	460	470	-	-	86	84	81	88	93	P	EXTRUSION
8/29/2023	0820	70	RF	X9	460	470	-	-	89	90	79	106	104	P	EXTRUSION
8/31/2023	0800	60	RF	X9	485	475	-	-	83	89	91	103	108	P	EXTRUSION

TRIAL WELD INFORMATION															
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM									MATERIAL: 40 MIL HDPE		
					EXTRUSION WELDS		FUSION WELDS								
DATE	TIME	AMBIENT TEMP (°F)	SEAMER INITIALS	MACHINE NUMBER	BARREL TEMP. (°F)	PREHEAT TEMP. (°F)	WEDGE TEMP. (°F)	MEASURED SPEED (FT/MIN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	PEEL VALUES (LB/IN)	SHEAR VALUES (LB/IN)	SHEAR VALUES (LB/IN)	PASS/FAIL	COMMENTS
8/31/2023	0810	60	AB	X3	470	475	-	-	95	89	90	102	100	P	EXTRUSION
8/31/2023	1250	70	AB	X3	470	475	-	-	92	89	87	96	99	P	EXTRUSION
8/31/2023	1300	70	RF	X9	475	475	-	-	61	67	85	100	98	P	EXTRUSION

PANEL SEAMING CHECKLIST									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 MIL HDPE
DATE	TIME	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTINGS (°F)	MACHINE SPEED (FT/MIN)	PANEL NUMBERS	SEAM TYPE	SEAM LENGTH (FEET)	COMMENTS
6/12/2023	0930	JK	W-7	860	650	1/4	S/S	185	FUSION
6/12/2023	0930	JK	W-7	860	650	1/2	S/S	53	FUSION
6/12/2023	0920	KP	W-8	860	550	2/4	T/T	24.6	FUSION
6/12/2023	0937	KP	W-8	860	650	5/2	S/S	53	FUSION
6/12/2023	0937	KP	W-8	860	650	5/4	S/S	169	FUSION
6/12/2023	1021	JK	W-7	860	650	6/5	S/S	38	FUSION
6/12/2023	1021	JK	W-7	860	650	7/5	S/S	159	FUSION
6/12/2023	1021	KP	W-8	860	550	6/7	T/T	24.6	FUSION
6/12/2023	1021	KP	W-8	860	650	6/8	S/S	6	FUSION
6/12/2023	1021	KP	W-8	860	650	7/8	S/S	103	FUSION
6/12/2023	1021	KP	W-8	860	650	7/3	S/S	54	EXTRUSION
6/12/2023	1021	KP	W-8	860	550	8/3	T/T	6	EXTRUSION
6/12/2023	1100	JK	W-7	860	650	1/10	S/S	166	FUSION
6/12/2023	1050	KP	W-8	860	550	10/9	T/T	24.6	FUSION
6/12/2023	1100	KP	W-8	860	650	1/9	S/S	127	FUSION
6/12/2023	1050	KP	W-8	860	650	9/11	S/S	122	FUSION
6/12/2023	1215	KP	W-8	860	650	10/11	S/S	59	FUSION
6/12/2023	1215	KP	W-8	860	650	10/12	S/S	170	FUSION
6/12/2023	1123	KP	W-8	860	550	12/11	T/T	24.6	FUSION
6/12/2023	1222	JK	W-7	860	650	12/14	S/S	163	FUSION
6/12/2023	1210	JK	W-7	860	600	14/13	T/T	24.6	FUSION
6/12/2023	1222	JK	W-7	860	650	12/14	S/S	26	FUSION
6/12/2023	1222	JK	W-7	860	650	11/13	S/S	177	FUSION
6/12/2023	1418	KP	W-8	860	650	13/15	S/S	200	FUSION
6/12/2023	1418	KP	W-8	860	650	14/15	S/S	37	FUSION
6/12/2023	1418	KP	W-8	860	650	14/16	S/S	125	FUSION
6/12/2023	1408	KP	W-8	860	650	16/15	T/T	24.6	FUSION
6/12/2023	1510	KP	W-8	860	650	16/18	S/S	70	FUSION
6/12/2023	1400	JK	W-7	860	650	18/17	T/T	24.6	FUSION
6/12/2023	1510	KP	W-8	860	650	16/17	S/S	51	FUSION
6/12/2023	1510	KP	W-8	860	650	15/17	S/S	236	FUSION
6/12/2023	1532	JK	W-7	860	650	18/20	S/S	15	FUSION
6/12/2023	1532	JK	W-7	860	650	18/19	S/S	54	FUSION
6/12/2023	1520	JK	W-7	860	650	20/19	T/T	24.6	FUSION
6/12/2023	1532	JK	W-7	860	650	17/19	S/S	285	FUSION

PANEL SEAMING CHECKLIST									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 MIL HDPE
DATE	TIME	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTINGS (°F)	MACHINE SPEED (FT/MIN)	PANEL NUMBERS	SEAM TYPE	SEAM LENGTH (FEET)	COMMENTS
6/12/2023	1602	KP	W-8	860	650	19/21	S/S	337	FUSION
6/12/2023	1602	KP	W-8	860	650	20/21	S/S	17	FUSION
6/12/2023	1629	JK	W-7	860	650	21/23	S/S	319	FUSION
6/12/2023	1629	JK	W-7	860	650	21/22	S/S	38	FUSION
6/12/2023	1703	KP	W-8	860	650	23/22	T/T	24.6	FUSION
6/12/2023	1723	KP	W-8	860	650	22/24	S/S	39	FUSION
6/12/2023	1723	KP	W-8	860	650	23/24	S/S	52	FUSION
6/12/2023	1723	KP	W-8	860	650	23/25	S/S	267	FUSION
6/12/2023	1723	JK	W-7	860	650	25/24	T/T	24.6	FUSION
6/12/2023	1804	JK	W-7	860	650	25/27	S/S	220	FUSION
6/12/2023	1804	JK	W-7	860	650	25/26	S/S	50	FUSION
6/12/2023	1804	JK	W-7	860	650	24/26	S/S	92	FUSION
6/12/2023	1839	KP	W-8	860	650	26/28	S/S	141	FUSION
6/12/2023	1839	KP	W-8	860	650	27/28	S/S	32	FUSION
6/12/2023	1828	KP	W-8	860	650	29/28	T/T	24.6	FUSION
6/12/2023	1839	KP	W-8	860	650	27/29	S/S	195	FUSION
6/12/2023	1900	JK	W-7	860	650	28/30	S/S	173	FUSION
6/12/2023	1900	JK	W-7	860	650	29/30	S/S	37	FUSION
6/12/2023	1924	JK	W-7	860	650	31/30	T/T	24.6	FUSION
6/12/2023	1900	JK	W-7	860	650	29/31	S/S	168	FUSION
6/13/2023	0858	KP	W-8	860	650	31/33	S/S	141	FUSION
6/13/2023	0837	KP	W-8	860	550	33/32	T/T	24.6	FUSION
6/13/2023	0858	KP	W-8	860	650	31/32	S/S	37	FUSION
6/13/2023	0858	KP	W-8	860	650	30/32	S/S	206	FUSION
6/13/2023	0937	JK	W-7	860	650	32/34	S/S	240	FUSION
6/13/2023	0937	JK	W-7	860	650	33/34	S/S	41	FUSION
6/13/2023	0937	JK	W-7	860	650	33/35	S/S	110	FUSION
6/13/2023	0920	JK	W-7	860	550	35/34	T/T	24.6	FUSION
6/13/2023	1931	JK	W-7	860	575	53/35	S/T	30	FUSION
6/13/2023	1931	JK	W-7	860	575	35/51	S/T	30	FUSION
6/13/2023	1931	JK	W-7	860	575	35/50	S/T	30	FUSION
6/13/2023	1931	JK	W-7	860	575	35/48	S/T	24	FUSION
6/13/2023	1931	JK	W-7	860	575	34/48	S/T	6	FUSION
6/13/2023	1130	JK	W-7	860	550	34/46	S/T	30	FUSION
6/13/2023	1130	JK	W-7	860	550	34/45	S/T	30	FUSION

PANEL SEAMING CHECKLIST									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 MIL HDPE
DATE	TIME	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTINGS (°F)	MACHINE SPEED (FT/MIN)	PANEL NUMBERS	SEAM TYPE	SEAM LENGTH (FEET)	COMMENTS
6/13/2023	1130	JK	W-7	860	550	34/43	S/T	30	FUSION
6/13/2023	1130	JK	W-7	860	550	34/36	S/T	30	FUSION
6/13/2023	1130	JK	W-7	860	550	34/38	S/T	30	FUSION
6/13/2023	1130	JK	W-7	860	550	34/39	S/T	31	FUSION
6/13/2023	1130	JK	W-7	860	550	34/40	S/T	32	FUSION
6/13/2023	1130	JK	W-7	860	550	34/41	S/T	55	FUSION
6/13/2023	1130	JK	W-7	860	550	40/41	S/T	31	FUSION
6/13/2023	1130	JK	W-7	860	550	40/42	S/T	29	FUSION
6/13/2023	1206	JK	W-7	860	650	41/42	S/S	27	FUSION
6/13/2023	1057	KP	W-8	860	650	40/39	S/S	99	FUSION
6/13/2023	1133	KP	W-8	860	650	39/37	S/S	87	FUSION
6/13/2023	1133	KP	W-8	860	650	39/38	S/S	43	FUSION
6/13/2023	1116	JK	W-7	860	650	38/36	S/S	61	FUSION
6/13/2023	1116	JK	W-7	860	650	37/36	S/S	98	FUSION
6/13/2023	1105	JK	W-7	860	550	38/37	T/T	24.6	FUSION
6/13/2023	1402	KP	W-8	860	650	36/43	S/S	181	FUSION
6/13/2023	1220	JK	W-7	860	650	43/45	S/S	18	FUSION
6/13/2023	1220	JK	W-7	860	650	43/44	S/S	190	FUSION
6/13/2023	1215	JK	W-7	860	550	45/44	T/T	24.6	FUSION
6/13/2023	1418	KP	W-8	860	650	44/46	S/S	194	FUSION
6/13/2023	1418	KP	W-8	860	650	45/46	S/S	36	FUSION
6/13/2023	1432	JK	W-7	860	650	46/48	S/S	123	FUSION
6/13/2023	1432	JK	W-7	860	650	46/47	S/S	125	FUSION
6/13/2023	1432	KP	W-8	860	550	48/47	T/T	24.6	FUSION
6/13/2023	1534	KP	W-8	860	650	47/49	S/S	126	FUSION
6/13/2023	1534	KP	W-8	860	650	48/49	S/S	133	FUSION
6/13/2023	1534	KP	W-8	860	650	48/50	S/S	8	FUSION
6/13/2023	1513	JK	W-7	860	550	50/49	T/T	24.6	FUSION
6/13/2023	1513	JK	W-7	860	650	50/51	S/S	26	FUSION
6/13/2023	1513	JK	W-7	860	650	49/51	S/S	229	FUSION
6/13/2023	1642	KP	W-8	860	650	51/52	S/S	76	FUSION
6/13/2023	1642	KP	W-8	860	650	51/53	S/S	197	FUSION
6/13/2023	1614	KP	W-8	860	550	53/52	T/T	24.6	FUSION
6/13/2023	1622	JK	W-7	860	650	53/55	S/S	125	FUSION
6/13/2023	1622	JK	W-7	860	650	53/54	S/S	86	FUSION

PANEL SEAMING CHECKLIST									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 MIL HDPE
DATE	TIME	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTINGS (°F)	MACHINE SPEED (FT/MIN)	PANEL NUMBERS	SEAM TYPE	SEAM LENGTH (FEET)	COMMENTS
6/13/2023	1622	JK	W-7	860	650	52/54	S/S	100	FUSION
6/13/2023	1600	JK	W-7	860	570	55/54	T/T	24.6	FUSION
6/13/2023	1654	KP	W-8	860	650	54/56	S/S	178	FUSION
6/13/2023	1654	KP	W-8	860	650	55/56	S/S	119	FUSION
6/13/2023	1739	JK	W-7	860	650	56/57	S/S	290	FUSION
6/13/2023	1739	KP	W-8	860	650	57/58	S/S	126	FUSION
6/13/2023	1739	KP	W-8	860	650	57/59	S/S	154	FUSION
6/13/2023	1807	KP	W-8	860	550	59/58	T/T	24.6	FUSION
6/13/2023	1844	JK	W-7	860	650	59/60	S/S	133	FUSION
6/13/2023	1844	JK	W-7	860	650	59/61	S/S	13	FUSION
6/13/2023	1844	JK	W-7	860	650	58/60	S/S	126	FUSION
6/13/2023	1800	JK	W-7	860	570	61/60	T/T	24.6	FUSION
6/13/2023	1907	KP	W-8	860	650	61/62	S/S	8	FUSION
6/13/2023	1907	KP	W-8	860	650	60/62	S/S	255	FUSION
6/23/2023	0930	JK	W-7	860	650	63/64	S/S	172	FUSION
6/23/2023	0930	JK	W-7	860	650	63/65	S/S	62	FUSION
6/23/2023	0939	KP	W-8	860	650	64/66	S/S	148	FUSION
6/23/2023	0939	KP	W-8	860	650	65/66	S/S	57	FUSION
6/23/2023	930	KP	W-8	860	550	65/64	T/T	24.6	FUSION
6/23/2023	1010	JK	W-7	860	550	69/68	T/T	24.6	FUSION
6/23/2023	1020	JK	W-7	860	650	69/63	S/S	74	FUSION
6/23/2023	1020	JK	W-7	860	650	68/63	S/S	161	FUSION
6/23/2023	1044	KP	W-8	860	650	68/70	S/S	172	FUSION
6/23/2023	1044	KP	W-8	860	650	69/70	S/S	72	FUSION
6/23/2023	1050	JK	W-7	860	650	72/70	S/S	180	FUSION
6/23/2023	1050	JK	W-7	860	650	71/70	S/S	75	FUSION
6/23/2023	1115	JK	W-7	860	550	72/71	T/T	24.6	FUSION
6/23/2023	1155	KP	W-8	860	650	73/71	S/S	79	FUSION
6/23/2023	1130	KP	W-8	860	650	73/72	S/S	147	FUSION
6/23/2023	1130	KP	W-8	860	650	74/72	S/S	32	FUSION
6/23/2023	1120	KP	W-8	860	550	74/73	T/T	24.6	FUSION
6/23/2023	1136	JK	W-7	860	650	75/74	S/S	30	FUSION
6/23/2023	1136	JK	W-7	860	650	75/73	S/S	237	FUSION
6/23/2023	1204	KP	W-8	860	650	75/76	S/S	110	FUSION
6/23/2023	1204	KP	W-8	860	650	75/77	S/S	166	FUSION

PANEL SEAMING CHECKLIST									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 MIL HDPE
DATE	TIME	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTINGS (°F)	MACHINE SPEED (FT/MIN)	PANEL NUMBERS	SEAM TYPE	SEAM LENGTH (FEET)	COMMENTS
6/23/2023	1209	JK	W-7	860	550	77/76	T/T	24.6	FUSION
6/23/2023	1416	JK	W-7	860	700	77/79	S/S	55	FUSION
6/23/2023	1408	KP	W-8	860	650	79/78	T/T	24.6	FUSION
6/23/2023	1416	JK	W-7	860	700	78/77	S/S	114	FUSION
6/23/2023	1416	JK	W-7	860	700	78/76	S/S	107	FUSION
6/23/2023	1448	KP	W-8	860	700	78/80	S/S	227	FUSION
6/23/2023	1448	KP	W-8	860	700	79/80	S/S	59	FUSION
6/23/2023	1457	KP	W-8	860	700	80/82	S/S	211	FUSION
6/23/2023	1457	KP	W-8	860	700	80/81	S/S	76	FUSION
6/23/2023	1452	JK	W-7	860	575	82/81	T/T	24.6	FUSION
6/23/2023	1520	JK	W-7	860	700	81/83	S/S	76	FUSION
6/23/2023	1520	JK	W-7	860	700	82/83	S/S	123	FUSION
6/23/2023	1520	JK	W-7	860	700	82/84	S/S	91	FUSION
6/23/2023	1509	JK	W-7	860	575	83/84	T/T	24.6	FUSION
6/23/2023	1537	KP	W-8	860	700	84/85	S/S	96	FUSION
6/23/2023	1537	KP	W-8	860	700	83/85	S/S	198	FUSION
6/23/2023	1605	JK	W-7	860	700	85/86	S/S	24	FUSION
6/23/2023	1605	JK	W-7	860	700	85/87	S/S	264	FUSION
6/23/2023	1640	JK	W-7	860	575	86/87	T/T	24.6	FUSION
6/23/2023	1632	KP	W-8	860	700	87/89	S/S	137	FUSION
6/23/2023	1632	KP	W-8	860	700	88/87	S/S	133	FUSION
6/23/2023	1616	KP	W-8	860	650	88/89	T/T	24.6	FUSION
6/23/2023	1632	KP	W-8	860	700	88/86	S/S	19	FUSION
6/23/2023	1012	KP	W-8	860	650	66/90	S/S	36	FUSION
6/23/2023	1018	KP	W-8	860	650	90/91	S/S	22	FUSION
6/23/2023	1034	KP	W-8	860	650	91/92	S/S	13	FUSION
6/23/2023	1700	JK	W-7	860	700	66/67	S/S	38	FUSION
6/24/2023	0800	JK	X-13	475	475	67/66/90/91/92/PHASE 1	T/T	192	EXTRUSION
6/24/2023	0945	JK	X-13	475	475	92/91/90/64/63/70/71/73/75/76/78/80/81/83/85/86/88 TO WEST SLOPE	T/T	409	EXTRUSION
6/14/2023	932	JK	X-13	475	475	12/10/1/4/6/8/3/PHASE 1	T/T	413	EXTRUSION
7/6/2023	1550	KP	W-8	860	650	88/96	T/T	47	FUSION
7/6/2023	1440	RF	W-18	860	850	95/96	S/S	59	FUSION
7/6/2023	1550	KP	W-8	860	650	88/95	T/T	47	FUSION
7/6/2023	1455	RF	W-18	860	850	94/95	S/S	86	FUSION
7/6/2023	1457	JK	W-7	860	650	93/94	T/T	24.6	FUSION

PANEL SEAMING CHECKLIST									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 MIL HDPE
DATE	TIME	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTINGS (°F)	MACHINE SPEED (FT/MIN)	PANEL NUMBERS	SEAM TYPE	SEAM LENGTH (FEET)	COMMENTS
7/6/2023	1520	RF	W-18	860	850	93/95	S/S	20	FUSION
7/6/2023	1520	RF	W-18	860	850	93/62	S/S	247	FUSION
7/6/2023	1605	JK	W-7	860	850	93/97	S/S	127	FUSION
7/6/2023	1600	JK	W-7	860	650	97/98	T/T	24.6	FUSION
7/6/2023	1527	JK	W-7	860	850	93/98	S/S	145	FUSION
7/6/2023	1527	JK	W-7	860	850	94/98	S/S	127	FUSION
7/6/2023	1525	KP	W-8	860	650	89/94	T/T	10	FUSION
7/6/2023	1525	KP	W-8	860	650	88/94	T/T	38	FUSION
7/6/2023	1630	RF	W-18	860	850	98/100	S/S	313	FUSION
7/6/2023	1630	RF	W-18	860	850	97/100	S/S	30	FUSION
7/6/2023	1633	JK	W-7	860	650	99/100	T/T	24.6	FUSION
7/6/2023	1630	RF	W-18	860	850	97/99	S/S	95	FUSION
7/6/2023	1711	JK	W-7	860	850	99/101	S/S	97	FUSION
7/6/2023	1711	JK	W-7	860	850	100/101	S/S	300	FUSION
7/6/2023	1654	JK	W-7	860	650	101/102	T/T	24.6	FUSION
7/6/2023	1711	JK	W-7	860	850	100/102	S/S	83	FUSION
7/6/2023	1725	KP	W-8	860	650	89/102	T/T	33	FUSION
7/6/2023	1725	KP	W-8	860	650	89/100	T/T	50	FUSION
7/6/2023	1725	KP	W-8	860	650	89/98	T/T	49	FUSION
7/6/2023	1725	RF	W-18	860	850	101/104	S/S	109	FUSION
7/6/2023	1722	KP	W-8	860	650	103/104	T/T	24.6	FUSION
7/6/2023	1725	RF	W-18	860	850	101/103	S/S	292	FUSION
7/6/2023	1732	KP	W-8	860	850	103/105	S/S	190	FUSION
7/6/2023	1751	KP	W-8	860	850	105/106	S/S	51	FUSION
7/7/2023	0811	JK	W-7	860	650	105/107	S/S	113	FUSION
7/7/2023	0820	KP	W-8	860	550	106/107	T/T	24.6	FUSION
7/7/2023	0826	JK	W-7	860	650	107/108	S/S	63	FUSION
7/7/2023	0826	JK	W-7	860	650	106/108	S/S	61	FUSION
7/7/2023	0830	KP	W-8	860	650	108/109	S/S	101	FUSION
7/7/2023	0853	JK	W-7	860	650	109/110	S/S	40	FUSION
7/7/2023	0853	JK	W-7	860	650	109/112	S/S	17	FUSION
7/7/2023	0918	JK	W-7	860	550	110/112	T/T	15	FUSION
7/7/2023	0903	KP	W-8	860	650	110/111	S/S	43	FUSION
7/7/2023	0952	KP	W-8	860	550	111/113	T/T	33	FUSION
7/7/2023	0952	KP	W-8	860	550	112/113	T/T	33	FUSION

PANEL SEAMING CHECKLIST									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 MIL HDPE
DATE	TIME	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTINGS (°F)	MACHINE SPEED (FT/MIN)	PANEL NUMBERS	SEAM TYPE	SEAM LENGTH (FEET)	COMMENTS
7/7/2023	0952	KP	W-8	860	550	109/113	T/T	37	FUSION
7/7/2023	0952	KP	W-8	860	550	108/113	T/T	37	FUSION
7/7/2023	0952	KP	W-8	860	550	107/113	T/T	37	FUSION
7/7/2023	0952	KP	W-8	860	550	110/113	T/T	10	FUSION
7/7/2023	1128	KP	W-8	860	650	102/114	S/S	109	FUSION
7/7/2023	1133	KP	W-8	860	550	104/114	T/T	24.6	FUSION
7/7/2023	1330	RF	X-3	475	-	61/96	T/T	24.6	EXTRUSION
7/7/2023	1330	RF	X-3	475	-	62/95	T/T	24.6	EXTRUSION
7/19/2023	1121	AS	W-8	860	750	117/116	S/S	60	FUSION
7/19/2023	1110	AS	W-8	860	750	116/115	S/S	103	FUSION
7/19/2023	1126	JK	W-7	860	650	118/115	S/S	151	FUSION
7/19/2023	1132	AS	W-8	860	750	118/119	S/S	186	FUSION
7/19/2023	1145	JK	W-7	860	650	119/120	S/S	194	FUSION
7/19/2023	1328	JK	W-7	860	750	120/121	S/S	206	FUSION
7/19/2023	1359	JK	W-7	860	750	121/123	S/S	90	FUSION
7/19/2023	1359	JK	W-7	860	750	121/122	S/S	148	FUSION
7/19/2023	1400	AS	W-8	860	550	123/122	T/T	24.6	FUSION
7/19/2023	1420	AS	W-8	860	750	123/124	S/S	98	FUSION
7/19/2023	1420	AS	W-8	860	750	122/124	S/S	149	FUSION
7/19/2023	1433	JK	W-7	860	750	124/125	S/S	210	FUSION
7/19/2023	1433	JK	W-7	860	750	124/126	S/S	46	FUSION
7/19/2023	1419	AS	W-8	860	550	125/126	T/T	24.6	FUSION
7/19/2023	1508	JK	W-7	860	750	125/128	S/S	65	FUSION
7/19/2023	1508	JK	W-7	860	750	125/127	S/S	155	FUSION
7/19/2023	1508	JK	W-7	860	750	126/127	S/S	47	FUSION
7/19/2023	1501	AS	W-8	860	550	128/127	T/T	24.6	FUSION
7/19/2023	1512	AS	W-8	860	750	128/129	S/S	73	FUSION
7/19/2023	1512	AS	W-8	860	750	127/129	S/S	201	FUSION
7/19/2023	1554	JK	W-7	860	550	104/129	S/T	25	FUSION
7/19/2023	1554	JK	W-7	860	550	104/128	S/T	25	FUSION
7/19/2023	1554	JK	W-7	860	550	104/125	S/T	25	FUSION
7/19/2023	1554	JK	W-7	860	550	104/124	S/T	18	FUSION
7/19/2023	1554	JK	W-7	860	550	103/124	S/T	7	FUSION
7/19/2023	1554	JK	W-7	860	550	103/123	S/T	25	FUSION
7/19/2023	1554	JK	W-7	860	550	103/121	S/T	25	FUSION

PANEL SEAMING CHECKLIST									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 MIL HDPE
DATE	TIME	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTINGS (°F)	MACHINE SPEED (FT/MIN)	PANEL NUMBERS	SEAM TYPE	SEAM LENGTH (FEET)	COMMENTS
7/19/2023	1556	AS	W-8	860	550	105/121	S/T	23	FUSION
7/19/2023	1601	AS	W-8	860	550	105/120	T/T	23	FUSION
7/19/2023	1601	AS	W-8	860	550	105/119	T/T	25	FUSION
7/19/2023	1601	AS	W-8	860	550	105/118	T/T	18	FUSION
7/19/2023	1618	JK	W-7	860	550	107/118	T/T	30	FUSION
7/19/2023	1624	JK	W-7	860	550	113/115	S/T	49	FUSION
7/19/2023	1624	JK	W-7	860	550	113/116	S/T	50	FUSION
7/19/2023	1624	JK	W-7	860	550	113/117	S/T	62	FUSION
7/21/2023	0915	JK	W-7	860	650	129/130	S/S	58	FUSION
7/21/2023	0915	JK	W-7	860	650	129/131	S/S	220	FUSION
7/21/2023	1015	JK	W-7	860	650	130/132	S/S	59	FUSION
7/21/2023	1015	JK	W-7	860	650	131/132	S/S	117	FUSION
7/21/2023	1015	JK	W-7	860	650	131/133	S/S	114	FUSION
7/21/2023	0853	JK	W-7	860	550	130/131	T/T	24.6	FUSION
7/21/2023	1005	JK	W-7	860	550	133/132	T/T	24.6	FUSION
7/21/2023	1130	JK	W-7	860	575	104/131	S/T	14	FUSION
7/21/2023	1130	JK	W-7	860	575	114/131	S/T	12	FUSION
7/21/2023	1130	JK	W-7	860	575	114/133	S/T	25	FUSION
8/16/2023	0939	KP	W-8	860	650	133/135	S/S	17	FUSION
8/16/2023	0939	KP	W-8	860	650	133/134	S/S	101	FUSION
8/16/2023	0939	KP	W-8	860	650	132/134	S/S	174	FUSION
8/16/2023	0920	KP	W-8	860	450	135/134	T/T	24.6	FUSION
8/16/2023	1030	KW	W-7	860	650	135/136	S/S	27	FUSION
8/16/2023	1030	KW	W-7	860	650	134/136	S/S	278	FUSION
8/16/2023	1058	KP	W-8	860	650	136/137	S/S	43	FUSION
8/16/2023	1058	KP	W-8	860	650	136/138	S/S	261	FUSION
8/16/2023	1045	KW	W-7	860	550	138/137	T/T	24.6	FUSION
8/16/2023	1144	KP	W-8	860	650	138/139	S/S	275	FUSION
8/16/2023	1144	KP	W-8	860	650	137/139	S/S	41	FUSION
8/16/2023	1140	KW	W-7	860	650	140/139	S/S	42	FUSION
8/16/2023	1140	KW	W-7	860	650	141/139	S/S	42	FUSION
8/16/2023	1140	KW	W-7	860	650	141/140	S/S	12	FUSION
8/16/2023	1357	KP	W-8	860	650	139/142	S/S	427	FUSION
8/16/2023	1407	KW	W-7	860	650	142/143	S/S	427	FUSION
8/16/2023	1500	KP	W-8	860	650	143/144	S/S	427	FUSION

PANEL SEAMING CHECKLIST									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 MIL HDPE
DATE	TIME	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTINGS (°F)	MACHINE SPEED (FT/MIN)	PANEL NUMBERS	SEAM TYPE	SEAM LENGTH (FEET)	COMMENTS
8/16/2023	1645	KW	W-7	860	650	144/145	S/S	427	FUSION
8/16/2023	1705	KP	W-8	860	650	145/146	S/S	427	FUSION
8/17/2023	0808	KP	W-8	860	650	146/147	S/S	427	FUSION
8/17/2023	0830	KW	W-7	860	650	147/148	S/S	427	FUSION
8/17/2023	0900	KP	W-8	860	650	148/149	S/S	427	FUSION
8/17/2023	1005	KW	W-7	860	650	149/150	S/S	427	FUSION
8/17/2023	1003	KP	W-8	860	650	150/151	S/S	427	FUSION
8/17/2023	1104	KP	W-8	860	650	151/152	S/S	427	FUSION
8/17/2023	1140	KW	W-7	860	650	152/153	S/S	427	FUSION
8/17/2023	1325	KW	W-7	860	650	153/154	S/S	427	FUSION
8/17/2023	1402	KP	W-8	860	650	154/155	S/S	427	FUSION
8/17/2023	1455	KW	W-7	860	650	155/156	S/S	379	FUSION
8/17/2023	1540	KP	W-8	860	650	156/157	S/S	314	FUSION
8/17/2023	1540	KP	W-8	860	650	156/158	S/S	46	FUSION
8/17/2023	1533	KW	W-7	860	450	157/158	T/T	18	FUSION
8/17/2023	1612	KW	W-7	860	650	157/161	S/S	168	FUSION
8/17/2023	1612	KW	W-7	860	650	157/160	S/S	107	FUSION
8/17/2023	1612	KW	W-7	860	650	157/159	S/S	25	FUSION
8/17/2023	1552	KW	W-7	860	450	161/160	T/T	24.6	FUSION
8/17/2023	1545	KW	W-7	860	450	160/159	T/T	10	FUSION
8/17/2023	1629	KP	W-8	860	650	161/162	S/S	170	FUSION
8/17/2023	1629	KP	W-8	860	650	160/162	S/S	77	FUSION
8/17/2023	1655	KW	W-7	860	650	162/163	S/S	182	FUSION
8/18/2023	0920	KP	W-8	860	550	167/165	S/S	210	FUSION
8/18/2023	0920	KP	W-8	860	550	166/165	S/S	24	FUSION
8/18/2023	0920	KP	W-8	860	550	166/164	S/S	140	FUSION
8/18/2023	0851	KW	W-7	860	600	169/167	S/S	185	FUSION
8/18/2023	0851	KW	W-7	860	600	168/167	S/S	30	FUSION
8/18/2023	0851	KW	W-7	860	600	168/166	S/S	160	FUSION
8/18/2023	0943	KP	W-8	860	550	171/169	S/S	99	FUSION
8/18/2023	0943	KP	W-8	860	550	170/169	S/S	197	FUSION
8/18/2023	0924	KP	W-8	860	450	171/170	T/T	24.6	FUSION
8/18/2023	0924	KP	W-8	860	550	170/168	S/S	190	FUSION
8/18/2023	0800	KW	W-7	860	450	165/164	T/T	24.6	FUSION
8/18/2023	0837	KW	W-7	860	450	167/166	T/T	24.6	FUSION

PANEL SEAMING CHECKLIST									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 MIL HDPE
DATE	TIME	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTINGS (°F)	MACHINE SPEED (FT/MIN)	PANEL NUMBERS	SEAM TYPE	SEAM LENGTH (FEET)	COMMENTS
8/18/2023	0900	KW	W-7	860	450	169/168	T/T	24.6	FUSION
8/18/2023	1040	KW	W-7	860	600	173/171	S/S	63	FUSION
8/18/2023	1040	KW	W-7	860	600	172/171	S/S	36	FUSION
8/18/2023	1040	KW	W-7	860	600	172/170	S/S	383	FUSION
8/18/2023	1011	KW	W-7	860	450	173/172	T/T	24.6	FUSION
8/18/2023	1245	KW	W-7	860	600	175/173	S/S	61	FUSION
8/18/2023	1245	KW	W-7	860	600	175/172	S/S	72	FUSION
8/18/2023	1245	KW	W-7	860	600	174/172	S/S	343	FUSION
8/18/2023	1300	KP	W-8	860	450	175/174	S/S	24.6	FUSION
8/18/2023	1311	KP	W-8	860	550	177/175	S/S	134	FUSION
8/18/2023	1311	KP	W-8	860	550	177/174	S/S	55	FUSION
8/18/2023	1311	KP	W-8	860	550	176/174	S/S	282	FUSION
8/18/2023	1345	KP	W-8	860	450	177/176	T/T	24.6	FUSION
8/18/2023	1320	TP	W-8	860	550	179/177	S/S	187	FUSION
8/18/2023	1320	TP	W-8	860	550	179/176	S/S	59	FUSION
8/18/2023	1320	TP	W-8	860	550	178/176	S/S	208	FUSION
8/21/2023	0906	KW	W-7	860	450	179/178	T/T	24.6	FUSION
8/18/2023	1355	KP	W-8	860	550	181/179	S/S	246	FUSION
8/18/2023	1355	KP	W-8	860	550	181/178	S/S	50	FUSION
8/18/2023	1355	KP	W-8	860	550	180/178	S/S	166	FUSION
8/21/2023	0921	KW	W-7	860	450	181/180	T/T	24.6	FUSION
8/21/2023	0930	KP	W-8	860	550	183/181	S/S	286	FUSION
8/21/2023	0930	KP	W-8	860	550	183/180	S/S	38	FUSION
8/21/2023	0930	KP	W-8	860	550	182/180	S/S	117	FUSION
8/21/2023	0928	KW	W-7	860	450	183/182	T/T	24.6	FUSION
8/21/2023	1110	KW	W-7	860	650	185/183	S/S	317	FUSION
8/21/2023	1110	KW	W-7	860	650	185/182	S/S	43	FUSION
8/21/2023	1110	KW	W-7	860	650	184/182	S/S	67	FUSION
8/21/2023	1037	KP	W-8	860	450	185/184	T/T	24.6	FUSION
8/21/2023	1115	KP	W-8	860	550	187/185	S/S	370	FUSION
8/21/2023	1115	KP	W-8	860	550	187/184	S/S	26	FUSION
8/21/2023	1115	KP	W-8	860	550	186/184	S/S	38	FUSION
8/21/2023	1045	KP	W-8	860	450	187/186	T/T	24.6	FUSION
8/21/2023	1140	KW	W-7	860	650	188/187	S/S	360	FUSION
8/21/2023	1140	KW	W-7	860	650	188/186	S/S	38	FUSION

PANEL SEAMING CHECKLIST									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 MIL HDPE
DATE	TIME	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTINGS (°F)	MACHINE SPEED (FT/MIN)	PANEL NUMBERS	SEAM TYPE	SEAM LENGTH (FEET)	COMMENTS
8/21/2023	1416	KW	W-7	860	650	189/188	S/S	45	FUSION
8/21/2023	1416	KW	W-7	860	650	190/188	S/S	75	FUSION
8/21/2023	1416	KW	W-7	860	650	191/188	S/S	68	FUSION
8/21/2023	1416	KW	W-7	860	650	192/188	S/S	156	FUSION
8/21/2023	1407	KW	W-7	860	450	189/190	T/T	8	FUSION
8/21/2023	1410	KW	W-7	860	450	190/191	T/T	9	FUSION
8/21/2023	1438	KW	W-7	860	450	191/192	T/T	11	FUSION
8/21/2023	1530	BM	X3	475	475	188/189/190/191/192/ PHASE 1	T/T	424	EXTRUSION
8/22/2023	0900	BM	X3	475	475	192/188/186/184/182/180/178/176/174/172/170/ 168/166/164/140/141/139/138/136/135	T/T	500	EXTRUSION
8/19/2023	0900	BM	X3	450	475	169/167/165/164/163/162/161/157/156/155/154/ 153/152/151/150/149/148/147/146/145/144/143/ 142/140/139	T/T	480	EXTRUSION

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
6/12/2023	7/8	CARM	1210	1215	30	30	0	P	R-2 TO R-4
6/12/2023	5/6	CARM	1345	1340	30	30	0	P	R-7 TO EOS
6/12/2023	5/7	CARM	1215	1220	30	30	0	P	TOS TO R-11
6/12/2023	5/7	CARM	1215	1220	30	30	0	P	R-11 TO R-14
6/12/2023	5/7	CARM	1355	1400	30	30	0	P	R-14 TO EOS
6/12/2023	4/5	CARM	1115	1120	30	30	0	P	TOS TO R-15
6/12/2023	4/5	CARM	1115	1120	30	30	0	P	R-15 TO EOS
6/12/2023	4/2	CARM	1115	1120	30	30	0	P	BS
6/12/2023	2/5	CARM	1147	1152	30	30	0	P	TOS TO EOS
6/12/2023	1/4	CARM	1115	1120	30	30	0	P	TOS TO EOS
6/12/2023	1/2	CARM	1147	1152	30	30	0	P	TOS TO R-19
6/12/2023	1/2	CARM	1147	1152	30	30	0	P	R-19 TO EOS
6/12/2023	10/1	CARM	1620	1625	30	30	0	P	TOS TO R-24
6/12/2023	10/1	CARM	1605	1610	30	30	0	P	R-24 TO R-25
6/12/2023	10/1	CARM	1455	1600	30	30	0	P	R-25 TO R-26
6/12/2023	10/9	CARM	1420	1425	30	30	0	P	BS TO R-34
6/12/2023	9/1	CARM	1415	1420	30	30	0	P	TOS TO R-28
6/12/2023	9/1	CARM	1305	1310	30	30	0	P	R-28 TO EOS
6/12/2023	12/10	CARM	1630	1635	30	30	0	P	TOS TO EOS
6/12/2023	11/10	CARM	1450	1455	30	30	0	P	TOS TO EOS
6/12/2023	10/9	CARM	1445	1450	30	30	0	P	TOS TO R-31
6/12/2023	11/9	CARM	1505	1510	30	30	0	P	R-31 TO EOS
6/12/2023	14/12	CARM	1605	1610	30	30	0	P	TOS TO EOS
6/12/2023	14/13	CARM	1600	1605	30	30	0	P	BS
6/12/2023	13/12	CARM	1525	1530	30	30	0	P	TOS TO EOS
6/12/2023	12/11	CARM	1540	1545	30	30	0	P	BS
6/12/2023	13/11	CARM	1655	1700	30	30	0	P	TOS TO EOS
6/14/2023	16/14	KP	0813	0818	30	30	0	P	TOS TO EOS
6/14/2023	16/15	KP	0813	0818	30	30	0	P	BS
6/14/2023	15/14	KP	0818	0823	30	30	0	P	TOS TO EOS

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
6/12/2023	15/13	CARM	1730	1735	30	30	0	P	TOS TO EOS
6/14/2023	18/16	KP	742	747	30	30	0	P	TOS TO EOS
6/14/2023	18/17	KP	758	803	30	30	0	P	BS TO R-48
6/14/2023	18/17	KP	758	803	30	30	0	P	R-48 TO BS
6/14/2023	17/16	KP	758	803	30	30	0	P	TOS TO EOS
6/14/2023	17/15	KP	758	803	30	30	0	P	TOS TO EOS
6/14/2023	20/18	KP	832	837	30	30	0	P	TOS TO EOS
6/14/2023	19/18	KP	832	837	30	29	1	P	TOS TO R-54
6/14/2023	19/18	KP	832	837	30	29	1	P	R-54 TO EOS
6/12/2023	19/17	CARM	710	715	30	30	0	P	TOS TO EOS
6/14/2023	21/20	KP	852	857	30	30	0	P	TOS TO EOS
6/14/2023	20/19	KP	858	903	30	27	3	P	BS
6/14/2023	21/19	KP	921	926	30	30	0	P	TOS TO EOS
6/14/2023	23/21	KP	943	948	30	30	0	P	TOS TO R-61
6/14/2023	23/21	KP	921	926	30	30	0	P	R-61 TO R-60
6/14/2023	23/21	KP	932	937	30	30	0	P	R-60 TO EOS
6/14/2023	25/23	KP	1000	1005	30	30	0	P	TOS TO R-63
6/14/2023	25/23	KP	1000	1005	30	28	2	P	R-63 TO EOS
6/14/2023	24/23	KP	1000	1005	30	30	0	P	TOS TO EOS
6/14/2023	23/22	KP	1000	1005	30	30	0	P	TOS TO EOS
6/14/2023	27/25	KP	1028	1033	30	30	0	P	TOS TO R-75
6/14/2023	27/25	KP	1028	1033	30	30	0	P	R-75 TO R-73
6/14/2023	27/26	KP	1043	1048	30	30	0	P	BS
6/14/2023	26/25	KP	1043	1048	30	30	0	P	TOS TO EOS
6/14/2023	26/24	KP	1000	1005	30	30	0	P	BS
6/14/2023	22/21	KP	932	937	30	30	0	P	TOS TO EOS
6/14/2023	27/25	KP	1038	1043	30	30	0	P	R-73 TO EOS
6/14/2023	25/24	KP	1000	1005	30	28	2	P	BS
6/14/2023	26/24	KP	1055	1100	30	30	0	P	TOS TO R-66
6/14/2023	26/24	KP	1055	1100	30	30	0	P	R-66 TO EOS

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING						COMMENTS
			TIME		PRESSURE (PSI)			PASS/FAIL	
			START	END	START	END	DROP		
6/14/2023	23/22	KP	952	957	30	30	0	P	BS
6/14/2023	29/27	KP	1248	1253	30	30	0	P	TOS TO R-76
6/14/2023	29/27	KP	1248	1253	30	30	0	P	R-76 TO R-78
6/14/2023	29/27	KP	1112	1117	30	30	0	P	R-78 TO EOS
6/14/2023	29/28	KP	1112	1117	30	30	0	P	BS
6/14/2023	28/27	KP	1112	1117	30	30	0	P	TOS TO EOS
6/14/2023	28/26	KP	1055	1100	30	30	0	P	TOS TO EOS
6/14/2023	31/29	KP	1223	1228	30	30	0	P	TOS TO R-86
6/14/2023	31/29	KP	1235	1240	30	30	0	P	R-86 TO R-85
6/14/2023	31/29	KP	1235	1240	30	30	0	P	R-85 TO EOS
6/14/2023	30/29	KP	1125	1130	30	30	0	P	TOS TO EOS
6/14/2023	30/28	KP	1125	1130	30	30	0	P	TOS TO EOS
6/14/2023	33/31	KP	1302	1307	30	30	0	P	TOS TO EOS
6/14/2023	32/31	KP	1315	1320	30	30	0	P	TOS TO EOS
6/14/2023	32/30	KP	1315	1320	30	27	3	P	TOS TO EOS
6/15/2023	35/33	KP	1421	1426	30	30	0	P	TOS TO EOS
6/14/2023	34/33	KP	1302	1307	30	30	0	P	TOS TO EOS
6/14/2023	34/32	KP	1323	1328	30	28	2	P	TOS TO R-99
6/14/2023	33/32	KP	1302	1307	30	28	2	P	BS
6/14/2023	34/32	KP	1323	1328	30	30	0	P	R-99 TO R-98
6/14/2023	34/32	KP	1329	1334	30	30	0	P	R-98 TO R-97
6/14/2023	34/32	KP	1335	1340	30	30	0	P	R-97 TO R-96
6/14/2023	34/32	KP	1353	1358	30	30	0	P	R-96 TO R-95
6/14/2023	34/32	KP	1353	1358	30	30	0	P	R95 TO EOS
6/15/2023	35/53	KP	0847	0852	30	30	0	P	TOS TO EOS
6/15/2023	35/51	KP	0756	0801	30	30	0	P	TOS TO R105
6/15/2023	35/51	KP	0756	0801	30	30	0	P	R105 TO EOS
6/15/2023	35/50	KP	0732	0737	30	30	0	P	TOS TO R107
6/15/2023	35/50	KP	0732	0737	30	30	0	P	R107 TO EOS
6/14/2023	35/48	KP	1753	1758	30	30	0	P	TOS TO R109

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
6/14/2023	35/48	KP	1753	1758	30	30	0	P	R109 TO EOS
6/14/2023	34/48	KP	1753	1758	30	30	0	P	TOS TO EOS
6/14/2023	34/46	KP	1745	1750	30	30	0	P	TOS TO EOS
6/14/2023	34/45	KP	1647	1652	30	30	0	P	TOS TO EOS
6/14/2023	34/43	KP	1615	1620	30	30	0	P	TOS TO R118
6/14/2023	34/43	KP	1615	1620	30	30	0	P	R118 TO EOS
6/14/2023	34/36	KP	1455	1500	30	30	0	P	TOS TO EOS
6/14/2023	34/38	KP	1455	1500	30	30	0	P	TOS TO R122
6/14/2023	34/38	KP	1455	1500	30	27	3	P	R122 TO EOS
6/14/2023	34/39	KP	1455	1500	30	30	0	P	TOS TO EOS
6/14/2023	34/40	KP	1442	1447	30	30	0	P	TOS TO EOS
6/14/2023	34/41	KP	1421	1426	30	30	0	P	TOS TO R128
6/14/2023	34/41	KP	1421	1426	30	30	0	P	R128 TO EOS
6/14/2023	41/42	KP	1421	1426	30	30	0	P	TOS TO EOS
6/14/2023	42/40	KP	1442	1447	30	29	1	P	TOS TO EOS
6/14/2023	40/41	KP	1421	1426	30	30	0	P	TOS TO EOS
6/14/2023	39/40	KP	1442	1447	30	28	2	P	TOS TO EOS
6/14/2023	38/39	KP	1455	1500	30	30	0	P	TOS TO EOS
6/14/2023	37/38	KP	1551	1556	30	27	3	P	TOS TO EOS
6/14/2023	37/39	KP	1551	1556	30	30	0	P	TOS TO EOS
6/14/2023	36/38	KP	1551	1556	30	30	0	P	TOS TO EOS
6/14/2023	36/37	KP	1551	1556	30	30	0	P	TOS TO R141
6/14/2023	36/37	KP	1551	1556	30	30	0	P	R141 TO R142
6/14/2023	36/37	KP	1556	1601	30	30	0	P	R142 TO EOS
6/14/2023	36/43	KP	1615	1620	30	30	0	P	TOS TO EOS
6/14/2023	43/45	KP	1647	1652	30	30	0	P	TOS TO EOS
6/14/2023	44/45	KP	1637	1642	30	30	0	P	TOS TO R145
6/14/2023	44/45	KP	1647	1652	30	30	0	P	R145 TO EOS
6/14/2023	43/44	KP	1705	1710	30	30	0	P	TOS TO R146
6/15/2023	43/44	KP	0711	0716	30	30	0	P	R146 TO EOS

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
6/14/2023	45/46	KP	1637	1642	30	28	2	P	TOS TO EOS
6/14/2023	44/46	KP	1735	1740	30	27	3	P	TOS TO EOS
6/15/2023	46/47	KP	0816	0821	30	29	1	P	TOS TO EOS
6/15/2023	47/48	KP	0816	0821	30	30	0	P	TOS TO EOS
6/14/2023	46/48	KP	1745	1750	30	30	0	P	TOS TO R149
6/15/2023	46/48	KP	0830	0835	30	29	1	P	R149 TO EOS
6/14/2023	48/50	CARM	1800	1805	30	30	0	P	TOS TO EOS
6/15/2023	49/50	KP	0732	0737	30	30	0	P	BSEAM
6/15/2023	48/49	KP	0756	0801	30	29	1	P	TOS TO EOS
6/15/2023	47/49	KP	0816	0821	30	30	0	P	TOS TO EOS
6/15/2023	50/51	KP	0732	0737	30	30	0	P	TOS TO EOS
6/15/2023	49/51	KP	0756	0801	30	30	0	P	TOS TO R155
6/15/2023	49/51	KP	0900	0905	30	30	0	P	R155 TO R156
6/15/2023	49/51	KP	0900	0905	30	30	0	P	R156 TO R157
6/15/2023	49/51	KP	0900	0905	30	30	0	P	R157 TO EOS
6/15/2023	51/53	KP	0847	0852	30	30	0	P	TOS TO EOS
6/15/2023	52/53	KP	0927	0932	30	30	0	P	BSEAM
6/15/2023	51/52	KP	1005	1010	30	28	2	P	TOS TO R161
6/15/2023	51/52	KP	1005	1010	30	27	3	P	R161 TO EOS
6/15/2023	53/55	KP	1030	1035	30	30	0	P	TOS TO R167
6/15/2023	53/55	KP	1020	1025	30	30	0	P	R167 TO EOS
6/15/2023	54/55	KP	1020	1025	30	28	2	P	BSEAM
6/15/2023	53/54	KP	1020	1025	30	30	0	P	TOS TO R170
6/15/2023	53/54	KP	0927	0932	30	30	0	P	R170 TO EOS
6/15/2023	52/54	KP	0927	0932	30	30	0	P	TOS TO EOS
6/15/2023	55/56	KP	1055	1100	30	30	0	P	TOS TO EOS
6/15/2023	54/56	KP	1110	1115	30	30	0	P	TOS TO R176
6/15/2023	54/56	KP	1110	1115	30	30	0	P	R176 TO R175
6/15/2023	54/56	KP	1110	1115	30	30	0	P	R175 TO EOS
6/15/2023	56/57	KP	1125	1130	30	30	0	P	TOS TO EOS

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
6/15/2023	57/59	KP	0950	0955	30	30	0	P	TOS TO EOS
6/15/2023	58/59	KP	1125	1130	30	30	0	P	BSEAM
6/15/2023	57/58	KP	1125	1130	30	30	0	P	TOS TO EOS
6/15/2023	59/61	KP	1150	1155	30	30	0	P	TOS TO EOS
6/15/2023	60/61	KP	1150	1155	30	30	0	P	EOS TO R182
6/15/2023	60/61	KP	1240	1245	30	30	0	P	R182 TO EOS
6/15/2023	59/60	KP	1150	1155	30	30	0	P	TOS TO EOS
6/15/2023	58/60	KP	1250	1255	30	30	0	P	TOS TO R184
6/15/2023	58/60	KP	1250	1255	30	30	0	P	R184 TO R185
6/15/2023	58/60	KP	1305	1310	30	28	2	P	R185 TO R186
6/15/2023	58/60	KP	1305	1310	30	30	0	P	R186 TO EOS
6/15/2023	61/62	KP	1240	1245	30	30	0	P	TOS TO EOS
6/15/2023	60/62	KP	1330	1335	30	28	2	P	TOS TO R189
6/15/2023	60/62	KP	1338	1343	30	27	3	P	R189 TO EOS
6/24/2023	63/65	KP	0658	0703	30	30	0	P	TOS TO EOS
6/24/2023	63/64	KP	0658	0703	30	30	0	P	TOS TO EOS
6/24/2023	65/66	KP	0658	0703	30	30	0	P	TOS TO EOS
6/24/2023	64/66	KP	0658	0703	30	30	0	P	TOS TO EOS
6/24/2023	66/90	KP	0725	0730	30	26	4	P	TOS TO EOS
6/24/2023	90/91	KP	0725	0730	30	28	2	P	TOS TO EOS
6/24/2023	91/92	KP	0725	0730	30	28	2	P	TOS TO R213
6/24/2023	91/92	KP	0730	0735	30	26	4	P	R213 TO EOS
6/24/2023	63/69	KP	0733	0738	30	28	2	P	EOS TO R228
6/24/2023	68/69	KP	0733	0738	30	30	0	P	EOS TO R230
6/24/2023	69/70	KP	0746	0751	30	27	3	P	TOS TO EOS
6/24/2023	68/70	KP	0746	0751	30	28	2	P	TOS TO R235
6/24/2023	68/69	KP	0746	0751	30	30	0	P	R230 TO EOS
6/24/2023	63/69	KP	0759	0804	30	28	2	P	R228 TO TOS
6/24/2023	66/67	KP	0746	0751	30	30	0	P	TOS TO EOS
6/24/2023	68/70	KP	0812	0817	30	26	4	P	R235 T0 R234

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
6/24/2023	68/70	KP	0812	0817	30	26	4	P	R234 TO R233
6/24/2023	68/70	KP	0812	0817	30	28	2	P	R233 TO EOS
6/24/2023	70/72	KP	0832	0837	30	29	1	P	TOS TO EOS
6/24/2023	71/72	KP	0832	0837	30	29	1	P	EOS TO EOS
6/24/2023	70/71	KP	0832	0837	30	26	4	P	TOS TO R240
6/24/2023	70/71	KP	0841	0846	30	28	2	P	R240 TO EOS
6/24/2023	72/74	KP	0914	0919	30	27	3	P	TOS TO EOS
6/24/2023	72/73	KP	0855	0900	30	30	0	P	TOS TO EOS
6/24/2023	71/73	KP	0855	0900	30	26	4	P	TOS TO EOS
6/24/2023	74/75	KP	0950	0955	30	30	0	P	TOS TO EOS
6/24/2023	73/75	KP	0950	0955	30	27	3	P	TOS TO EOS
6/24/2023	73/74	KP	0855	0900	30	29	1	P	BSEAM
6/24/2023	75/76	KP	0941	0946	30	26	4	P	TOS TO EOS
6/24/2023	75/77	KP	1006	1011	30	26	4	P	EOS TO R252
6/24/2023	76/77	KP	1019	1024	30	28	2	P	BSEAM
6/24/2023	76/78	KP	1019	1024	30	30	0	P	TOS TO EOS
6/24/2023	77/78	KP	1019	1024	30	28	2	P	TOS TO EOS
6/24/2023	75/77	KP	1026	1031	30	29	1	P	R252 TO TOS
6/24/2023	79/80	KP	1039	1044	30	28	2	P	TOS TO EOS
6/24/2023	78/79	KP	1039	1044	30	30	0	P	BSEAM
6/24/2023	78/80	KP	1039	1044	30	30	0	P	TOS TO EOS
6/24/2023	77/79	KP	1101	1106	30	30	0	P	TOS TO EOS
6/24/2023	80/82	KP	1116	1121	30	28	2	P	TOS TO EOS
6/24/2023	80/81	KP	1116	1121	30	28	2	P	TOS TO EOS
6/24/2023	81/82	KP	1116	1121	30	30	0	P	BSEAM
6/24/2023	81/83	KP	1125	1130	30	28	2	P	TOS TO R264
6/24/2023	81/83	KP	1125	1130	30	27	3	P	R264 TO EOS
6/24/2023	82/83	KP	1140	1145	30	27	3	P	TOS TO R266
6/24/2023	82/83	KP	1140	1145	30	30	0	P	R266 TO EOS
6/24/2023	83/84	KP	1155	1200	30	30	0	P	BSEAM

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
6/24/2023	83/85	KP	1155	1200	30	29	1	P	TOS TO EOS
6/24/2023	84/85	KP	1155	1200	30	28	2	P	TOS TO EOS
6/24/2023	82/84	KP	1202	1207	30	29	1	P	TOS TO EOS
6/24/2023	85/86	KP	1254	1259	30	30	0	P	TOS TO EOS
6/24/2023	86/87	KP	1254	1259	30	27	3	P	BSEAM
6/24/2023	85/87	KP	1254	1259	30	29	1	P	TOS TO EOS
6/24/2023	86/88	KP	1305	1310	30	29	1	P	TOS TO EOS
6/24/2023	87/88	KP	1305	1310	30	28	2	P	R278 TO EOS
6/24/2023	87/88	KP	1317	1322	30	30	0	P	R278 TO TOS
6/24/2023	87/89	KP	1317	1322	30	30	0	P	TOS TO EOS
6/24/2023	88/89	KP	1317	1322	30	30	0	P	BSEAM
6/24/2023	63/68	KP	0733	0738	30	30	0	P	TOS TO EOS
7/7/2023	88/96	KD	0720	0725	30	29	1	P	TOS TO EOS
7/7/2023	88/95	KD	0720	0725	30	28	2	P	TOS TO EOS
7/7/2023	95/96	KD	0720	0725	30	29	1	P	TOS TO EOS
7/7/2023	94/95	KD	0720	0725	30	28	2	P	TOS TO EOS
7/7/2023	93/94	KD	0745	0750	30	29	1	P	EOS TO EOS
7/7/2023	93/95	KD	0745	0750	30	30	0	P	TOS TO EOS
7/7/2023	62/93	KD	1010	1015	30	28	2	P	TOS TO R301
7/6/2023	62/93	LP	1630	1635	30	30	0	P	R301 TO R304
7/7/2023	89/94	KD	0815	0820	30	30	0	P	TOS TO EOS
7/7/2023	88/94	KD	0815	0820	30	30	0	P	TOS TO R295
7/7/2023	88/94	KD	0815	0820	30	30	0	P	R295 TO EOS
7/7/2023	94/98	KD	0815	0820	30	29	1	P	TOS TO R298
7/7/2023	94/98	KD	0800	0805	30	30	0	P	R298 TO EOS
7/7/2023	93/98	KD	0800	0805	30	28	2	P	TOS TO R300
7/7/2023	93/98	KD	0800	0805	30	30	0	P	R300 TO R302
7/7/2023	93/98	KD	1010	1015	30	30	0	P	R302 TO EOS
7/7/2023	97/98	KD	1010	1015	30	30	0	P	EOS TO EOS
7/6/2023	93/97	LP	1630	1635	30	30	0	P	TOS TO EOS

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
7/7/2023	89/98	KD	0845	0850	30	29	1	P	TOS TO EOS
7/7/2023	98/100	KD	0845	0850	30	29	1	P	TOS TO EOS
7/7/2023	97/100	KD	1010	1015	30	30	0	P	TOS TO EOS
7/7/2023	99/100	KD	1025	1030	30	29	1	P	EOS TO EOS
7/6/2023	97/99	LP	1630	1635	30	30	0	P	TOS TO EOS
7/7/2023	89/100	KD	0845	0850	30	30	0	P	EOS TO R311
7/7/2023	89/100	KD	0845	0850	30	30	0	P	R311 TO R313
7/7/2023	89/100	KD	0900	0905	30	30	0	P	R313 TO TOS
7/7/2023	100/102	KD	0900	0905	30	30	0	P	TOS TO EOS
7/7/2023	101/102	KD	0925	0930	30	29	1	P	EOS TO EOS
7/7/2023	100/101	KD	0925	0930	30	28	2	P	TOS TO R317
7/7/2023	100/101	KD	0950	0955	30	30	0	P	R317 TO R318
7/7/2023	100/101	KD	0950	0955	30	30	0	P	R318 TO EOS
7/7/2023	99/101	KD	1025	1030	30	30	0	P	TOS TO R321
7/7/2023	99/101	KD	1025	1030	30	30	0	P	R321 TO R322
7/7/2023	99/101	KD	1040	1045	30	30	0	P	R322 TO EOS
7/7/2023	89/102	KD	0900	0905	30	30	0	P	TOS TO R372
7/7/2023	89/102	KD	0900	0905	30	28	2	P	R372 TO R371
7/7/2023	89/102	KD	0900	0905	30	30	0	P	R371 TO EOS
7/7/2023	102/114	KD	1150	1155	30	30	0	P	TOS TO R370
7/7/2023	102/114	KD	1150	1155	30	30	0	P	R370 TO R330
7/7/2023	102/114	KD	1150	1155	30	30	0	P	R330 TO EOS
7/7/2023	104/114	KD	1150	1155	30	30	0	P	EOS TO EOS
7/7/2023	101/104	KD	1150	1155	30	30	0	P	TOS TO EOS
7/7/2023	103/104	KD	0925	0930	30	30	0	P	EOS TO EOS
7/7/2023	101/103	KD	0950	0955	30	30	0	P	TOS TO R327
7/7/2023	101/103	KD	0950	0955	30	30	0	P	R327 TO R326
7/7/2023	101/103	KD	1025	1030	30	30	0	P	R326 TO TO R325
7/7/2023	101/103	KD	1040	1045	30	30	0	P	R325 TO R324
7/7/2023	103/105	KD	1100	1105	30	30	0	P	TOS TO R332

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
7/7/2023	103/105	KD	1100	1105	30	30	0	P	R332 TO R335
7/7/2023	103/105	KD	1040	1045	30	30	0	P	R335 TO EOS
7/7/2023	105/107	KD	1100	1105	30	27	3	P	TOS TO EOS
7/7/2023	106/107	KD	1120	1125	30	30	0	P	EOS TO EOS
7/7/2023	105/106	KD	1100	1105	30	28	2	P	TOS TO R337
7/7/2023	105/106	KD	1120	1125	30	30	0	P	R337 TO R336
7/7/2023	105/106	KD	1120	1125	30	30	0	P	R336 TO EOS
7/7/2023	107/108	LP	1103	1108	30	30	0	P	TOS TO R342
7/7/2023	107/108	LP	1115	1120	30	30	0	P	R342 TO EOS
7/7/2023	106/108	KD	1120	1125	30	30	0	P	TOS TO R344
7/7/2023	106/108	KD	1120	1125	30	29	1	P	R344 TO R345
7/7/2023	106/108	KD	1120	1125	30	30	0	P	R345 TO EOS
7/7/2023	108/109	LP	1103	1108	30	30	0	P	TOS TO R352
7/7/2023	108/109	LP	1006	1011	30	30	0	P	R352 TO R349
7/7/2023	108/109	LP	0945	0950	30	30	0	P	R349 TO EOS
7/7/2023	109/112	LP	1035	1040	30	30	0	P	TOS TO EOS
7/7/2023	110/112	LP	1035	1040	30	30	0	P	EOS TO EOS
7/7/2023	109/110	LP	1013	1018	30	30	0	P	TOS TO R361
7/7/2023	109/110	LP	1013	1018	30	30	0	P	R361 TO R364
7/7/2023	109/110	LP	1013	1018	30	30	0	P	R364 TO EOS
7/7/2023	110/111	LP	1013	1018	30	30	0	P	TOS TO R365
7/7/2023	110/111	LP	1013	1018	30	30	0	P	R365 TO EOS
7/7/2023	108/113	LP	1055	1100	30	30	0	P	TOS TO EOS
7/7/2023	109/113	LP	1055	1100	30	30	0	P	TOS TO R357
7/7/2023	109/113	LP	1055	1100	30	30	0	P	R357 TO EOS
7/7/2023	112/113	LP	1035	1040	30	30	0	P	TOS TO EOS
7/7/2023	110/113	LP	1035	1040	30	30	0	P	TOS TO EOS
7/7/2023	111/113	LP	1024	1029	30	30	0	P	TOS TO R367
7/7/2023	111/113	LP	1024	1029	30	30	0	P	R367 TO EOS
7/7/2023	107/113	LP	1103	1108	30	30	0	P	TOS TO R339

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
7/7/2023	107/113	LP	1103	1108	30	30	0	P	R339 TO EOS
7/19/2023	116/117	TR	1356	1401	30	29	1	P	TOS TO EOS
7/19/2023	115/116	TR	1356	1401	30	28	2	P	TOS TO EOS
7/19/2023	115/118	TR	1330	1335	30	29	1	P	TOS TO R385
7/19/2023	115/118	TR	1356	1401	30	29	1	P	R385 TO EOS
7/19/2023	118/119	TR	1330	1335	30	30	0	P	TOS TO EOS
7/19/2023	119/120	TR	1330	1335	30	29	1	P	TOS TO EOS
7/19/2023	120/121	TR	1420	1425	30	27	3	P	TOS TO R396
7/19/2023	120/121	TR	1420	1425	30	29	1	P	R396 TO R398
7/19/2023	120/121	TR	1420	1425	30	29	1	P	R398 TO EOS
7/19/2023	121/123	TR	1450	1455	30	30	0	P	TOS TO R405
7/19/2023	121/123	TR	1450	1455	30	30	0	P	R405 TO EOS
7/19/2023	122/123	TR	1450	1455	30	30	0	P	EOS TO R413
7/19/2023	122/123	TR	1550	1555	30	30	0	P	R413 TO EOS
7/19/2023	121/122	TR	1450	1455	30	30	0	P	TOS TO R407
7/19/2023	121/122	TR	1450	1455	30	30	0	P	R407 TO R409
7/19/2023	121/122	TR	1450	1455	30	28	2	P	R409 TO EOS
7/19/2023	123/124	TR	1550	1555	30	30	0	P	TOS TO EOS
7/19/2023	122/124	TR	1550	1555	30	30	0	P	TOS TO R410
7/19/2023	122/124	TR	1550	1555	30	30	0	P	R410 TO EOS
7/19/2023	124/125	TR	0730	0735	30	30	0	P	TOS TO R436
7/19/2023	124/125	TR	1635	1640	30	27	3	P	R436 TO EOS
7/19/2023	125/126	TR	1635	1640	30	30	0	P	EOS TO EOS
7/19/2023	124/126	TR	1635	1640	30	30	0	P	TOS TO R455
7/20/2023	124/126	TR	0730	0735	30	27	3	P	R455 TO EOS
7/20/2023	126/127	TR	0816	0821	30	30	0	P	TOS TO EOS
7/20/2023	127/128	TR	0752	0757	30	28	2	P	EOS TO EOS
7/20/2023	125/127	TR	0752	0757	30	30	0	P	TOS TO EOS
7/20/2023	125/128	TR	0752	0757	30	30	0	P	TOS TO EOS
7/20/2023	128/129	TR	0816	0821	30	30	0	P	TOS TO EOS

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
7/20/2023	127/129	TR	0816	0821	30	30	0	P	TOS TO R463
7/20/2023	127/129	TR	0816	0821	30	30	0	P	R463 TO R464
7/20/2023	127/129	TR	0816	0821	30	30	0	P	R464 TO R465
7/20/2023	127/129	TR	0816	0821	30	30	0	P	R465 TO EOS
7/20/2023	104/129	TR	0855	0900	30	30	0	P	TOS TO EOS
7/20/2023	104/128	TR	0855	0900	30	30	0	P	EOS TO EOS
7/20/2023	104/125	TR	0855	0900	30	30	0	P	EOS TO R459
7/20/2023	104/125	TR	0855	0900	30	30	0	P	R459 TO EOS
7/20/2023	104/124	TR	0855	0900	30	28	2	P	EOS TO R434
7/20/2023	104/124	TR	0930	0935	30	30	0	P	R434 TO EOS
7/20/2023	103/124	TR	0930	0935	30	30	0	P	EOS TO EOS
7/20/2023	103/123	TR	0930	0935	30	30	0	P	EOS TO EOS
7/20/2023	103/121	TR	0915	0920	30	30	0	P	EOS TO EOS
7/20/2023	105/121	TR	0955	1000	30	30	0	P	EOS TO EOS
7/20/2023	105/120	TR	0955	1000	30	28	2	P	EOS TO R400
7/20/2023	105/120	TR	0955	1000	30	30	0	P	R400 TO EOS
7/20/2023	105/119	TR	1005	1010	30	30	0	P	EOS TO EOS
7/20/2023	105/118	TR	1005	1010	30	30	0	P	EOS TO EOS
7/20/2023	107/118	TR	1025	1030	30	30	0	P	EOS TO EOS
7/20/2023	113/115	TR	1025	1030	30	28	2	P	EOS TO R383
7/20/2023	113/115	TR	1045	1050	30	30	0	P	R383 TO EOS
7/20/2023	113/116	TR	1045	1050	30	30	0	P	TOS TO EOS
7/20/2023	113/117	TR	1045	1050	30	30	0	P	TOS TO EOS
8/22/2023	189/188	TP	0832	0837	30	26	4	P	TOS TO EOS
8/22/2023	190/188	TP	0832	0837	30	30	0	P	TOS TO EOS
8/22/2023	191/188	TP	0832	0837	30	28	2	P	TOS TO EOS
8/22/2023	192/188	TP	0945	0950	30	29	1	P	TOS TO R496
8/22/2023	192/188	TP	0945	0950	30	26	4	P	R496 TO EOS
8/22/2023	188/186	TP	0945	0950	30	30	0	P	TOS TO EOS
8/22/2023	187/186	TP	0945	0950	30	29	1	P	EOS TO EOS

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
8/22/2023	188/187	TP	0945	0950	30	29	1	P	EOS TO R501
8/22/2023	186/184	TP	1259	1304	30	28	2	P	TOS TO EOS
8/22/2023	187/184	TP	1259	1304	30	27	3	P	EOS TO R507
8/22/2023	187/184	TP	1315	1320	30	27	3	P	R507 TO EOS
8/22/2023	185/184	TP	1315	1320	30	30	0	P	EOS TO EOS
8/22/2023	184/182	TP	1315	1320	30	28	2	P	TOS TO EOS
8/22/2023	182/180	TP	1315	1320	30	28	2	P	TOS TO EOS
8/22/2023	187/185	TP	1432	1437	30	30	0	P	TOS TO EOS
8/22/2023	188/187	TP	1457	1502	30	29	1	P	R501 TO R500
8/22/2023	188/187	TP	1457	1502	30	27	3	P	R500 TO R499
8/22/2023	188/187	TP	1519	1524	30	28	2	P	R499 TO TOS
8/22/2023	185/183	TP	1519	1524	30	30	0	P	TOS TO R511
8/22/2023	185/183	TP	1519	1524	30	29	1	P	R511 TO R512
8/22/2023	185/183	TP	1557	1602	30	29	1	P	R512 TO EOS
8/22/2023	183/182	TP	1557	1602	30	28	2	P	EOS TO EOS
8/22/2023	185/182	TP	1557	1602	30	29	1	P	TOS TO EOS
8/22/2023	183/180	TP	1615	1620	30	28	2	P	TOS TO EOS
8/22/2023	181/180	TP	1615	1620	30	30	0	P	EOS TO EOS
8/22/2023	183/181	TP	1615	1620	30	27	3	P	EOS TO R520
8/22/2023	181/178	TP	1655	1660	30	30	0	P	TOS TO EOS
8/22/2023	181/179	TP	1655	1660	30	30	0	P	TOS TO EOS
8/22/2023	183/181	TP	1655	1700	30	27	3	P	R520 TO TOS
8/22/2023	179/177	TP	1715	1720	30	29	1	P	TOS TO EOS
8/22/2023	177/175	AU	1715	1720	30	29	1	P	TOS TO EOS
8/22/2023	177/174	AU	1715	1720	30	30	0	P	TOS TO EOS
8/23/2023	175/CAP	AU	0730	0735	30	30	0	P	EOS TO R557
8/23/2023	175/174	AU	0730	0735	30	27	3	P	EOS TO EOS
8/23/2023	174/CAP	AU	0730	0735	30	28	2	P	TOS TO R537
8/23/2023	176/174	AU	0812	0817	30	26	4	P	TOS TO R532
8/23/2023	176/174	AU	0812	0817	30	30	0	P	R532 TO R533

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
8/23/2023	176/174	AU	0812	0817	30	30	0	P	R533 TO EOS
8/23/2023	179/178	AU	0841	0846	30	29	1	P	EOS TO EOS
8/23/2023	178/176	AU	0841	0846	30	30	0	P	TOS TO R526
8/23/2023	179/176	AU	0841	0846	30	30	0	P	TOS TO EOS
8/23/2023	177/176	AU	0858	0903	30	27	3	P	EOS TO EOS
8/23/2023	180/178	AU	0915	0920	30	29	1	P	TOS TO EOS
8/23/2023	178/176	AU	0942	0947	30	30	0	P	R526 TO EOS
8/23/2023	175/173	AU	1038	1043	30	28	2	P	TOS TO CAP
8/23/2023	173/CAP	AU	1038	1043	30	30	0	P	TOS TO EOS
8/23/2023	175/CAP	AU	1038	1043	30	29	1	P	TOS TO R557
8/23/2023	173/171	AU	1108	1113	30	26	4	P	TOS TO EOS
8/23/2023	173/172	AU	1108	1113	30	29	1	P	EOS TO EOS
8/23/2023	172/CAP	AU	1108	1113	30	29	1	P	TOS TO R554
8/23/2023	172/CAP	AU	1140	1145	30	27	3	P	R554 TO R552
8/23/2023	174/CAP	AU	1309	1314	30	29	1	P	TOS TO R553
8/23/2023	172/CAP	AU	1309	1314	30	28	2	P	R552 TO R550
8/23/2023	172/CAP	AU	1309	1314	30	29	1	P	R550 TO R547
8/23/2023	174/CAP	AU	1322	1327	30	30	0	P	R553 TO R548
8/23/2023	174/CAP	AU	1355	1400	30	28	2	P	R548 TO R546
8/23/2023	172/CAP	AU	1355	1400	30	28	2	P	R547 TO R545
8/23/2023	174/CAP	AU	1359	1404	30	28	2	P	R546 TO R540
8/23/2023	172/CAP	AU	1428	1433	30	29	1	P	R545 TO R544
8/23/2023	172/CAP	AU	1428	1433	30	28	2	P	R544 TO R543
8/23/2023	174/CAP	AU	1428	1433	30	30	0	P	R540 TO R539
8/23/2023	172/CAP	AU	1428	1433	30	30	0	P	R543 TO R542
8/23/2023	174/CAP	AU	1452	1457	30	30	0	P	R539 TO R538
8/23/2023	174/CAP	AU	1452	1457	30	28	2	P	R538 TO R537
8/23/2023	172/CAP	AU	1504	1509	30	28	2	P	R542 TO R536
8/23/2023	172/CAP	AU	1504	1509	30	28	2	P	R536 TO EOS
8/23/2023	174/CAP	AU	1504	1509	30	26	4	P	R537 TO EOS

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
8/23/2023	172/171	AU	1530	1535	30	30	0	P	TOS TO EOS
8/23/2023	172/170	AU	1530	1535	30	27	3	P	TOS TO R562
8/23/2023	171/170	AU	1530	1535	30	30	0	P	EOS TO EOS
8/23/2023	171/169	AU	1558	1403	30	27	3	P	TOS TO EOS
8/23/2023	170/169	AU	1558	1403	30	30	0	P	TOS TO EOS
8/23/2023	172/170	AU	1610	1615	30	30	0	P	R562 TO EOS
8/23/2023	170/168	AU	1610	1615	30	30	0	P	TOS TO R567
8/23/2023	170/168	AU	1610	1615	30	29	1	P	R567 TO R565
8/23/2023	170/168	AU	1610	1615	30	27	3	P	R565 TO EOS
8/23/2023	168/167	AU	1634	1639	30	29	1	P	TOS TO EOS
8/23/2023	169/168	AU	1634	1639	30	30	0	P	EOS TO EOS
8/23/2023	167/166	AU	1634	1639	30	28	2	P	EOS TO EOS
8/23/2023	168/166	AU	1634	1639	30	30	0	P	TOS TO EOS
8/23/2023	169/167	AU	1650	1655	30	28	2	P	TOS TO EOS
8/23/2023	167/165	AU	1650	1655	30	27	3	P	TOS TO R584
8/23/2023	167/165	AU	1650	1655	30	29	1	P	R584 TO EOS
8/23/2023	166/165	AU	1712	1717	30	28	2	P	TOS TO R582
8/23/2023	166/165	AU	1712	1717	30	26	4	P	R582 TO EOS
8/23/2023	166/164	AU	1712	1717	30	29	1	P	TOS TO EOS
8/23/2023	163/162	AU	1822	1827	30	29	1	P	TOS TO R675
8/23/2023	163/162	AU	1822	1827	30	28	2	P	R675 TO EOS
8/24/2023	161/162	AU	0739	0744	30	28	2	P	TOS TO EOS
8/24/2023	161/160	AU	0739	0744	30	29	1	P	EOS TO EOS
8/24/2023	160/162	AU	0739	0744	30	29	1	P	TOS TO EOS
8/24/2023	157/161	AU	0750	0755	30	29	1	P	TOS TO EOS
8/24/2023	157/160	AU	0802	0807	30	30	0	P	TOS TO R671
8/24/2023	157/156	AU	0802	0807	30	30	0	P	TOS TO R63
8/24/2023	157/156	AU	0811	0816	30	29	1	P	R663 TO EOS
8/24/2023	155/156	AU	0825	0830	30	30	0	P	TOS TO R662
8/24/2023	155/154	AU	0830	0835	30	30	0	P	TOS TO R658

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
8/24/2023	154/153	AU	0845	0850	30	28	2	P	TOS TO R654
8/24/2023	153/152	AU	0857	0902	30	27	3	P	TOS TO R653
8/24/2023	152/151	AU	0905	0910	30	30	0	P	TOS TO R650
8/24/2023	151/150	AU	0915	0920	30	28	2	P	TOS TO EOS
8/24/2023	150/149	AU	0925	0930	30	28	2	P	TOS TO R645
8/24/2023	149/148	AU	0938	0943	30	27	3	P	TOS TO EOS
8/24/2023	148/147	AU	0946	0951	30	28	2	P	TOS TO R637
8/24/2023	147/146	AU	0951	0956	30	28	2	P	TOS TO EOS
8/24/2023	146/145	AU	1001	1006	30	29	1	P	TOS TO R631
8/24/2023	145/144	AU	1007	1012	30	29	1	P	TOS TO R626
8/24/2023	143/142	AU	1028	1033	30	28	2	P	TOS TO R617
8/24/2023	142/139	AU	1058	1103	30	28	2	P	TOS TO R615
8/24/2023	140/139	AU	1112	1117	30	29	1	P	TOS TO EOS
8/24/2023	141/139	AU	1115	1120	30	29	1	P	TOS TO EOS
8/24/2023	139/138	AU	1127	1132	30	29	1	P	TOS TO R611
8/24/2023	138/136	AU	1143	1148	30	27	3	P	TOS TO R604
8/24/2023	136/135	AU	1143	1148	30	29	1	P	TOS TO EOS
8/24/2023	135/133	AU	1143	1148	30	28	2	P	TOS TO EOS
8/24/2023	135/134	AU	1155	1200	30	30	0	P	EOS TO EOS
8/24/2023	134/133	AU	1155	1200	30	29	1	P	TOS TO R592
8/24/2023	134/133	AU	1318	1323	30	30	0	P	R592 TO EOS
8/24/2023	134/132	AU	1318	1323	30	30	0	P	TOS TO EOS
7/21/2023	133/132	KD	1150	1155	30	30	0	P	EOS TO R590
7/21/2023	133/132	KD	1150	1155	30	30	0	P	R590 TO EOS
8/24/2023	136/134	AU	1306	1311	30	28	2	P	TOS TO R597
8/24/2023	136/134	AU	1321	1326	30	29	1	P	R597 TO R601
8/24/2023	136/134	AU	1321	1326	30	30	0	P	R601 TO EOS
8/24/2023	144/143	AU	1414	1419	30	30	0	P	TOS TO R679
8/24/2023	138/139	AU	1441	1446	30	28	2	P	R611 TO EOS
8/24/2023	138/136	AU	1441	1446	30	29	1	P	R604 TO EOS

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
8/24/2023	142/139	AU	1441	1446	30	28	2	P	R615 TO R613
7/21/2023	104/131	KD	1140	1145	30	30	0	P	EOS TO EOS
7/21/2023	114/131	KD	1140	1145	30	30	0	P	EOS TO EOS
7/21/2023	129/131	KD	1150	1155	30	30	0	P	TOS TO EOS
7/21/2023	130/131	KD	1305	1310	30	29	1	P	EOS TO EOS
7/21/2023	129/130	KD	1305	1310	30	30	0	P	TOS TO R476
7/21/2023	129/130	KD	1310	1315	30	28	2	P	R476 TO EOS
7/21/2023	131/133	KD	1150	1155	30	30	0	P	TOS TO EOS
7/21/2023	131/132	KD	1300	1305	30	30	0	P	TOS TO R484
7/21/2023	131/132	KD	1300	1305	30	30	0	P	R484 TO R485
7/21/2023	131/132	KD	1300	1305	30	30	0	P	R485 TO R486
7/21/2023	131/132	KD	1300	1305	30	30	0	P	R487 TO EOS
7/21/2023	130/132	KD	1310	1315	30	30	0	P	TOS TO R489
7/21/2023	130/132	KD	1310	1315	30	29	1	P	R489 TO EOS
8/29/2023	136/137	AU	0741	0746	30	30	0	P	TOS TO EOS
8/29/2023	138/137	AU	0741	0746	30	30	0	P	EOS TO EOS
8/29/2023	139/137	AU	0741	0746	30	30	0	P	TOS TO EOS
8/29/2023	142/143	AU	1458	1503	30	29	1	P	R617 TO R618
8/29/2023	142/139	AU	0821	0826	30	29	1	P	R613 TO EOS
8/29/2023	142/143	AU	0837	0842	30	29	1	P	R618 TO R619
8/29/2023	142/143	AU	0837	0842	30	29	1	P	R619 TO R620
8/29/2023	142/143	AU	0824	0829	30	30	0	P	R620 TO R621
8/29/2023	142/143	AU	0821	0826	30	30	0	P	R621 TO EOS
8/29/2023	143/144	AU	0909	0914	30	28	2	P	R623 TO R622
8/29/2023	143/144	AU	0909	0914	30	29	1	P	R622 TO EOS
8/29/2023	144/145	AU	0946	0951	30	30	0	P	R626 TO R627
8/29/2023	144/145	AU	1015	1020	30	28	2	P	R627 TO R628
8/29/2023	144/145	AU	1023	1028	30	30	0	P	R628 TO R629
8/29/2023	144/145	AU	0849	0854	30	30	0	P	R629 TO R630
8/29/2023	145/146	AU	1035	1040	30	29	1	P	R630 TO EOS

NON-DESTRUCTIVE SEAM TEST LOG									
PROJECT: Dolby Phase 3 Cover Upgrade			QUALITY ASSURANCE MONITOR: TJM						MATERIAL: 40 mil HDPE
DATE	PANEL NUMBERS	TESTER INITIALS	AIR TESTING					PASS/FAIL	COMMENTS
			TIME		PRESSURE (PSI)				
			START	END	START	END	DROP		
8/29/2023	147/148	AU	1057	1102	30	30	0	P	R638 TO R637
8/29/2023	147/148	AU	1057	1102	30	28	2	P	R637 TO EOS
8/29/2023	149/150	AU	1118	1123	30	30	0	P	R645 TO R644
8/29/2023	149/150	AU	1118	1123	30	28	2	P	R644 TO R643
8/29/2023	149/150	AU	1118	1123	30	29	1	P	R643 TO EOS
8/29/2023	151/152	AU	1142	1147	30	28	2	P	R650 TO EOS
8/29/2023	153/154	AU	1307	1312	30	29	1	P	R654 TO EOS
8/29/2023	154/155	AU	1307	1312	30	29	1	P	R658 TO R659
8/29/2023	155/156	AU	1335	1340	30	28	2	P	R662 TO R661
8/29/2023	155/156	AU	1335	1340	30	28	2	P	R661 TO EOS
8/29/2023	156/158	AU	1354	1359	30	27	3	P	TOS TO EOS
8/29/2023	157/158	AU	1354	1359	30	28	2	P	EOS TO EOS
8/29/2023	157/160	AU	1415	1420	30	30	0	P	R670 TO EOS
8/29/2023	157/159	AU	1415	1420	30	28	2	P	TOS TO EOS
8/29/2023	154/155	AU	1430	1435	30	29	1	P	R659 TO EOS
8/29/2023	152/153	AU	1440	1445	30	30	0	P	R655 TO EOS

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
6/14/2023	1430	1	6/8/PHASE 1	159 FEET UP FROM AT	3X2	JK	X13	6/26/2023	P	DM	TIE IN
6/14/2023	1437	2	6/7/8	150 FEET UP FROM AT	3X3	JK	X13	6/16/2023	P	DM	-
6/14/2023	1343	3	6/7	150 FEET UP FROM AT	3.5X1	CS	X9	6/16/2023	P	DM	MID SEAM
6/14/2023	1114	4	7/8	55 FEET UP FROM AT	2X1.5	CS	X9	6/22/2023	P	DM	-
6/14/2023	1006	5	3/7	29 FEET UP FROM AT	8X6	CS	X9	6/26/2023	P	DM	CB#2
6/14/2023	1411	6	6/PHASE 1	186 FEET UP FROM AT	3X1	JK	X13	6/26/2023	P	DM	4' OVER FROM TOP P-5
6/14/2023	1347	7	5/6	180 FEET UP FROM AT	2X2	JK	X13	6/16/2013	P	DM	-
6/14/2023	1340	8	6/7	154 FEET UP FROM AT	2X1	CS	X9	6/16/2023	P	DM	2' OVER FROM R-9
6/14/2023	1335	9	5/6/7	154 FEET UP FROM AT	3X1	CS	X9	6/16/2023	P	DM	-
6/14/2023	1221	10	5/7	110 FEET UP FROM AT	2X1	CS	X9	6/22/2023	P	DM	-
6/14/2023	1318	11	5/7	94 FEET UP FROM AT	4X2	CS	X9	6/22/2023	P	DM	-
6/14/2023	1105	12	5/7	70 FEET UP FROM AT	4X2	CS	X9	6/22/2023	P	DM	-
6/14/2023	1050	13	5/7	45 FEET UP FROM AT	2.5X1	CS	X9	6/26/2023	P	DM	-
6/14/2023	1019	14	5/7	8 FEET UP FROM AT	2X1.5	CS	X9	6/26/2023	P	DM	-
6/15/2023	0840	15	4/5	106 FEET UP FROM AT	4.5X1.5	JK	X13	6/26/2023	P	DM	DT-1
6/14/2023	1236	16	4/5	48 FEET UP FROM AT	3.5X1	CS	X9	6/26/2023	P	DM	-
6/14/2023	1440	17	2/4/5	44 FEET UP FROM AT	1' CIRCLE	CS	X9	6/22/2023	P	DM	-
6/14/2023	1526	18	1/2	0 FEET UP FROM AT	5X1.5	CS	X9	6/22/2023	P	DM	-
6/14/2023	1504	19	1/2	8 FEET UP FROM AT	1.5X1	CS	X9	6/22/2023	P	DM	-
6/14/2023	1504	20	1/2	10 FEET UP FROM AT	1X1	CS	X9	6/22/2023	P	DM	-
6/14/2023	1451	21	1/2/4	41 FEET UP FROM AT	1.5X1	CS	X9	6/22/2023	P	DM	-
6/14/2023	1309	22	1/4/PHASE 1	225 FEET UP FROM AT	7X13	JK	X13	6/16/2023	P	DM	-
6/14/2023	1039	23	1/10	283 FEET UP FROM AT	1.5X1	JK	X13	6/16/2023	P	DM	-
6/14/2023	1000	24	1/10	241 FEET UP FROM AT	1.5X1.5	AB	X3	6/16/2023	P	DM	-
6/14/2023	0940	25	1/10	206 FEET UP FROM AT	5X5	AB	X3	6/16/2023	P	DM	GV DMH D3-#5
6/15/2023	0905	26	1/10	180 FEET UP FROM AT	4X2	JK	X13	6/16/2023	P	DM	DT-2
6/14/2023	1710	27	1/9/10	122 FEET UP FROM AT	2.5X1.5	CS	X9	6/22/2023	P	DM	-
6/14/2023	1541	28	1/9	9 FEET UP FROM AT	2X1.5	CS	X9	6/22/2023	P	DM	-
6/14/2023	1546	29	9/11	5 FEET UP FROM AT	1' CIRCLE	CS	X9	6/22/2023	P	DM	-
6/14/2023	1546	30	9	5 FEET UP FROM AT	1' CIRCLE	CS	X9	6/22/2023	P	DM	1' OVER FROM R29
6/14/2023	1604	31	9/11	12 FEET UP FROM AT	1.5' CIRCLE	CS	X9	6/22/2023	P	DM	-
6/14/2023	1604	32	9/11	15 FEET UP FROM AT	1' CIRCLE	CS	X9	6/22/2023	P	DM	-
6/14/2023	1721	33	9/10/11	118 FEET UP FROM AT	2X1.5	CS	X9	6/16/2023	P	DM	-
6/14/2023	1713	34	9/10	118 FEET UP FROM AT	1.5X1	CS	X9	6/16/2023	P	DM	2' TO N OF R33

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
6/14/2023	1721	35	10	123 FEET UP FROM AT	1.5X1	CS	X9	6/16/2023	P	DM	1' N OF P-10/11 SEAM
6/14/2023	1100	36	10/11/12	177 FEET UP FROM AT	1.5' CIRCLE	AB	X3	6/16/2023	P	DM	-
-	-	37	-	COVERED BY PANEL OVERLAP	-	-	-	-	-	-	-
6/14/2023	1015	38	12/13/14	198 FEET UP FROM AT	5.5X4	AB	X3	6/16/2023	P	DM	-
6/14/2023	1105	39	11/12/13	174 FEET UP FROM AT	3.5X2	AB	X3	6/16/2023	P	DM	-
6/15/2023	0915	40	11/13	74 FEET UP FROM AT	4X1.5	JK	X13	6/22/2023	P	DM	DT-3
6/14/2023	1730	41	11/13	6 FEET UP FROM AT	1.5X1	CS	X9	6/22/2023	P	DM	-
6/14/2023	1742	42	13/15	0 FEET UP FROM AT	5X1	CS	X9	6/22/2023	P	DM	at AT
6/14/2023	1725	43	13/15	40 FEET UP FROM AT	1' CIRCLE	CS	X9	6/22/2023	P	DM	-
6/14/2023	1050	44	13/14/15	197 FEET UP FROM AT	9X4	AB	X3	6/16/2023	P	DM	-
6/14/2023	1130	45	14/15/16	234 FEET UP FROM AT	3X2.5	AB	X3	6/16/2023	P	DM	-
6/15/2023	0835	46	16/18	335 FEET UP FROM AT	4.5X2	AB	X9	6/16/2023	P	DM	DT-4
6/14/2023	1305	47	16/17/18	282 FEET UP FROM AT	3X2	AB	X3	6/16/2023	P	DM	-
6/14/2023	1310	48	17/18	282 FEET UP FROM AT	2.5X2	AB	X3	6/16/2023	P	DM	MID SEAM
6/14/2023	1300	49	15/16/17	231 FEET UP FROM AT	3X2	AB	X3	6/16/2023	P	DM	-
6/14/2023	1752	50	17/19	4 FEET UP FROM AT	1' CIRCLE	CS	X9	6/27/2023	P	DM	-
6/14/2023	1756	51	17	8 FEET UP FROM AT	1' CIRCLE	CS	X9	6/27/2023	P	DM	1' OVER TO NORTH
6/14/2023	1756	52	17	8 FEET UP FROM AT	1' CIRCLE	CS	X9	6/27/2023	P	DM	1' OVER FROM R51
6/14/2023	1315	53	17/18/19	282 FEET UP FROM AT	3X1.5	AB	X3	6/16/2023	P	DM	-
6/14/2023	1320	54	18/19	289 FEET UP FROM AT	2.5X1.5	AB	X3	6/16/2023	P	DM	-
6/14/2023	1345	55	18/19/29	335 FEET UP FROM AT	1.5X1.5	AB	X3	6/16/2023	P	DM	-
6/14/2023	1400	56	18/20	343 FEET UP FROM AT	11X5	AB	X3	6/16/2023	P	DM	GV
6/14/2023	1415	57	19/20/21	336 FEET UP FROM AT	1.5X1.5	AB	X3	6/16/2023	P	DM	-
6/15/2023	0930	58	19/21	164 FEET UP FROM AT	4X2	JK	X13	6/26/2023	P	DM	DT-5
6/15/2023	1657	59	19/21	21 FEET UP FROM AT	18X11	JK	X13	6/27/2023	P	DM	CB-#3
6/15/2023	1643	60	21/22/23	34 FEET UP FROM AT	6.5X2.5	JK	X13	6/27/2023	P	DM	-
6/14/2023	1440	61	21/23	295 FEET UP FROM AT	2.5X1.5	AB	X3	6/16/2023	P	DM	-
6/15/2023	0830	62	23/25	275 FEET UP FROM AT	5X2	AB	X9	6/16/2023	P	DM	DT-6
6/15/2023	0940	63	23/25	151 FEET UP FROM AT	1' CIRCLE	JK	X13	6/27/2023	P	DM	-
6/15/2023	1009	64	23/24/25	87 FEET UP FROM AT	1.5X1	JK	X13	6/27/2023	P	DM	-
6/15/2023	1107	65	22/23/24	35 FEET UP FROM AT	1.5X1.5	JK	X13	6/27/2023	P	DM	-
6/15/2023	1025	66	24/26	78 FEET UP FROM AT	1.5X1	JK	X13	6/27/2023	P	DM	-
6/15/2023	1020	67	24/25/26	88 FEET UP FROM AT	1.5X1	JK	X13	6/27/2023	P	DM	-
6/15/2023	1014	68	24/25	88 FEET UP FROM AT	3X1	JK	X13	6/27/2023	P	DM	4' TO N OF R67

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
6/15/2023	1003	69	25	93 FEET UP FROM AT	1x1	JK	X13	6/27/2023	P	DM	5' UP FROM BSEAM MID PANEL
6/15/2023	1000	70	25	98 FEET UP FROM AT	1.5x1	JK	X13	6/27/2023	P	DM	5' UP FROM R69
6/15/2023	0957	71	25	103 FEET UP FROM AT	1' CIRCLE	JK	X13	6/27/2023	P	DM	5' UP FROM R70
6/15/2023	0949	72	25/26/27	137 FEET UP FROM AT	2X1	JK	X13	6/27/2023	P	DM	-
6/14/2023	1530	73	25/27	192 FEET UP FROM AT	4X2	AB	X3	6/27/2023	P	DM	-
6/14/2023	1500	74	25	196 FEET UP FROM AT	7X5	AB	X3	6/27/2023	P	DM	GV 8' N OF 25/27 SEAM
6/14/2023	1420	75	25/27	318 FEET UP FROM AT	3X1.5	AB	X3	6/16/2023	P	DM	-
6/14/2023	1605	76	27/29	314 FEET UP FROM AT	2.5X2	AB	X3	6/16/2023	P	DM	-
6/15/2023	0825	77	27/29	285 FEET UP FROM AT	4.5X2	AB	X9	6/16/2023	P	DM	DT-7
6/14/2023	1517	78	27/29	254 FEET UP FROM AT	3.5X1.5	AB	X3	6/27/2023	P	DM	-
6/15/2023	1452	79	27/28/29	170 FEET UP FROM AT	3X2.5	JK	X13	6/27/2023	P	DM	-
6/15/2023	1446	80	26/27/28	138 FEET UP FROM AT	1.5X1.5	JK	X13	6/27/2023	P	DM	-
6/15/2023	1346	81	26/28	0 FEET UP FROM AT	2X1	JK	X13	6/27/2023	P	DM	-
6/14/2023	1640	82	28/29/30	169 FEET UP FROM AT	2X2	AB	X3	6/27/2023	P	DM	-
6/14/2023	1600	83	29/30/31	206 FEET UP FROM AT	3X2	AB	X3	6/27/2023	P	DM	-
6/14/2023	1555	84	29/31	210 FEET UP FROM AT	1.5X1.5	AB	X3	6/16/2023	P	DM	-
6/14/2023	1540	85	29/31	218 FEET UP FROM AT	1.5X1.5	AB	X3	6/16/2023	P	DM	-
6/14/2023	1530	86	29/31	274 FEET UP FROM AT	1.5X1.5	AB	X3	6/16/2023	P	DM	-
6/14/2023	1608	87	31/32/33	239 FEET UP FROM AT	2.5X1.5	AB	X3	6/16/2023	P	DM	-
6/14/2023	1610	88	30/31/32	203 FEET UP FROM AT	3.5X2	AB	X3	6/27/2023	P	DM	-
6/14/2023	1619	89	30/32	14 FEET UP FROM AT	1.5X1	CS	X9	6/27/2023	P	DM	-
6/13/2023	1900	90	30/32	9 FEET UP FROM AT	1X1	TP	X9	6/27/2023	P	DM	-
6/14/2023	1614	91	30/32	1 FEET UP FROM AT	1.5X1	CS	X9	6/27/2023	P	DM	-
6/14/2023	1645	92	32/34	8 FEET UP FROM AT	2X1.5	CS	X9	6/27/2023	P	DM	-
6/13/2023	1900	93	32	13 FEET UP FROM AT	8X8	TP	X9	6/27/2023	P	DM	CB-2C
6/15/2023	1408	94	32/34	29 FEET UP FROM AT	5X1.5	JK	X13	6/27/2023	P	DM	DT-8
6/15/2023	1410	95	32/34	80 FEET UP FROM AT	3.5X1.5	JK	X13	6/27/2023	P	DM	-
6/15/2023	1414	96	32/34	98 FEET UP FROM AT	1.5X1	JK	X13	6/27/2023	P	DM	-
6/15/2023	1426	97	32/34	110 FEET UP FROM AT	1.5X1	JK	X13	6/27/2023	P	DM	-
6/15/2023	1437	98	32/34	124 FEET UP FROM AT	2.5X1.5	JK	X13	6/27/2023	P	DM	-
6/15/2023	1340	99	32/34	164 FEET UP FROM AT	2X1.5	AB	X9	6/27/2023	P	DM	-
6/15/2023	0940	100	33/34/35	278 FEET UP FROM AT	2X2	AB	X9	6/27/2023	P	DM	-
6/15/2023	0940	101	34/35	278 FEET UP FROM AT	2.5X1.5	AB	X9	6/16/2023	P	DM	3' S OF R100
6/15/2023	0950	102	33/35	288 FEET UP FROM AT	3.5X1.5	AB	X9	6/16/2023	P	DM	-
6/16/2023	1151	103	33/35	371 FEET UP FROM AT	5X4	JK	X13	6/16/2023	P	DM	GV

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
6/15/2023	0910	104	35/51/53	357 FEET UP FROM AT	2.5X1	AB	X9	6/16/2023	P	DM	-
6/15/2023	0840	105	35/51	350 FEET UP FROM AT	3.5X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	0845	106	35/50/51	327 FEET UP FROM AT	1.5X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1220	107	35/50	305 FEET UP FROM AT	3X1.5	AB	X9	6/16/2023	P	DM	MID SEAM
6/15/2023	0920	108	35/48/50	295 FEET UP FROM AT	2X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	0925	109	35/48	283 FEET UP FROM AT	2.5X1.5	AB	X9	6/16/2023	P	DM	MID SEAM
6/15/2023	0940	110	34/35	272 FEET UP FROM AT	2.5X1.5	AB	X9	6/16/2023	P	DM	MID SEAM
6/15/2023	0940	111	35	272 FEET UP FROM AT	1X1	AB	X9	6/16/2023	P	DM	2' N OF R112
6/15/2023	0927	112	34/35/48	272 FEET UP FROM AT	2.5X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1000	113	34/46/48	265 FEET UP FROM AT	1.5X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1815	114	34/45/46	235 FEET UP FROM AT	3.5X3	AB	X9	6/16/2023	P	DM	-
6/15/2023	1815	115	34/45	232 FEET UP FROM AT	2X1.5	AB	X9	6/16/2023	P	DM	1' DOWN TO W OF R114
6/15/2023	1040	116	34/43/45	205 FEET UP FROM AT	1.5X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1040	117	34/43	200 FEET UP FROM AT	3X2	AB	X9	6/16/2023	P	DM	1' DOWN TO W OF R116
6/15/2023	1045	118	34/43	186 FEET UP FROM AT	3.5X1.5	AB	X9	6/27/2023	P	DM	MID SEAM
6/15/2023	1130	119	34/36/43	174 FEET UP FROM AT	1.5X1.5	AB	X9	6/27/2023	P	DM	-
6/15/2023	1330	120	34/36/38	141 FEET UP FROM AT	4.5' CIRCLE	AB	X9	6/27/2023	P	DM	-
6/15/2023	1330	121	34/38	132 FEET UP FROM AT	8X2	AB	X9	6/27/2023	P	DM	MID SEAM
6/15/2023	1330	122	34/38	122 FEET UP FROM AT	2.5X1	AB	X9	6/27/2023	P	DM	5' DOWN TO W OF R121
6/15/2023	1330	123	34/38/39	113 FEET UP FROM AT	1.5' CIRCLE	AB	X9	6/27/2023	P	DM	-
6/15/2023	1732	124	34/39/40	82 FEET UP FROM AT	1.5' CIRCLE	JK	X13	6/27/2023	P	DM	-
6/15/2023	1727	125	34/40	75 FEET UP FROM AT	1.5X1	JK	X13	6/27/2023	P	DM	-
6/15/2023	1516	126	34/40/41	51 FEET UP FROM AT	4X1	JK	X13	6/27/2023	P	DM	-
6/15/2023	1522	127	34/40/41	49 FEET UP FROM AT	2X1.5	JK	X13	6/27/2023	P	DM	-
6/15/2023	1537	128	34/41	33 FEET UP FROM AT	5X4	JK	X13	6/27/2023	P	DM	GV
6/16/2023	0739	129	41/42	9 FEET UP FROM AT	1' CIRCLE	JK	X13	6/27/2023	P	DM	-
6/16/2023	0754	130	40/42	0 FEET UP FROM AT	2X1.5	JK	X13	6/27/2023	P	DM	-
6/15/2023	1720	131	40/41/42	23 FEET UP FROM AT	2X1.5	JK	X13	6/27/2023	P	DM	-
6/16/2023	0800	132	37/38/39	82 FEET UP FROM AT	2X1.5	JK	X13	6/27/2023	P	DM	-
6/15/2023	1744	133	36/38	103 FEET UP FROM AT	35X3	JK	X13	6/27/2023	P	DM	DT-9
6/16/2023	0808	134	37/38	95 FEET UP FROM AT	2.5X2.5	JK	X13	6/27/2023	P	DM	MID SEAM
6/16/2023	0810	135	36/37/38	95 FEET UP FROM AT	1X1	JK	X13	6/27/2023	P	DM	-
6/16/2023	0813	136	36/37/38	95 FEET UP FROM AT	1X1	JK	X13	6/27/2023	P	DM	-
6/16/2023	0817	137	36/37	91 FEET UP FROM AT	1' CIRCLE	JK	X13	6/27/2023	P	DM	-

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
6/16/2023	0819	138	36/37	84 FEET UP FROM AT	1' CIRCLE	JK	X13	6/27/2023	P	DM	-
6/16/2023	0828	139	36/37	72 FEET UP FROM AT	1X1	JK	X13	6/27/2023	P	DM	-
6/16/2023	0837	140	36/37	57 FEET UP FROM AT	3X1	JK	X13	6/27/2023	P	DM	-
6/16/2023	0920	141	36/37	32 FEET UP FROM AT	2.5X1	JK	X13	6/27/2023	P	DM	-
6/16/2023	0924	142	36/37	10 FEET UP FROM AT	2X1	JK	X13	6/27/2023	P	DM	-
6/15/2023	1050	143	43/44/45	186 FEET UP FROM AT	2.5X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1100	144	44/45	186 FEET UP FROM AT	3.5X2	AB	X9	6/16/2023	P	DM	MID SEAM
6/15/2023	1100	145	44/45	186 FEET UP FROM AT	1.5X1.5	AB	X9	6/16/2023	P	DM	MID SEAM
6/16/2023	0945	146	43/44	58 FEET UP FROM AT	1.5X1	KP	X9	6/27/2023	P	DM	-
6/15/2023	1005	147	44/45	186 FEET UP FROM AT	2X1.5	AB	X9	6/16/2023	P	DM	2' N OF R148
6/15/2023	1005	148	44/45/46	186 FEET UP FROM AT	2X2	AB	X9	6/16/2023	P	DM	-
6/15/2023	1115	149	46/48	186 FEET UP FROM AT	4X5	AB	X9	6/16/2023	P	DM	GV
6/16/2023	0934	150	46/47/48	122 FEET UP FROM AT	2X1	KP	X9	6/27/2023	P	DM	-
6/16/2023	0906	151	46/47	26 FEET UP FROM AT	4.5X2	KP	X9	6/27/2023	P	DM	DT-10
6/16/2023	0925	152	47/48/49	123 FEET UP FROM AT	2X1	KP	X9	6/27/2023	P	DM	-
6/15/2023	0955	153	48/49/50	256 FEET UP FROM AT	2.5X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1400	154	49/50/51	256 FEET UP FROM AT	1.5X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1530	155	49/51	143 FEET UP FROM AT	2X1.5	AB	X9	6/27/2023	P	DM	-
6/15/2023	1535	156	49/51	132 FEET UP FROM AT	1.5X1.5	AB	X9	6/27/2023	P	DM	-
6/15/2023	1537	157	49/51	125 FEET UP FROM AT	1.5X1	AB	X9	6/27/2023	P	DM	-
6/28/2023	1000	158	51/52	38 FEET UP FROM AT	2.5X1.5	AB	X9	6/28/2023	P	DM	CB#5
6/28/2023	1000	159	51/52	33 FEET UP FROM AT	20X2	AB	X9	6/28/2023	P	DM	CB#5
6/16/2023	0849	160	51/52	50 FEET UP FROM AT	1' CIRCLE	KP	X9	6/27/2023	P	DM	-
6/15/2023	1638	161	51/52	75 FEET UP FROM AT	2X1.5	AB	X9	6/27/2023	P	DM	-
6/15/2023	1623	162	51/52	96 FEET UP FROM AT	1X1	AB	X9	6/27/2023	P	DM	-
6/15/2023	1619	163	51/52/53	98 FEET UP FROM AT	4.5X1.5	AB	X9	6/27/2023	P	DM	-
6/15/2023	1602	164	53	102 FEET UP FROM AT	1X1	AB	X9	6/27/2023	P	DM	3' UP FROM P-52 MID PANEL
6/15/2023	1601	165	53	104 FEET UP FROM AT	1X1	AB	X9	6/27/2023	P	DM	5' UP FROM P-52 MID PANEL
6/15/2023	1558	166	53	107 FEET UP FROM AT	1X1	AB	X9	6/27/2023	P	DM	8' UP FROM P-52 MID PANEL
6/15/2023	1420	167	53/55	289 FEET UP FROM AT	4X2	AB	X9	6/16/2023	P	DM	DT-11
6/15/2023	1525	168	53/54/55	185 FEET UP FROM AT	2X1.5	AB	X9	6/27/2023	P	DM	-
6/15/2023	1525	169	54/55	185 FEET UP FROM AT	2X1.5	AB	X9	6/27/2023	P	DM	1' S OF R168
6/16/2023	1700	170	53/54	124 FEET UP FROM AT	2X3	JK	X13	6/27/2023	P	DM	-
6/15/2023	1608	171	52/53/54	98 FEET UP FROM AT	3.5X1.5	AB	X9	6/27/2023	P	DM	-

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
6/16/2023	0841	172	52/54	12 FEET UP FROM AT	1.5X1	KP	X9	6/27/2023	P	DM	-
6/16/2023	0838	173	52/54	0 FEET UP FROM AT	4X2	KP	X9	6/27/2023	P	DM	-
6/16/2023	0807	174	54/56	5 FEET UP FROM AT	1.5X1	KP	X9	6/27/2023	P	DM	-
6/16/2023	0811	175	54/56	31 FEET UP FROM AT	1X1	KP	X9	6/27/2023	P	DM	-
6/15/2023	1516	176	54/56	160 FEET UP FROM AT	1.5X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1318	177	54/55/56	178 FEET UP FROM AT	2.5X1.5	AB	X9	6/16/2023	P	DM	-
-	-	178	-	COVERED BY PANEL OVERLAP	-	-	-	-	-	-	-
6/15/2023	1508	179	57/58/59	123 FEET UP FROM AT	3.5X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1515	180	57/59	153 FEET UP FROM AT	5X2.5	AB	X9	6/16/2023	P	DM	DT-12
6/15/2023	1430	181	59/60/61	253 FEET UP FROM AT	2X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1435	182	60/61	253 FEET UP FROM AT	2X1.5	AB	X9	6/16/2023	P	DM	BSEAM MID SEAM
6/15/2023	1500	183	58/59/60	121 FEET UP FROM AT	1.5X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1505	184	58/60	104 FEET UP FROM AT	1.5X1.5	AB	X9	6/27/2023	P	DM	-
6/15/2023	1738	185	58/60	30 FEET UP FROM AT	6X5	AB	X9	6/27/2023	P	DM	GV
6/16/2023	0738	186	58/60	11 FEET UP FROM AT	1' CIRCLE	KP	X9	6/27/2023	P	DM	-
6/16/2023	0744	187	58/60	0 FEET UP FROM AT	1.5X1.5	KP	X9	6/27/2023	P	DM	-
6/16/2023	0750	188	60/62	0 FEET UP FROM AT	2.5X1.5	KP	X9	6/27/2023	P	DM	-
6/15/2023	1430	189	60/62	172 FEET UP FROM AT	2X1.5	AB	X9	6/16/2023	P	DM	-
6/15/2023	1442	190	60/61/62	249 FEET UP FROM AT	1.5X1.5	AB	X9	6/16/2023	P	DM	-
6/14/2023	1008	191	32/33/34	236 FEET UP FROM AT	2X1.5	AB	X9	6/16/2023	P	DM	-
6/19/2023	1447	192	21/23/25/27	357 FEET UP FROM AT	92X2.5	JK	X13	6/21/2023	P	DM	START 12' N OF 21/23 TOP 21
6/19/2023	1843	193	27/28/29	166 FEET UP FROM AT	155X2.5	JK	X13	6/20/2023	P	DM	-
6/19/2023	1530	194	21	357 FEET UP FROM AT	7X2	JK	X13	6/20/2023	P	DM	-
6/20/2023	1334	195	27	25' UP FROM R73	16X3	JK	X13	6/20/2023	P	DM	-
6/20/2023	1447	196	53	310 FEET UP FROM AT DOWN TO R197	113X2	KP	X9	6/21/2023	P	DM	MID PANEL
6/20/2023	1400	197	49/51/53/55	12' UP FROM 54/55 BSEAM	68X3	KP	X9	6/21/2023	P	DM	-
6/20/2023	1125	198	29/30/32	1' DOWN FROM R88 TO 14' DOWN FROM R86	65X2	JK	X13	6/21/2023	P	DM	-
6/21/2023	1322	199	36/37/38	START IS END OF R200	81X3	JK	X13	6/21/2023	P	DM	-
6/21/2023	1014	200	36/43/44/46/49/51/53/54	42.5' DOWN FROM R149	187X3	JK	X13	6/21/2023	P	DM	-
6/20/2023	0914	201	51/52/53	START AT CB-#5	119X2	KP	X9	6/21/2023	P	DM	5.5 ' S OF 53/54 SEAM
6/21/2023	1720	202	54	START IS 12' UP FROM 54/55 BSEAM	80X2	KP	X9	6/21/2023	P	DM	-
6/20/2023	1752	203	31	1' UP FROM 30/31 BSEAM	1X1	JK	X13	6/20/2023	P	DM	MID PANEL
6/21/2023	1615	204	21/23	TOP 21/23	36X2	KP	X9	6/21/2023	P	DM	-
6/22/2023	1722	205	27/29	190 FEET UP FROM AT	190X3	JK	X13	6/22/2023	P	DM	-
6/22/2023	0814	206	28/30	50 FEET UP FROM AT	22X3	KP	X9	6/22/2023	P	DM	-

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
6/22/2023	0754	207	32	114 FEET UP FROM AT	16X3	KP	X9	6/22/2023	P	DM	-
6/21/2023	1630	208	32	16 FEET UP FROM AT	32X30	JK	X13	6/22/2023	P	DM	-
6/22/2023	0900	209	22/21	25 FEET UP FROM AT	25X3	JK	X13	6/22/2023	P	DM	-
6/22/2023	0820	210	11/13	33 FEET UP FROM AT	33X3	JK	X13	6/22/2023	P	DM	-
6/22/2023	1008	211	43	12 FEET UP FROM AT	2X2	JK	X13	6/22/2023	P	DM	-
6/24/2023	0949	212	90/91	0 FEET UP FROM EDGE WS	1.5X1.5	JK	X13	6/28/2023	P	DM	-
6/27/2023	1515	213	91/92	4 FEET UP FROM EDGE WS	5X10	RF	X4	6/28/2023	P	DM	-
6/24/2023	1000	214	64/90	0 FEET UP FROM EDGE WS	3X2.5	JK	X13	6/28/2023	P	DM	-
6/27/2023	1350	215	64/66/90	38 FEET UP FROM EDGE WS	5.5X1.5	RF	X4	6/28/2023	P	DM	-
6/24/2023	0915	216	90/PH1	34 FEET UP FROM EDGE WS	2X1.5	JK	X13	6/28/2023	P	DM	-
6/27/2023	1400	217	66/90	38 FEET UP FROM EDGE WS	6.5X2	RF	X4	6/28/2023	P	DM	-
6/27/2023	1512	218	64/66	42 FEET UP FROM EDGE WS	1.5X1	JK	X13	6/28/2023	P	DM	-
6/27/2023	1120	219	66/PH1	91 FEET UP FROM EDGE WS	4.5X2	JK	X13	6/28/2023	P	DM	DT-19
6/27/2023	1402	220	66/PH1	156 FEET UP FROM EDGE WS	1.5X1.5	JK	X13	6/28/2023	P	DM	-
6/27/2023	1408	221	66/67/PH1	164 FEET UP FROM EDGE WS	1X1	JK	X13	6/28/2023	P	DM	-
6/27/2023	1354	222	64/65/66	148 FEET UP FROM EDGE WS	2.5X1.5	JK	X13	6/28/2023	P	DM	-
6/27/2023	1345	223	64/65	148 FEET UP FROM EDGE WS	1.5X1	JK	X13	6/28/2023	P	DM	-
6/27/2023	1340	224	64/65	148 FEET UP FROM EDGE WS	2.5X2	JK	X13	6/28/2023	P	DM	-
6/27/2023	1336	225	63/64/65	148 FEET UP FROM EDGE WS	2X1.5	JK	X13	6/28/2023	P	DM	-
6/27/2023	1128	226	63/65	207 FEET UP FROM EDGE WS	2X1.5	JK	X13	6/28/2023	P	DM	-
6/27/2023	1422	227	63/69	232 FEET UP FROM EDGE WS	1.5X1.5	JK	X13	6/28/2023	P	DM	-
6/27/2023	1432	228	63/69	217 FEET UP FROM EDGE WS	2.5X2	JK	X13	6/28/2023	P	DM	-
6/27/2023	1453	229	63/68/69	162 FEET UP FROM EDGE WS	2X1.5	JK	X13	6/28/2023	P	DM	-
6/27/2023	1457	230	68/69	162 FEET UP FROM EDGE WS	1.5X1.5	JK	X13	6/28/2023	P	DM	BSEAM MID
6/24/2023	1000	231	63/68	0 FEET UP FROM EDGE WS	2X1.5	JK	X13	6/28/2023	P	DM	-
6/24/2023	1057	232	68/70	0 FEET UP FROM EDGE WS	2X2	JK	X13	6/28/2023	P	DM	-
6/27/2023	1530	233	68/70	7 FEET UP FROM EDGE WS	4X1	RF	X4	6/28/2023	P	DM	-
6/27/2023	1509	234	68/70	111 FEET UP FROM EDGE WS	2X2	JK	X13	6/28/2023	P	DM	-
6/27/2023	1505	235	68/70	142 FEET UP FROM EDGE WS	2X1.5	JK	X13	6/28/2023	P	DM	-
6/27/2023	1500	236	68/69/70	175 FEET UP FROM EDGE WS	1.5X1.5	JK	X13	6/28/2023	P	DM	-
6/27/2023	1132	237	70/72	207 FEET UP FROM EDGE WS	4X2	JK	X13	6/28/2023	P	DM	DT-15
6/27/2023	1143	238	70/72	60 FEET UP FROM EDGE WS	1.5X1	JK	X13	6/28/2023	P	DM	-
6/27/2023	1146	239	70/71/72	74 FEET UP FROM EDGE WS	2.5X2.5	JK	X13	6/29/2023	P	DM	-
6/28/2023	0835	240	70/71	16 FEET UP FROM EDGE WS	1.5X1.5	RF	X4	6/29/2023	P	DM	-

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
6/24/2023	1115	241	70/71	0 FEET UP FROM EDGE WS	1' CIRCLE	JK	X13	6/29/2023	P	DM	-
6/28/2023	0805	242	71/72/73	77 FEET UP FROM EDGE WS	1.5X1.5	RF	X4	6/29/2023	P	DM	-
6/28/2023	0820	243	72	81 FEET UP FROM EDGE WS	1.5X1.5	RF	X4	6/29/2023	P	DM	BSEAM 1' UP
6/27/2023	1518	244	72/73/74	226 FEET UP FROM EDGE WS	1X1	JK	X13	6/29/2023	P	DM	-
6/27/2023	1520	245	72/74	255 FEET UP FROM EDGE WS	1X1	JK	X13	6/29/2023	P	DM	-
6/27/2023	1531	246	73/74/75	232 FEET UP FROM EDGE WS	2X1.5	JK	X13	6/29/2023	P	DM	-
6/24/2023	1130	247	73/75	2 FEET UP FROM EDGE WS	1.5X1	JK	X13	6/29/2023	P	DM	-
6/28/2023	0905	248	75/76/77	107 FEET UP FROM EDGE WS	6X3	RF	X4	6/29/2023	P	DM	-
6/27/2023	1154	249	75/77	130 FEET UP FROM EDGE WS	4X2	JK	X13	6/29/2023	P	DM	DT-16
6/28/2023	1036	250	75/77	179 FEET UP FROM EDGE WS	10X3	JK	X13	6/29/2023	P	DM	GV
6/28/2023	1036	251	77	179 FEET UP FROM EDGE WS	5X5	JK	X13	6/29/2023	P	DM	GV
6/28/2023	0754	252	75/77	267 FEET UP FROM EDGE WS	2.5X2.5	JK	X13	6/29/2023	P	DM	-
6/28/2023	0800	253	77/78/79	220 FEET UP FROM EDGE WS	2X2	JK	X13	6/29/2023	P	DM	-
6/28/2023	0840	254	79	224 FEET UP FROM EDGE WS	2X2	JK	X13	6/29/2023	P	DM	4' UP FROM BSEAM MID
6/28/2023	0820	255	79	221 FEET UP FROM EDGE WS	1.5X1.5	JK	X13	6/29/2023	P	DM	1' UP FROM R256
6/28/2023	0815	256	79	220 FEET UP FROM EDGE WS	1.5X1.5	JK	X13	6/29/2023	P	DM	BSEAM MID
6/28/2023	0915	257	76/77/78	106 FEET UP FROM EDGE WS	3X2.5	RF	X13	6/29/2023	P	DM	-
6/24/2023	1144	258	76/78	0 FEET UP FROM EDGE WS	1.5X1.5	JK	X13	6/29/2023	P	DM	-
6/28/2023	0908	259	78/79/80	218 FEET UP FROM EDGE WS	2.5X2	JK	X13	6/29/2023	P	DM	-
6/28/2023	0915	260	80/82	273 FEET UP FROM EDGE WS	2.5X2	JK	X4	6/29/2023	P	DM	-
6/28/2023	1200	261	80/81/82	65 FEET UP FROM EDGE WS	6.5X2.5	RF	X4	6/29/2023	P	DM	-
6/28/2023	1135	262	80/81	45 FEET UP FROM EDGE WS	5X2	RF	X13	6/29/2023	P	DM	DT-17
6/24/2023	1325	263	35/81	0 FEET UP FROM EDGE WS	5X1.5	JK	X13	6/29/2023	P	DM	-
6/29/2023	1320	264	81/83	53 FEET UP FROM EDGE WS	1.5X1.5	RF	X13	6/29/2023	P	DM	-
6/29/2023	1323	265	81/82/83	72 FEET UP FROM EDGE WS	2.5X2	RF	X13	6/29/2023	P	DM	-
6/29/2023	1310	266	82/83	82 FEET UP FROM EDGE WS	1.5X1.5	RF	X13	6/29/2023	P	DM	-
6/28/2023	1014	267	82/83/84	195 FEET UP FROM EDGE WS	5X2	JK	X13	6/29/2023	P	DM	-
6/28/2023	1000	268	83/84/85	193 FEET UP FROM EDGE WS	2X2	JK	X13	6/29/2023	P	DM	-
6/24/2023	1320	269	83	0 FEET UP FROM EDGE WS	5.5X1.5	JK	X13	6/29/2023	P	DM	-
6/29/2023	1345	270	85/86/87	25 FEET UP FROM EDGE WS	2.5X2	RF	X13	6/29/2023	P	DM	-
6/29/2023	1335	271	85/87	31FEET UP FROM EDGE WS	1.5X1.5	RF	X13	6/29/2023	P	DM	-
6/28/2023	0952	272	85/87	222 FEET UP FROM EDGE WS	5X2	JK	X13	6/29/2023	P	DM	DT-18
6/29/2023	1150	273	87/89	283 FEET UP FROM EDGE OF WEST SLOPE	1X1	RF	X13	6/29/2023	P	DM	-
6/29/2023	1125	274	89	162 FEET UP FROM EDGE OF WEST SLOPE	1X1	RF	X13	6/29/2023	P	DM	10' UP FROM BSEAM MID PANEL

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
6/29/2023	1135	275	89	156 FEET UP FROM EDGE OF WEST SLOPE	2X2	RF	X13	6/29/2023	P	DM	3' UP FROM BSEAM MID PANEL
6/29/2023	1130	276	89	156 FEET UP FROM EDGE OF WEST SLOPE	2X2	RF	X13	6/29/2023	P	DM	3' UP FROM BSEAM MID PANEL
6/29/2023	1140	277	87/88/89	150 FEET UP FROM EDGE OF WEST SLOPE	1.5X1.5	RF	X13	6/29/2023	P	DM	-
6/29/2023	1400	278	87/88	106 FEET UP FROM EDGE OF WEST SLOPE	3X2	RF	X13	6/29/2023	P	DM	-
6/29/2023	1350	279	86/87/88	19 FEET UP FROM EDGE OF WEST SLOPE	2X2	RF	X13	6/29/2023	P	DM	-
6/27/2023	1520	280	63	0 FEET UP FROM EDGE OF WEST SLOPE	1.5X1	RF	X4	6/29/2023	P	DM	MID SEAM
6/27/2023	1520	281	63	0 FEET UP FROM EDGE OF WEST SLOPE	1' CIRCLE	RF	X4	6/29/2023	P	DM	MID SEAM
6/27/2023	1520	282	63	0 FEET UP FROM EDGE OF WEST SLOPE	1' CIRCLE	RF	X4	6/29/2023	P	DM	MID SEAM
6/28/2023	1520	283	67	24 ' FROM SOUTH EDGE OF SEAM	2X1	RF	X4	6/29/2023	P	DM	-
6/29/2023	1312	284	82	205 FEET UP FROM EDGE OF WEST SLOPE	1X1	RF	X4	6/29/2023	P	DM	MID SEAM
6/30/2023	0930	285	17	12 FEET UP FROM AT	2X4	KP	X13	6/30/2023	P	KP	2' TO W OF SEAM
6/30/2023	0939	286	15	14 FEET UP FROM AT	1X1	KP	X13	6/30/2023	P	KP	7' TO E OF SEAM
6/30/2023	0945	287	11	12 FEET UP FROM AT	2X3	KP	X13	6/30/2023	P	KP	10' TO W OF SEAM
6/30/2023	0955	288	11	12 FEET UP FROM AT	1X1	KP	X13	6/30/2023	P	KP	10' TO W OF SEAM
7/7/2023	1325	289	88/96	14 FEET FROM EDGE OF WEST SLOPE	1.5X1.5	RF	X3	7/7/2023	P	DM	-
7/7/2023	0915	290	88/95/96	51 FEET FROM EDGE OF WEST SLOPE	9X3	RF	X3	7/7/2023	P	DM	-
7/7/2023	1355	291	62/95/96	250 FEET UP FROM AT	1.5' CIRCLE	RF	X3	7/8/2023	P	DM	-
7/7/2023	1420	292	62/93/95	240 FEET UP FROM AT	2.5X1.5	RF	X3	7/8/2023	P	DM	-
7/7/2023	1440	293	93/94/95	257 FEET UP FROM AT	6X2	RF	X3	7/8/2023	P	DM	-
7/7/2023	0922	294	88/94/95	340 FEET UP FROM AT	2.5X2	RF	X3	7/8/2023	P	DM	-
7/7/2023	0930	295	88/94	371 FEET UP FROM AT	3X1.5	RF	X3	7/7/2023	P	DM	-
7/7/2023	0940	296	88/89/94	382 FEET UP FROM AT	2.5X1.5	RF	X3	7/7/2023	P	DM	-
7/7/2023	0955	297	89/94/98	388 FEET UP FROM AT	8.5X2	RF	X3	7/7/2023	P	DM	-
7/7/2023	1155	298	94/98	300 FEET UP FROM AT	5.5X4.5	RF	X3	7/18/2023	P	DM	GV
7/7/2023	1445	299	93/94/98	266 FEET UP FROM AT	1.5X1	RF	X3	7/18/2023	P	DM	-
7/7/2023	1450	300	93/98	261 FEET UP FROM AT	1X1.5	RF	X3	7/18/2023	P	DM	-
7/8/2023	0840	301	62/93	145 FEET UP FROM AT	4X3	JK	X13	7/18/2023	P	DM	GV
7/8/2023	0855	302	93/98	130 FEET UP FROM AT	1.5X1	JK	X13	7/18/2023	P	DM	-
7/8/2023	0900	303	93/97	124 FEET UP FROM AT	1.5X1	JK	X13	7/18/2023	P	DM	-
7/7/2023	1400	304	62/93	16 FEET UP FROM AT	1X1	BM	X9	7/7/2023	P	DM	-
7/7/2023	1405	305	62/93	0 FEET UP FROM AT	13X1	BM	X9	7/7/2023	P	DM	-
7/7/2023	1410	306	97/99	17 FEET UP FROM AT	1.5X1.5	BM	X9	7/7/2023	P	DM	-
7/8/2023	0955	307	97/99/100	91 FEET UP FROM AT	2X3	JK	X13	7/18/2023	P	DM	-
7/7/2023	1625	308	97/98/100	120 FEET UP FROM AT	1.5' CIRCLE	RF	X3	7/18/2023	P	DM	-

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
7/7/2023	1621	309	98/100	188 FEET UP FROM AT	4.5X2	RF	X3	7/18/2023	P	DM	DT-20
7/7/2023	1010	310	89/98/100	424 FEET UP FROM AT	6.5X2.5	RF	X3	7/7/2023	P	DM	-
7/7/2023	1030	311	89/100	436 FEET UP FROM AT	8X2	RF	X3	7/7/2023	P	DM	-
7/7/2023	1030	312	100	436 FEET UP FROM AT	6.5X4.5	RF	X3	7/7/2023	P	DM	GV
7/7/2023	1125	313	89/100	444 FEET UP FROM AT	4X2	RF	X3	7/7/2023	P	DM	DT-21
7/7/2023	1604	314	89/100	468 FEET UP FROM AT	1.5X1	RF	X3	7/18/2023	P	DM	-
7/7/2023	1050	315	89/100/102	473 FEET UP FROM AT	4X1.5	RF	X3	7/18/2023	P	DM	-
7/7/2023	1130	316	100/101/102	389 FEET UP FROM AT	2.5X2	RF	X3	7/7/2023	P	DM	-
7/7/2023	1613	317	100/101	218 FEET UP FROM AT	1.5X1	RF	X3	7/18/2023	P	DM	-
7/7/2023	1615	318	100/101	210 FEET UP FROM AT	1.5X1.5	RF	X3	7/18/2023	P	DM	-
7/7/2023	1630	319	100	109 FEET UP FROM AT	1X1	RF	X3	7/18/2023	P	DM	6' TO N
7/8/2023	1000	320	99/100/101	93 FEET UP FROM AT	2X2	JK	X13	7/18/2023	P	DM	-
7/7/2023	1115	321	99/101	21 FEET UP FROM AT	2X2	BM	X9	7/7/2023	P	DM	-
7/7/2023	1130	322	99/101	15 FEET UP FROM AT	4X2	BM	X9	7/7/2023	P	DM	-
7/18/2023	1555	323	101	20 FEET UP FROM AT	2X2	JK	X13	7/18/2023	P	DM	MID PANEL
7/7/2023	1525	324	101/103	5 FEET UP FROM AT	1.5X1.5	BM	X9	7/7/2023	P	DM	-
7/7/2023	1500	325	101/103	10 FEET UP FROM AT	5X2	BM	X9	7/7/2023	P	DM	-
7/18/2023	1029	326	101/103	26 FEET UP FROM AT	2X1.5	JK	X13	7/18/2023	P	DM	-
7/7/2023	1605	327	101/103	273 FEET UP FROM AT	1X1	RF	X3	7/18/2023	P	DM	-
7/7/2023	1500	328	101/103/104	287 FEET UP FROM AT	2X2	RF	X3	7/18/2023	P	DM	-
7/7/2023	1350	329	101/102/104/114	392 FEET UP FROM AT	5X2.5	RF	X3	7/18/2023	P	DM	-
7/7/2023	1400	330	102/114	409 FEET UP FROM AT	9X3	RF	X3	7/18/2023	P	DM	-
7/18/2023	0820	331	103	175 FEET UP FROM AT	13X2	JK	X13	7/18/2023	P	DM	NEXT TO R332
7/18/2023	0820	332	103/105	175 FEET UP FROM AT	4X2	JK	X13	7/18/2023	P	DM	-
7/18/2023	1034	333	103	46 FEET UP FROM AT	1X1	JK	X13	7/18/2023	P	DM	7' TO N
7/18/2023	1031	334	103	35 FEET UP FROM AT	2X2	JK	X13	7/18/2023	P	DM	1' TO N
7/7/2023	1540	335	103/105	14 FEET UP FROM AT	2X2	BM	X9	7/7/2023	P	DM	-
7/7/2023	1600	336	105/106	2 FEET UP FROM AT	5X2	BM	X9	7/7/2023	P	DM	-
7/7/2023	1605	337	105/106	29 FEET UP FROM AT	1' CIRCLE	BM	X9	7/7/2023	P	DM	-
7/18/2023	1050	338	105/106/107	54 FEET UP FROM AT	9X2	JK	X13	7/18/2023	P	DM	-
7/18/2023	1134	339	107/113	138 FEET UP FROM AT	2.5X1.5	AS	X3	7/18/2023	P	DM	-
7/18/2023	1130	340	107/113	128 FEET UP FROM AT	2.5X1.5	AS	X3	7/18/2023	P	DM	-
7/18/2023	1130	341	107/108/113	128 FEET UP FROM AT	1' CIRCLE	AS	X3	7/18/2023	P	DM	-
7/18/2023	1124	342	107/108	86 FEET UP FROM AT	9X2	JK	X13	7/18/2023	P	DM	-

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
7/18/2023	1100	343	106/107/108	61 FEET UP FROM AT	1X1	JK	X13	7/18/2023	P	DM	-
7/18/2023	1110	344	106/108	52 FEET UP FROM AT	6X2	JK	X13	7/18/2023	P	DM	DT-22
7/7/2023	1620	345	106/108	10 FEET UP FROM AT	2.5X2.5	BM	X9	7/7/2023	P	DM	-
7/7/2023	1615	346	106/108	0 FEET UP FROM AT	3X2	BM	X9	7/7/2023	P	DM	-
7/7/2023	1610	347	108/109	0 FEET UP FROM AT	1X1	BM	X9	7/7/2023	P	DM	-
7/7/2023	1603	348	108/109	5 FEET UP FROM AT	3.5X2	BM	X9	7/7/2023	P	DM	-
7/7/2023	1557	349	108/109	12 FEET UP FROM AT	1.5X1.5	BM	X9	7/7/2023	P	DM	-
-	-	350	-	COVERED BY R-351	-	-	-	-	-	-	-
7/18/2023	0928	351	108/109	14 FEET UP FROM AT	11X3	AS	X3	7/18/2023	P	DM	-
7/18/2023	0946	352	108/109	44 FEET UP FROM AT	3X1.5	AS	X3	7/18/2023	P	DM	-
7/18/2023	0946	353	108	44 FEET UP FROM AT	7X1.5	AS	X3	7/18/2023	P	DM	-
7/18/2023	0946	354	108	44 FEET UP FROM AT	6X3	AS	X3	7/18/2023	P	DM	GV
7/18/2023	0943	355	108/109	86 FEET UP FROM AT	1X1	AS	X3	7/18/2023	P	DM	-
7/18/2023	1000	356	108/109/113	106 FEET UP FROM AT	4X1.5	AS	X3	7/18/2023	P	DM	-
7/18/2023	1007	357	109/113	106 FEET UP FROM AT	4X1.5	AS	X3	7/18/2023	P	DM	2' TO S
7/18/2023	1020	358	109/112/113	72 FEET UP FROM AT	2X3	AS	X3	7/18/2023	P	DM	-
7/18/2023	1037	359	109/110/112	57 FEET UP FROM AT	2X3	AS	X3	7/18/2023	P	DM	-
7/18/2023	1054	360	110/112	57 FEET UP FROM AT	2X12	AS	X3	7/18/2023	P	DM	-
7/18/2023	1040	361	109/110	50 FEET UP FROM AT	1X2	AS	X3	7/18/2023	P	DM	-
7/7/2023	1533	362	109/110	26 FEET UP FROM AT	1X1	LP	X13	7/18/2023	P	KP	-
7/7/2023	1529	363	109/110	24 FEET UP FROM AT	2X3	LP	X13	7/7/2023	P	DM	-
7/7/2023	1519	364	109/110	15 FEET UP FROM AT	2X3	LP	X13	7/7/2023	P	KP	-
7/7/2023	1507	365	110/111	27 FEET UP FROM AT	2X3	LP	X13	7/7/2023	P	KP	-
7/18/2023	1100	366	110/111/113	45 FEET UP FROM AT	3X5	AS	X3	7/18/2023	P	DM	-
7/7/2023	1500	367	111/113	26 FEET UP FROM AT	3X6	LP	X13	7/7/2023	P	KP	-
7/7/2023	1430	368	111	12 FEET UP FROM AT	12X8	LP	X13	7/7/2023	P	KP	PIPE BOOT
7/18/2023	1130	369	111/113	0 FEET UP FROM AT	3X2	JK	X13	7/7/2023	P	DM	-
7/7/2023	1045	370	102/114	444 FEET UP FROM AT	1.5X1	RF	X3	7/7/2023	P	DM	-
7/7/2023	1055	371	102/89	473 FEET UP FROM AT	1.5X1	RF	X3	7/7/2023	P	DM	-
7/7/2023	1100	372	102/89	483 FEET UP FROM AT	1.5X1	RF	X3	7/7/2023	P	DM	-
7/7/2023	1500	373	96/88	0 FEET UP FROM AT	12X10	RF	X3	7/7/2023	P	DM	-
7/18/2023	0952	374	105	128 FEET DOWN FROM TOP OF PANEL	1X2	JK	X3	7/18/2023	P	DM	3' TO E
7/20/2023	1500	375	113/117	0 FEET UP FROM AT	7X8	AS	X3	7/18/2023	P	DM	-
7/20/2023	1508	376	113/117	18 FEET UP FROM AT	3.5X2	AS	X3	7/18/2023	P	DM	-
7/20/2023	1438	377	113/116/117	63 FEET UP FROM AT	4.5X2.5	AS	X3	7/18/2023	P	DM	-

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
7/20/2023	1538	378	116/117	0 FEET UP FROM AT	1.5X1.5	AS	X3	7/18/2023	P	DM	-
7/20/2023	1543	379	116	4 FEET UP FROM AT	1.5' CIRCLE	AS	X3	7/18/2023	P	DM	MID PANEL
7/20/2023	1548	380	116	8 FEET UP FROM AT	1' CIRCLE	AS	X3	7/18/2023	P	DM	MID PANEL
7/20/2023	1115	381	116	51 FEET UP FROM AT	3.5' CIRCLE	JK	X3	7/18/2023	P	DM	GV
7/20/2023	1420	382	113/115/116	104 FEET UP FROM AT	4X2	AS	X3	7/18/2023	P	DM	-
7/20/2023	1355	383	113/115	130 FEET UP FROM AT	10X2.5	AS	X3	7/18/2023	P	DM	-
7/20/2023	1207	384	107/113/115/118	150 FEET UP FROM AT	11.5X5	AS	X3	7/18/2023	P	DM	GV
7/20/2023	0914	385	115/118	123 FEET UP FROM AT	13X2	JK	X3	7/18/2023	P	DM	-
7/20/2023	0914	386	115/118	113 FEET UP FROM AT	4.5X2	JK	X3	7/18/2023	P	DM	DT-23
7/20/2023	1601	387	119	13 FEET UP FROM AT	1' CIRCLE	AS	X3	7/18/2023	P	DM	2' TO S
7/20/2023	1605	388	119	13 FEET UP FROM AT	1' CIRCLE	AS	X3	7/18/2023	P	DM	MID PANEL
7/20/2023	1610	389	119	13 FEET UP FROM AT	1' CIRCLE	AS	X3	7/18/2023	P	DM	MID PANEL
7/20/2023	1143	390	105/107/118	170 FEET UP FROM AT	7X4	AS	X3	7/18/2023	P	DM	-
7/20/2023	1123	391	105/118/119	178 FEET UP FROM AT	3X2	AS	X3	7/18/2023	P	DM	-
7/20/2023	1113	392	119/120	177 FEET UP FROM AT	3.5X1.5	AS	X3	7/18/2023	P	DM	-
7/20/2023	1615	393	119	13 FEET UP FROM AT	1' CIRCLE	AS	X3	7/18/2023	P	DM	5' TO N
7/20/2023	1620	394	119/120	5 FEET UP FROM AT	2X1.5	AS	X3	7/18/2023	P	DM	-
7/20/2023	1625	395	119/120	0 FEET UP FROM AT	2X1.5	AS	X3	7/18/2023	P	DM	-
7/20/2023	1634	396	120/121	0 FEET UP FROM AT	1.5X1.5	JK	X13	7/18/2023	P	DM	-
7/20/2023	1643	397	120	14 FEET UP FROM AT	1' CIRCLE	JK	X13	7/18/2023	P	DM	MID PANEL
7/20/2023	1647	398	120/121	23 FEET UP FROM AT	2X1.5	JK	X13	7/18/2023	P	DM	-
7/20/2023	0901	399	121	158 FEET UP FROM AT	6X6	AS	X3	7/18/2023	P	DM	GV
7/20/2023	1108	400	105/120	177 FEET UP FROM AT	2X1.5	AS	X3	7/18/2023	P	DM	MID SEAM
7/20/2023	1100	401	105/120/121	181 FEET UP FROM AT	3X2	AS	X3	7/18/2023	P	DM	-
7/20/2023	1048	402	103/105/121	201 FEET UP FROM AT	3.5' CIRCLE	AS	X3	7/18/2023	P	DM	-
7/20/2023	1025	403	103/121	204 FEET UP FROM AT	4X2	AS	X3	7/18/2023	P	DM	DT-26
7/20/2023	1015	404	103/121/123	196 FEET UP FROM AT	1.5X1.5	AS	X3	8/29/2023	P	GG	-
7/20/2023	1054	405	121/123	214FEET UP FROM AT	1.5X1.5	AS	X3	8/29/2023	P	GG	-
7/20/2023	0826	406	121/122/123	135 FEET UP FROM AT	5X1.5	JK	X13	8/29/2023	P	GG	-
7/20/2023	1635	407	121/122	19 FEET UP FROM AT	2X1.5	JK	X13	8/29/2023	P	GG	-
7/20/2023	1625	408	121/122	11 FEET UP FROM AT	2.5X1.5	JK	X13	8/29/2023	P	GG	-
7/20/2023	1516	409	122	14 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	1' TO W
7/20/2023	1350	410	122/124	23 FEET UP FROM AT	2.5X1.5	JK	X13	8/29/2023	P	GG	-
7/20/2023	0843	411	122/124	131 FEET UP FROM AT	4.5X2	JK	X13	8/29/2023	P	GG	DT-24

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
7/20/2023	0836	412	122/123/124	147 FEET UP FROM AT	1.5X1	JK	X13	8/29/2023	P	GG	-
7/20/2023	0833	413	122/123	147 FEET UP FROM AT	3X1.5	JK	X13	8/29/2023	P	GG	MID SEAM
7/20/2023	0820	414	123	149 FEET UP FROM AT	2.5X1.5	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	0803	415	123	149 FEET UP FROM AT	1.5X1	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	0801	416	123	155 FEET UP FROM AT	1.5X1	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	0753	417	123	160 FEET UP FROM AT	1.5X1.5	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0755	418	123	163 FEET UP FROM AT	1.5X1.5	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0758	419	123	168 FEET UP FROM AT	1.5X1.5	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0802	420	123	174 FEET UP FROM AT	1.5X1	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0805	421	123	179 FEET UP FROM AT	1X1	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0808	422	123	184 FEET UP FROM AT	1.5X1	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0811	423	123	189 FEET UP FROM AT	1X1	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0815	424	123	194 FEET UP FROM AT	1X1	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0818	425	123	199 FEET UP FROM AT	1X1	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0821	426	123	204 FEET UP FROM AT	1X1	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0824	427	123	209 FEET UP FROM AT	1.5X1.5	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0827	428	123	214 FEET UP FROM AT	1.5X1.5	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0820	429	123	219 FEET UP FROM AT	2X1	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0839	430	123	223 FEET UP FROM AT	2X1.5	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	0811	431	123	228 FEET UP FROM AT	1.5X1	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	1011	432	103/123/124	245 FEET UP FROM AT	1.5X1.5	AS	X3	8/29/2023	P	GG	-
7/20/2023	1006	433	103/104/124	245 FEET UP FROM AT	2X1.5	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	1001	434	104/124	251 FEET UP FROM AT	2.5X1.5	AS	X3	8/29/2023	P	GG	2' TO S
7/20/2023	0953	435	104/124/125	251 FEET UP FROM AT	4.5X2	AS	X3	8/29/2023	P	GG	-
7/20/2023	0850	436	124/125	157 FEET UP FROM AT	3.5X1.5	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1332	437	124	73 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1330	438	124	68 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1206	439	124	63 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1204	440	124	58 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1202	441	124	54 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1157	442	124	49 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1154	443	124	44 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1151	444	124	39 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1148	445	124	34 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
7/20/2023	1145	446	124	29 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1142	447	124	24 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1059	448	124	19 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1140	449	124	14 FEET UP FROM AT	2X1.5	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1055	450	124	9 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1049	451	124	6 FEET UP FROM AT	1.5X1	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1046	452	124	4 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1042	453	124/126	5 FEET UP FROM AT	2X1.5	JK	X13	8/29/2023	P	GG	-
7/20/2023	1127	454	124	18 FEET UP FROM AT	3X2	JK	X13	8/29/2023	P	GG	2' TO W OF R455
7/20/2023	1114	455	124/126	18 FEET UP FROM AT	2.5X1.5	JK	X13	8/29/2023	P	GG	-
7/20/2023	1130	456	126	18 FEET UP FROM AT	1.5X1	JK	X13	8/29/2023	P	GG	2' TO E OF R455
7/20/2023	1010	457	124/126	41 FEET UP FROM AT	2.5X2	JK	X13	8/29/2023	P	GG	-
7/20/2023	1338	458	124/125/126	48 FEET UP FROM AT	4.5X2.5	JK	X13	8/29/2023	P	GG	-
7/20/2023	0945	459	104/125	262 FEET UP FROM AT	1.5X1	AS	X3	8/29/2023	P	GG	MID SEAM
7/20/2023	0940	460	104/125/128	262 FEET UP FROM AT	1.5X1.5	AS	X3	8/29/2023	P	GG	-
7/20/2023	0913	461	125/127/128	198 FEET UP FROM AT	2.5X1.5	AS	X3	8/29/2023	P	GG	-
7/20/2023	0959	462	125/126/127	47 FEET UP FROM AT	1.5X1.5	JK	X13	8/29/2023	P	GG	-
7/20/2023	1027	463	127/129	4 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	-
7/20/2023	1025	464	127/129	9 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	-
7/20/2023	1021	465	127/129	14 FEET UP FROM AT	2.5X1.5	JK	X13	8/29/2023	P	GG	-
7/20/2023	0941	466	127/129	34 FEET UP FROM AT	4.5X2	JK	X13	8/29/2023	P	GG	DT-25
7/20/2023	0924	467	127/128/129	198 FEET UP FROM AT	2.5X1	AS	X3	8/29/2023	P	GG	-
7/20/2023	0936	468	104/128/129	270 FEET UP FROM AT	1.5X1.5	AS	X3	8/29/2023	P	GG	-
7/20/2023	1513	469	126/127	15 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	-
7/20/2023	1510	470	127	15 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
7/20/2023	1631	471	120	5 FEET UP FROM AT	2X2	AS	X3	8/29/2023	P	GG	MID PANEL
7/20/2023	1557	472	115/118	0 FEET UP FROM AT	1X1	AS	X3	8/29/2023	P	GG	-
7/20/2023	1623	473	122	11 FEET UP FROM AT	1' CIRCLE	JK	X13	8/29/2023	P	GG	MID PANEL
8/22/2023	1630	474	119	167 FEET UP FROM AT	1.5X1	CP	X3	8/29/2023	P	GG	1' TO E OF SEAM
7/21/2023	1436	475	129/130	0 FEET UP FROM AT	3.5X1.5	CP	X3	8/30/2023	P	GG	-
7/21/2023	1436	476	129/130	5 FEET UP FROM AT	1.5X1.5	JK	X3	8/30/2023	P	GG	-
8/23/2023	0900	477	129/130/131	56 FEET UP FROM AT	2X1	CP	X3	9/6/2023	P	GG	-
8/22/2023	1500	478	104/129	275 FEET UP FROM AT	1X1	CP	X3	8/30/2023	P	GG	1' TO W OF SEAM
8/22/2023	1500	479	104/129/131	275 FEET UP FROM AT	2X3	CP	X3	8/30/2023	P	GG	-

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
8/22/2023	1500	480	104/114/131	275 FEET UP FROM AT	1X1	CP	X3	8/30/2023	P	GG	-
8/23/2023	1500	481	114	275 FEET UP FROM AT	10X1	CP	X3	8/30/2023	P	GG	TOP DOWNSPOUT
8/23/2023	1500	482	114/133	275 FEET UP FROM AT	26X3	CP	X3	8/30/2023	P	GG	TOP DOWNSPOUT
7/21/2023	1305	483	131/132/133	171 FEET UP FROM AT	1X1	JK	X13	9/6/2023	P	GG	-
7/21/2023	1500	484	131/132	87 FEET UP FROM AT	2.5X1	JK	X13	9/6/2023	P	GG	-
7/21/2023	1455	485	131/132	80 FEET UP FROM AT	2X1	JK	X13	9/6/2023	P	GG	-
7/21/2023	1450	486	131/132	73 FEET UP FROM AT	1.5X1	JK	X13	9/6/2023	P	GG	-
7/21/2023	1445	487	131/132	70 FEET UP FROM AT	1X1	JK	X13	9/6/2023	P	GG	-
7/21/2023	1445	488	130/131/132	54 FEET UP FROM AT	2X2	JK	X3	9/6/2023	P	GG	-
7/21/2023	1440	489	130/132	31 FEET UP FROM AT	1X1	JK	X3	9/6/2023	P	GG	-
8/22/2023	1600	490	132	13 FEET UP FROM AT	3X2	CP	X3	9/6/2023	P	GG	1' TO E OF SEAM
8/22/2023	1555	491	132	13 FEET UP FROM AT	1X1	CP	X3	9/6/2023	P	GG	MID PANEL
8/23/2023	1104	492	187/188	400 FEET UP FROM TIE-IN	14X4	CP	X3	8/24/2023	P	KW	-
8/23/2023	1120	493	188/189/190	290 FEET UP FROM TIE-IN	8X2	CP	X3	8/24/2023	P	JD	-
8/23/2023	1158	494	188/190/191	222 FEET UP FROM TIE-IN	9X2	CP	X3	8/24/2023	P	JD	-
8/23/2023	1350	495	191/PH1	212 FEET UP FROM TIE-IN	4.5X2	CP	X3	8/24/2023	P	JD	DT-43
8/23/2023	1015	496	188/192	17 FEET UP FROM TIE-IN	4.5X1.5	BM	X9	8/24/2023	P	JD	DT-42
8/23/2023	1405	497	188/191/192	158 FEET UP FROM TIE-IN	4X1.5	BM	X9	8/24/2023	P	JD	-
8/23/2023	1420	498	188/191	161 FEET UP FROM TIE-IN	1.5X1	BM	X9	8/24/2023	P	JD	-
8/23/2023	1056	499	187/188	376 FEET UP FROM TIE-IN	1.5X1.5	CP	X3	8/31/2023	P	GG	-
8/23/2023	1310	500	187/188	147 FEET UP FROM TIE-IN	1X1	BM	X9	8/24/2023	P	JD	-
8/23/2023	1135	501	187/188	125 FEET UP FROM TIE-IN	4X1.5	BM	X9	8/31/2023	P	GG	DT-41
8/23/2023	1045	502	186/187/188	32 FEET UP FROM TIE-IN	1X1	BM	X9	8/24/2023	P	JD	-
8/23/2023	0925	503	186/188	0 FEET UP FROM TIE-IN	2X1	BM	X9	8/24/2023	P	JD	-
8/23/2023	0900	504	65	0 FEET UP FROM TIE-IN	1X1	BM	X9	8/24/2023	P	JD	-
8/23/2023	0850	505	65	0 FEET UP FROM TIE-IN	2X1	BM	X9	8/24/2023	P	JD	-
8/23/2023	1100	506	184/186/187	37 FEET UP FROM TIE-IN	1X1	BM	X9	8/24/2023	P	JD	-
8/24/2023	1630	507	184/187	48 FEET UP FROM TIE-IN	1.5X6	BM	X9	8/24/2023	P	JD	-
8/24/2023	1630	508	184	48 FEET UP FROM TIE-IN	6X6	BM	X9	8/24/2023	P	JD	GV
8/23/2023	1530	509	184/185/187	63 FEET UP FROM TIE-IN	1X1	BM	X9	8/24/2023	P	JD	-
8/24/2023	1158	510	185/187	425 FEET UP FROM TIE-IN	4X1.5	CP	X3	9/1/2023	P	GG	-
8/23/2023	1050	511	183/185	395 FEET UP FROM TIE-IN	6X5	CP	X3	8/24/2023	P	JD	GV
8/23/2023	1410	512	183/185	205 FEET UP FROM TIE-IN	2X2	CP	X3	8/31/2023	P	GG	-
8/23/2023	1410	513	185	205 FEET UP FROM TIE-IN	6X4	CP	X3	8/31/2023	P	GG	GV 8' N OF SEAM

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
8/23/2023	1435	514	182/183/185	111 FEET UP FROM TIE-IN	1X1	BM	X9	8/24/2023	P	JD	-
8/24/2023	1515	515	182/185	69 FEET UP FROM TIE-IN	1X1	BM	X9	8/31/2023	P	GG	-
8/23/2023	0800	516	182/184	0 FEET UP FROM TIE-IN	3X1.5	BM	X9	8/24/2023	P	JD	-
8/23/2023	1724	517	180/182	0 FEET UP FROM TIE-IN	4X5	BM	X9	8/24/2023	P	JD	-
8/23/2023	1500	518	180/182/183	121 FEET UP FROM TIE-IN	2.5X1	BM	X9	8/24/2023	P	JD	-
8/23/2023	1435	519	180/181/183	160 FEET UP FROM TIE-IN	3X1.5	CP	X3	8/24/2023	P	JD	-
8/23/2023	1455	520	181/183	392 FEET UP FROM TIE-IN	6X2	CP	X3	8/31/2023	P	GG	DT-40
8/23/2023	1502	521	179/181	458 FEET UP FROM TIE-IN	3.5X1	CP	X3	8/31/2023	P	GG	-
8/23/2023	1430	522	178/179/181	216 FEET UP FROM TIE-IN	3.5X1.5	CP	X3	8/31/2023	P	GG	-
8/23/2023	1430	523	178/180/181	167 FEET UP FROM TIE-IN	5.5X3	CP	X3	8/24/2023	P	JD	-
8/24/2023	0830	524	178/180	0 FEET UP FROM TIE-IN	1.5X1	BM	X9	8/24/2023	P	JD	-
8/24/2023	0835	525	176	4 FEET UP FROM TIE-IN	1X1	BM	X9	8/31/2023	P	GG	1' S OF SEAM
8/23/2023	1745	526	176/178	71 FEET UP FROM TIE-IN	3X1	BM	X3	8/31/2023	P	GG	-
8/23/2023	1810	527	176/178	90 FEET UP FROM TIE-IN	12.5X1.5	BM	X9	8/31/2023	P	GG	DT-39
8/23/2023	1419	528	176/178/179	220 FEET UP FROM TIE-IN	2.5X1.5	CP	X3	8/24/2023	P	JD	-
8/23/2023	1635	529	176/177/179	279 FEET UP FROM TIE-IN	3X2	CP	X3	8/24/2023	P	JD	-
8/23/2023	1555	530	174/175/177	339 FEET UP FROM TIE-IN	2X2	CP	X3	8/31/2023	P	GG	-
8/23/2023	1622	531	174/176/177	275 FEET UP FROM TIE-IN	28X2	CP	X3	8/24/2023	P	JD	DT-38A
8/23/2023	1639	532	174/176	199 FEET UP FROM TIE-IN	1X1	CP	X3	8/24/2023	P	JD	-
8/23/2023	1703	533	174/176	171 FEET UP FROM TIE-IN	4X2	CP	X3	8/24/2023	P	JD	-
8/24/2023	0825	534	174/176	0 FEET UP FROM TIE-IN	2X5	BM	X9	8/24/2023	P	JD	-
8/24/2023	0920	535	172	5 FEET UP FROM TIE-IN	2X1	BM	X9	8/24/2023	P	JD	CAP STRIP
8/24/2023	0930	536	172	28 FEET UP FROM TIE-IN	2.5X1	BM	X9	8/24/2023	P	JD	CAP STRIP
8/24/2023	0925	537	174	28 FEET UP FROM TIE-IN	2X1	BM	X9	8/24/2023	P	JD	CAP STRIP
8/24/2023	0950	538	174	44 FEET UP FROM TIE-IN	2X1	BM	X9	8/31/2023	P	GG	CAP STRIP
8/24/2023	1000	539	174	66 FEET UP FROM TIE-IN	3X1	BM	X9	8/31/2023	P	GG	CAP STRIP
8/24/2023	1020	540	174	82 FEET UP FROM TIE-IN	2X1	BM	X9	8/31/2023	P	GG	CAP STRIP
8/24/2023	1030	541	172/174	93 FEET UP FROM TIE-IN	8X1	BM	X9	8/31/2023	P	GG	CAP STRIP
8/24/2023	1045	542	172	108 FEET UP FROM TIE-IN	5X1	BM	X9	8/31/2023	P	GG	CAP STRIP
8/23/2023	1719	543	172	140 FEET UP FROM TIE-IN	5.5X1.5	CP	X3	8/24/2023	P	JD	DT-45
8/23/2023	1719	544	172	154 FEET UP FROM TIE-IN	1X1	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1719	545	172/174	161 FEET UP FROM TIE-IN	5X3	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1650	546	174	181 FEET UP FROM TIE-IN	3X1	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1646	547	172/174	190 FEET UP FROM TIE-IN	4X1	CP	X3	8/24/2023	P	JD	CAP STRIP

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
8/23/2023	1642	548	174	203 FEET UP FROM TIE-IN	1X1.5	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1628	549	174	223 FEET UP FROM TIE-IN	2X1.5	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1632	550	172	226 FEET UP FROM TIE-IN	2X1.5	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1607	551	172/174	272 FEET UP FROM TIE-IN	3X1	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1602	552	172	307 FEET UP FROM TIE-IN	4X1	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1548	553	174/175	341 FEET UP FROM TIE-IN	2X2	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1540	554	172	349 FEET UP FROM TIE-IN	2X1.5	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1535	555	172/175	356 FEET UP FROM TIE-IN	3X2	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1514	556	172/173	412 FEET UP FROM TIE-IN	4X1	CP	X3	8/24/2023	P	JD	CAP STRIP
8/23/2023	1508	557	173/175	425 FEET UP FROM TIE-IN	5X1.5	CP	X3	8/24/2023	P	JD	DT-38B
8/23/2023	1820	558	171	455 FEET UP FROM TIE-IN	5X5	CP	X3	8/24/2023	P	JD	GV 9' S OF SEAM
8/23/2023	1812	559	171/172/173	415 FEET UP FROM TIE-IN	2.5X2	CP	X3	8/24/2023	P	JD	-
8/23/2023	1207	560	170/171/172	381 FEET UP FROM TIE-IN	2X1.5	CP	X3	8/24/2023	P	JD	-
8/23/2023	1745	561	170/172	254 FEET UP FROM TIE-IN	5X5	CP	X3	8/24/2023	P	JD	GV
8/24/2023	0932	562	170/172	10 FEET UP FROM TIE-IN	1.5X1	BM	X9	8/24/2023	P	JD	-
8/24/2023	1200	563	170/172	0 FEET UP FROM TIE-IN	5.5X2.5	BM	X9	8/24/2023	P	JD	-
8/24/2023	1350	564	168/170	0 FEET UP FROM TIE-IN	2X1	BM	X9	8/24/2023	P	JD	-
8/24/2023	1130	565	168/170	66 FEET UP FROM TIE-IN	2X1.5	BM	X9	8/24/2023	P	JD	-
8/24/2023	1130	566	168	66 FEET UP FROM TIE-IN	5X3	BM	X9	8/24/2023	P	JD	GV 9' S OF SEAM
8/24/2023	1144	567	168/170	125 FEET UP FROM TIE-IN	4.5X1.5	BM	X9	8/31/2023	P	GG	DT-37
8/24/2023	1455	568	168/169/170	188 FEET UP FROM TIE-IN	10X2.5	BM	X9	8/31/2023	P	GG	-
8/23/2023	1754	569	169/170/171	386 FEET UP FROM TIE-IN	2X2.5	CP	X3	8/24/2023	P	JD	-
8/24/2023	1323	570	163/169	479 FEET UP FROM TIE-IN	2X2.5	CP	X3	8/31/2023	P	GG	-
8/24/2023	1328	571	162/163/169	458 FEET UP FROM TIE-IN	1.5X1	CP	X3	8/31/2023	P	GG	-
8/24/2023	1349	572	162/169	439 FEET UP FROM TIE-IN	3X1	CP	X3	8/31/2023	P	GG	-
8/24/2023	1356	573	161/162/169	434 FEET UP FROM TIE-IN	1X1.5	CP	X3	8/31/2023	P	GG	-
8/24/2023	1402	574	157/161/169	411 FEET UP FROM TIE-IN	1X1.5	CP	X3	8/24/2023	P	JD	-
8/23/2023	1405	575	156/157/169	387 FEET UP FROM TIE-IN	1.5X1.5	CP	X3	8/24/2023	P	JD	-
8/23/2023	1801	576	156/167/169	371 FEET UP FROM TIE-IN	5X1	CP	X3	8/24/2023	P	JD	-
8/24/2023	1510	577	167/168/169	187 FEET UP FROM TIE-IN	2X3	BM	X9	8/31/2023	P	GG	-
8/24/2023	1430	578	166/167/168	158 FEET UP FROM TIE-IN	2X1	BM	X9	8/31/2023	P	GG	-
8/24/2023	1355	579	166/168	0 FEET UP FROM TIE-IN	1X1	BM	X9	8/24/2023	P	JD	-
8/24/2023	1410	580	164/166	0 FEET UP FROM TIE-IN	1.5X1.5	BM	X9	8/31/2023	P	GG	-
8/24/2023	1430	581	164/165/166	135 FEET UP FROM TIE-IN	3.5X2	BM	X9	8/31/2023	P	GG	-

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
8/31/2023	0910	582	165/166	150 FEET UP FROM TIE-IN	2.5X1.5	RF	X9	8/31/2023	P	GG	-
8/31/2023	0920	583	165/166/167	162 FEET UP FROM TIE-IN	2X1.5	RF	X9	8/31/2023	P	GG	-
8/31/2023	1545	584	165/167	281 FEET UP FROM TIE-IN	5X2	RF	X9	8/31/2023	P	GG	DT-36
8/31/2023	1615	585	167	343 FEET UP FROM TIE-IN	1.5X1.5	RF	X9	8/31/2023	P	GG	1' N OF 165/176 SEAM
8/24/2023	1456	586	155/156	368 FEET UP FROM TIE-IN	1.5X1.5	CP	X3	8/31/2023	P	GG	-
8/23/2023	1110	587	66/188	0 FEET UP FROM TIE-IN	4X2	BM	X9	8/24/2023	P	JD	DT-44
8/23/2023	1646	588	132	10 FEET UP FROM AT	1.5X2	CP	X3	9/6/2023	P	GG	1' TO W OF 132/134 SEAM
8/23/2023	1646	589	132	10 FEET UP FROM AT	1.5X1	CP	X3	9/6/2023	P	GG	1' TO W OF 132/134 SEAM
8/29/2023	1130	590	132/133	168 FEET UP FROM AT	3.5X1.5	RF	X9	8/31/2023	P	GG	MID SEAM
8/29/2023	1135	591	132/133/134	168 FEET UP FROM AT	1.5X1.5	RF	X9	8/31/2023	P	GG	-
8/31/2023	0831	592	133/134	233 FEET UP FROM AT	4.5X1.5	AB	X3	8/31/2023	P	GG	DT-27
8/31/2023	0855	593	133/134/135	269 FEET UP FROM AT	1' CIRCLE	AB	X3	8/30/2023	P	GG	-
8/31/2023	0847	594	133/135	281 FEET UP FROM AT	1.5X1	AB	X3	8/30/2023	P	GG	-
8/31/2023	0900	595	114/135/136	295 FEET UP FROM AT	1.5X1	AB	X3	8/30/2023	P	GG	-
8/31/2023	0850	596	134/135/136	268 FEET UP FROM AT	1.5X1.5	AB	X3	8/30/2023	P	GG	-
8/29/2023	1145	597	134/136	163 FEET UP FROM AT	2X1	RF	X9	8/31/2023	P	GG	-
8/29/2023	1145	598	136	141 FEET UP FROM AT	8X5	RF	X9	8/31/2023	P	GG	GV MID PANEL
8/23/2023	0800	599	134	20 FEET UP FROM AT	6X5	CP	X3	9/6/2023	P	GG	GV MID PANEL
8/30/2023	1325	600	134	17 FEET UP FROM AT	2X2	AB	X3	9/6/2023	P	GG	-
8/30/2023	1325	601	134/136	17 FEET UP FROM AT	2X2	AB	X3	9/6/2023	P	GG	-
8/23/2023	0830	602	136	25 FEET UP FROM AT	10X6	CP	X3	9/6/2023	P	GG	GV
8/23/2023	0845	603	136/137/138	40 FEET UP FROM AT	2.5X2.5	CP	X3	9/6/2023	P	GG	-
8/29/2023	1200	604	136/138	128 FEET UP FROM AT	2X1	RF	X9	8/31/2023	P	GG	-
8/31/2023	0905	605	114/136/138	302 FEET UP FROM AT	1.5X1.5	AB	X3	8/31/2023	P	GG	-
8/22/2023	1400	606	114/139/140/141	350 FEET UP FROM AT	13X2	CP	X3	8/31/2023	P	GG	-
8/22/2023	1100	607	139/140/164	400 FEET UP FROM AT	40X4	BM	X9	8/31/2023	P	GG	-
8/22/2023	1400	608	139/141	311 FEET UP FROM AT	1.5X1	CP	X3	8/31/2023	P	GG	-
8/22/2023	1400	609	139/141	305 FEET UP FROM AT	1X1	CP	X3	8/31/2023	P	GG	-
8/31/2023	0910	610	139/141	303 FEET UP FROM AT	1' CIRCLE	AB	X3	8/31/2023	P	GG	-
8/31/2023	0925	611	138/139	160 FEET UP FROM AT	5X2	AB	X3	8/31/2023	P	GG	DT-28
8/31/2023	0935	612	137/138/139	39 FEET UP FROM AT	2X2	AB	X3	9/6/2023	P	GG	-
8/31/2023	0945	613	139/142	95 FEET UP FROM AT	2X1.5	AB	X3	9/6/2023	P	GG	-
8/23/2023	0930	614	142	170 FEET UP FROM AT	4X3	CP	X3	8/31/2023	P	GG	GV MID PANEL
8/31/2023	0915	615	139/142	225 FEET UP FROM AT	2X1.5	AB	X3	8/31/2023	P	GG	-

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
8/31/2023	0955	616	142/143/164	406 FEET UP FROM AT	3X1.5	RF	X9	8/31/2023	P	GG	-
8/31/2023	1350	617	142/143	289 FEET UP FROM AT	1.5X1	RF	X9	9/4/2023	P	GG	-
8/31/2023	1005	618	142/143	257 FEET UP FROM AT	3X1.5	AB	X3	9/4/2023	P	GG	-
8/31/2023	1000	619	142/143	205 FEET UP FROM AT	4X1	AB	X3	9/6/2023	P	GG	-
8/31/2023	0935	620	142/143	184 FEET UP FROM AT	2X1	AB	X3	9/6/2023	P	GG	-
8/31/2023	1015	621	142/143	67 FEET UP FROM AT	4X2	AB	X3	9/6/2023	P	GG	DT-29
8/31/2023	1020	622	143/144	60 FEET UP FROM AT	1.5X1.5	AB	X3	9/6/2023	P	GG	-
8/31/2023	1025	623	143/144	128 FEET UP FROM AT	2X1.5	AB	X3	9/6/2023	P	GG	-
8/31/2023	1105	624	143/144	402 FEET UP FROM AT	2.5X1.5	RF	X9	8/31/2023	P	GG	-
8/31/2023	0930	625	144/145/164	403 FEET UP FROM AT	2X1.5	RF	X9	8/31/2023	P	GG	-
8/31/2023	1125	626	144/145	322 FEET UP FROM AT	4X12	RF	X9	9/4/2023	P	GG	DT-30
8/31/2023	1035	627	144/145	127 FEET UP FROM AT	3X1.5	AB	X3	9/6/2023	P	GG	-
8/31/2023	1040	628	144/145	86 FEET UP FROM AT	1.5X1.5	AB	X3	9/6/2023	P	GG	-
8/31/2023	1050	629	144/145	47 FEET UP FROM AT	3.5X2	AB	X3	9/6/2023	P	GG	-
8/31/2023	1105	630	144/145	5 FEET UP FROM AT	3.5X2	AB	X3	9/6/2023	P	GG	-
8/31/2023	1125	631	145/146	2 FEET UP FROM AT	4X1.5	AB	X3	9/6/2023	P	GG	-
8/31/2023	1320	632	146	318 FEET UP FROM AT	6X4	RF	X9	9/4/2023	P	GG	5' E OF 145/146 SEAM GV
8/24/2023	1552	633	145/146/164	406 FEET UP FROM AT	1.5' CIRCLE	CP	X3	8/31/2023	P	GG	-
8/31/2023	0855	634	164/165	406 FEET UP FROM AT	25X1.5	RF	X9	8/31/2023	P	GG	-
8/24/2023	1552	635	146/147/165	405 FEET UP FROM AT	1.5' CIRCLE	CP	X3	8/31/2023	P	GG	-
8/31/2023	1040	636	147	187 FEET UP FROM AT	2.5X2	AB	X3	9/6/2023	P	GG	MID PANEL
8/31/2023	1055	637	147/148	136 FEET UP FROM AT	4X2	AB	X3	9/6/2023	P	GG	DT-31
8/31/2023	1045	638	147/148	183 FEET UP FROM AT	4X2	AB	X3	9/6/2023	P	GG	-
8/24/2023	1546	639	147/165	405 FEET UP FROM AT	4X2	CP	X3	8/31/2023	P	GG	DT-46
8/24/2023	1540	640	147/148/165	405 FEET UP FROM AT	1' CIRCLE	CP	X3	8/31/2023	P	GG	-
8/24/2023	1535	641	148/165	405 FEET UP FROM AT	1.5' CIRCLE	CP	X3	8/31/2023	P	GG	MID PANEL
8/24/2023	1529	642	148/149/165	405 FEET UP FROM AT	3X1.5	CP	X3	8/31/2023	P	GG	-
8/31/2023	1135	643	149/150	83 FEET UP FROM AT	4X2	AB	X3	9/7/2023	P	GG	DT-32
8/31/2023	1140	644	149/150	120 FEET UP FROM AT	3X2	AB	X3	9/7/2023	P	GG	-
8/31/2023	1445	645	149/150	278 FEET UP FROM AT	18X2.5	RF	X9	9/4/2023	P	GG	-
8/24/2023	1521	646	149/150/165	403 FEET UP FROM AT	2.5X1.5	CP	X3	8/31/2023	P	GG	-
8/24/2023	1515	647	150/151/165	403 FEET UP FROM AT	1.5' CIRCLE	CP	X3	8/31/2023	P	GG	-
8/31/2023	1245	648	150	183 FEET UP FROM AT	5X5	AB	X3	9/1/2023	P	GG	GV MID PANEL
8/31/2023	1255	649	151	35 FEET UP FROM AT	5X5	AB	X3	9/7/2023	P	GG	GV MID PANEL

REPAIR LOG											
PROJECT: Dolby Phase 3 Cover Upgrade				QUALITY ASSURANCE MONITOR: TJM							40 mil HDPE
DATE	TIME	REPAIR NUMBER	PANEL NUMBERS	LOCATION	DIMENSIONS (FEET) (LXW)	WELDER INITIAL	MACHINE NUMBER	VACUUM BOX TEST DATE	VACUUM BOX TEST PASS/FAIL	VACUUM BOX TEST QC INITIAL	COMMENTS
8/31/2023	1500	650	151/152	310 FEET UP FROM AT	4X2	RF	X9	9/4/2023	P	GG	DT-33
8/24/2023	1509	651	151/152/165	404 FEET UP FROM AT	1X1	CP	X3	8/31/2023	P	GG	-
8/24/2023	1506	652	152/153/165	402 FEET UP FROM AT	1X1	CP	X3	8/31/2023	P	GG	-
8/31/2023	1325	653	152/153	0 FEET UP FROM AT	1X1	AB	X3	9/7/2023	P	GG	-
8/31/2023	1340	654	153/154	142 FEET UP FROM AT	8X1.5	AB	X3	8/31/2023	P	GG	-
8/31/2023	1355	655	154	350 FEET UP FROM AT	5X5	AB	X3	8/31/2023	P	GG	GV MID PANEL
8/24/2023	1510	656	153/154/165	399 FEET UP FROM AT	1.5X1	CP	X3	8/30/2023	P	GG	-
8/24/2023	1458	657	154/155/165	404 FEET UP FROM AT	1X1	CP	X3	8/30/2023	P	GG	-
8/31/2023	1410	658	154/155	145 FEET UP FROM AT	4X2	AB	X3	9/1/2023	P	GG	DT-34
8/31/2023	1420	659	154/155	18 FEET UP FROM AT	1X1	AB	X3	9/7/2023	P	GG	-
8/31/2023	1435	660	155	10 FEET UP FROM AT	3X2	AB	X3	9/7/2023	P	GG	1' TO E OF 154/155 SEAM
8/31/2023	1500	661	155/156	108 FEET UP FROM AT	2.5X1.5	AB	X3	9/1/2023	P	GG	-
8/31/2023	1510	662	155/156	188 FEET UP FROM AT	1X1	AB	X3	9/7/2023	P	GG	-
8/24/2023	1444	663	156/157	257 FEET UP FROM AT	4X2	CP	X3	8/30/2023	P	GG	DT-35
8/31/2023	1530	664	156/157/158	40 FEET UP FROM AT	1.5X1.5	AB	X3	9/1/2023	P	GG	-
8/31/2023	1545	665	158	40 FEET UP FROM AT	1X1	AB	X3	9/1/2023	P	GG	MID PANEL
8/31/2023	1605	666	157	40 FEET UP FROM AT	2X1.5	AB	X3	9/1/2023	P	GG	MID PANEL
8/31/2023	1615	667	157	45 FEET UP FROM AT	1X1	AB	X3	9/1/2023	P	GG	MID PANEL
8/31/2023	1640	668	157/158	0 FEET UP FROM AT	1X1	AB	X3	9/1/2023	P	GG	-
9/1/2023	0830	669	159/160	23 FEET UP FROM AT	9X1.5	RF	X3	9/4/2023	P	GG	-
8/31/2023	1650	670	157/160	25 FEET UP FROM AT	2.5X1	AB	X3	9/4/2023	P	GG	-
8/31/2023	1655	671	157/160	70 FEET UP FROM AT	1.5X1	AB	X3	9/4/2023	P	GG	-
8/24/2023	1443	672	157/160/161	128 FEET UP FROM AT	2.5X1.5	CP	X3	8/31/2023	P	GG	-
8/31/2023	1439	673	161	131 FEET UP FROM AT	1X1	CP	X3	8/31/2023	P	GG	3' UP FROM 160/161 SEAM MID PANEL
8/24/2023	1438	674	160/161/162	68 FEET UP FROM AT	2.5X1.5	CP	X3	8/31/2023	P	GG	-
8/24/2023	1433	675	162/163	28 FEET UP FROM AT	1.5X1.5	CP	X3	8/31/2023	P	GG	-
8/24/2023	1424	676	163	69 FEET UP FROM AT	2X2	CP	X3	8/31/2023	P	GG	-
8/24/2023	1428	677	163	42 FEET UP FROM AT	2X1.5	CP	X3	8/31/2023	P	GG	-
8/31/2023	1330	678	134/136	0 FEET UP FROM AT	1' CIRCLE	AB	X3	9/6/2023	P	GG	-
8/31/2023	0940	679	143/144	393 FEET UP FROM AT	1' CIRCLE	RF	X9	8/31/2023	P	GG	-
8/31/2023	1140	680	146	275 FEET UP FROM AT	1X1	RF	X9	9/4/2023	P	GG	1' TO E OF 145/146 SEAM

- **40-MIL HDPE DESTRUCTIVE TEST RESULTS**

SME
SEVEE & MAHER
ENGINEERS

GAI-LAP
Initial: CVZ #:0.13
DATE: 06/16/2023

June 16, 2023

Nick Thompson
Sevee & Maher
4 Blanchard Road, P.O. 85A
Cumberland, ME, 04021

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Thompson:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of thirteen (13) HDPE Seam samples.

PROJECT NAME: Dolby Phase 3 Cover Upgrade DATE REPORTED: **June 16, 2023**

REFERENCE TRI JOB NO.: CA230587

DATE RECEIVED: June 16, 2023

SAMPLE(S) SENT BY: Sevee & Maher

TEST PERFORMED AT: TRI-CA Facility (see the complete contact info and address below), except otherwise noted.

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*TRI-CA CONTROL NUMBER*	*SAMPLE ID*	*TRI-CA CONTROL NUMBER*
DS-1 P4/P5	173359	DS-8 P32/P34	173366
DS-2 P1/P10	173360	DS-9A P36/P38	173367
DS-3 P11/P13	173361	DS-9B P36/P38	173368
DS-4 P16/P18	173362	DS-10 P46/P47	173369
DS-5 P19/P21	173363	DS-11 P53/P55	173370
DS-6 P23/P25	173364	DS-12 P57/P59	173371
DS-7 P27/P29	173365		

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in the attached Table(s) 1 to 7.

Note: The general conditioning and testing of the material samples identified in this report were performed within the range of the laboratory environmental conditions; i.e., 20-24°C and 45-65% RH. Otherwise, the actual environmental conditions are indicated in the respective test method reported.

Respectfully,

TRI Environmental, Inc. - California

Maria Espitia
Quality Assurance

Chad Blackwell
TRI-CA Director

Signatures are on file

It shall be noted that the sample(s) tested per this report is(are) believed to be true representative(s) of the material produced under the designation stated herein. In addition, the attached laboratory test results are considered indicative only of the quality/property of samples/specimens that were actually tested. The designated test methods employed are based on the generally accepted and current industry standards/practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entities duly authorized by the respective client, or the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them for a longer period, please advise us in writing.

8 Pages Total *(including this sheet)*

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **16-Jun-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230587**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 16-Jun-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-1	**173359**	101	>50%	BRK		1 Outside	97	0	SE1	
P4/P5		104	>50%	BRK		2 Outside	100	0	SE1	
		101	>50%	BRK		3 Outside	102	0	SE1	
		101	>50%	BRK		4 Outside	100	0	SE1	
		100	>50%	BRK		5 Outside	102	0	SE1	
						AVG:	**100**			52
						STD. DEV.	**2**			
						1 Inside	97	0	SE1	
						2 Inside	99	0	SE1	
						3 Inside	98	0	SE1	
						4 Inside	97	0	SE1	
						5 Inside	99	0	SE1	
	AVG.	**101**			78	**AVG:**	**98**			52
	STD. DEV.	**2**				STD. DEV.	**1**			
DS-2	**173360**	100	>50%	BRK		1 Outside	81	0	SE1	
P1/P10		101	>50%	BRK		2 Outside	94	0	SE1	
		102	>50%	BRK		3 Outside	94	0	SE1	
		100	>50%	BRK		4 Outside	86	0	SE1	
		103	>50%	BRK		5 Outside	92	0	SE1	
						AVG:	**89**			52
						STD. DEV.	**6**			
						1 Inside	90	0	SE1	
						2 Inside	83	0	SE1	
						3 Inside	80	0	SE1	
						4 Inside	82	0	SE1	
						5 Inside	88	0	SE1	
	AVG:	**101**			78	**AVG:**	**85**			52
	STD. DEV.	**1**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 2.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **16-Jun-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230587**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 16-Jun-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-3	**173361**	104	>50%	BRK		1 Outside	95	0	SE1	
P11/P13		107	>50%	BRK		2 Outside	91	0	SE1	
		103	>50%	BRK		3 Outside	98	0	SE1	
		102	>50%	BRK		4 Outside	95	0	SE1	
		104	>50%	BRK		5 Outside	98	0	SE1	
						AVG:	**96**			52
						STD. DEV.	**3**			
						1 Inside	102	0	SE1	
						2 Inside	102	0	SE1	
						3 Inside	104	0	SE1	
						4 Inside	104	0	SE1	
						5 Inside	103	0	SE1	
	AVG.	**104**			78	**AVG:**	**103**			52
	STD. DEV.	**2**				STD. DEV.	**1**			
DS-4	**173362**	102	>50%	BRK		1 Outside	100	0	SE1	
P16/P18		107	>50%	BRK		2 Outside	98	0	SE1	
		104	>50%	BRK		3 Outside	97	0	SE1	
		104	>50%	BRK		4 Outside	102	0	SE1	
		103	>50%	BRK		5 Outside	102	0	SE1	
						AVG:	**100**			52
						STD. DEV.	**2**			
						1 Inside	90	0	SE1	
						2 Inside	80	0	SE1	
						3 Inside	80	0	SE1	
						4 Inside	88	0	SE1	
						5 Inside	93	0	SE1	
	AVG:	**104**			78	**AVG:**	**86**			52
	STD. DEV.	**2**				STD. DEV.	**6**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 2)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 3.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **16-Jun-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230587**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 16-Jun-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-5	**173363**	100	>50%	BRK		1 Outside	73	0	SE1	
P19/P21		102	>50%	BRK		2 Outside	98	0	SE1	
		96	>50%	BRK		3 Outside	73	0	SE1	
		101	>50%	BRK		4 Outside	82	0	SE1	
		102	>50%	BRK		5 Outside	71	0	SE1	
						AVG:	**79**			52
						STD. DEV.	**11**			
						1 Inside	96	0	SE1	
						2 Inside	88	0	SE1	
						3 Inside	96	0	SE1	
						4 Inside	94	0	SE1	
						5 Inside	95	0	SE1	
	AVG.	**100**			78	**AVG:**	**94**			52
	STD. DEV.	**2**				STD. DEV.	**3**			
DS-6	**173364**	102	>50%	BRK		1 Outside	95	0	SE1	
P23/P25		105	>50%	BRK		2 Outside	96	0	SE1	
		99	>50%	BRK		3 Outside	96	0	SE1	
		101	>50%	BRK		4 Outside	93	0	SE1	
		100	>50%	BRK		5 Outside	93	0	SE1	
						AVG:	**95**			52
						STD. DEV.	**1**			
						1 Inside	94	0	SE1	
						2 Inside	95	0	SE1	
						3 Inside	95	0	SE1	
						4 Inside	95	0	SE1	
						5 Inside	93	0	SE1	
	AVG:	**101**			78	**AVG:**	**95**			52
	STD. DEV.	**2**				STD. DEV.	**1**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 3)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 4.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **16-Jun-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230587**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 16-Jun-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-7	**173365**	107	>50%	BRK		1 Outside	87	0	SE1	
P27/P29		109	>50%	BRK		2 Outside	88	0	SE1	
		105	>50%	BRK		3 Outside	90	0	SE1	
		106	>50%	BRK		4 Outside	94	0	SE1	
		108	>50%	BRK		5 Outside	95	0	SE1	
						AVG:	**91**			52
						STD. DEV.	**4**			
						1 Inside	91	0	SE1	
						2 Inside	97	0	SE1	
						3 Inside	95	0	SE1	
						4 Inside	98	0	SE1	
						5 Inside	98	0	SE1	
	AVG.	**107**			78	**AVG:**	**96**			52
	STD. DEV.	**2**				STD. DEV.	**3**			
DS-8	**173366**	110	>50%	BRK		1 Outside	96	0	SE1	
P32/P34		115	>50%	BRK		2 Outside	93	0	SE1	
		110	>50%	BRK		3 Outside	96	0	SE1	
		115	>50%	BRK		4 Outside	95	0	SE1	
		112	>50%	BRK		5 Outside	95	0	SE1	
						AVG:	**95**			52
						STD. DEV.	**1**			
						1 Inside	73	0	SE1	
						2 Inside	86	0	SE1	
						3 Inside	68	0	SE1	
						4 Inside	69	0	SE1	
						5 Inside	69	0	SE1	
	AVG:	**112**			78	**AVG:**	**73**			52
	STD. DEV.	**2**				STD. DEV.	**8**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 4)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 5.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **16-Jun-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230587**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 16-Jun-23

		Crosshead Speed: 2 in/min				Crosshead Speed: 2 in/min				
		SHEAR EVALUATION				PEEL EVALUATION				
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-PA	**173367**	100	>50%	BRK		1 Outside	94	0	SE1	
P36/P38		107	>50%	BRK		2 Outside	93	0	SE1	
		106	>50%	BRK		3 Outside	93	0	SE1	
		102	>50%	BRK		4 Outside	91	0	SE1	
		104	>50%	BRK		5 Outside	97	0	SE1	
						AVG:	**94**			52
						STD. DEV.	**2**			
						1 Inside	87	0	SE1	
						2 Inside	93	0	SE1	
						3 Inside	99	0	SE1	
						4 Inside	89	0	SE1	
						5 Inside	91	0	SE1	
	AVG.	**104**			78	**AVG:**	**92**			52
	STD. DEV.	**3**				STD. DEV.	**4**			
DS-9B	**173368**	102	>50%	BRK		1 Outside	92	0	SE1	
P36/P38		107	>50%	BRK		2 Outside	97	0	SE1	
		104	>50%	BRK		3 Outside	94	0	SE1	
		102	>50%	BRK		4 Outside	96	0	SE1	
		103	>50%	BRK		5 Outside	96	0	SE1	
						AVG:	**95**			52
						STD. DEV.	**2**			
						1 Inside	94	0	SE1	
						2 Inside	90	0	SE1	
						3 Inside	86	0	SE1	
						4 Inside	95	0	SE1	
						5 Inside	96	0	SE1	
	AVG:	**104**			78	**AVG:**	**92**			52
	STD. DEV.	**2**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 5)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 6.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **16-Jun-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230587**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 16-Jun-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-10	**173369**	99	>50%	BRK		1 Outside	74	0	SE1	
P46/P47		99	>50%	BRK		2 Outside	75	0	SE1	
		100	>50%	BRK		3 Outside	70	0	SE1	
		101	>50%	BRK		4 Outside	72	0	SE1	
		100	>50%	BRK		5 Outside	76	0	SE1	
						AVG:	**73**			52
						STD. DEV.	**2**			
						1 Inside	84	0	SE1	
						2 Inside	85	0	SE1	
						3 Inside	82	0	SE1	
						4 Inside	83	0	SE1	
						5 Inside	82	0	SE1	
	AVG.	**100**			78	**AVG:**	**83**			52
	STD. DEV.	**1**				STD. DEV.	**1**			
DS-11	**173370**	95	>50%	BRK		1 Outside	80	0	SE1	
P53/P55		101	>50%	BRK		2 Outside	77	0	SE1	
		97	>50%	BRK		3 Outside	87	0	SE1	
		101	>50%	BRK		4 Outside	85	0	SE1	
		99	>50%	BRK		5 Outside	81	0	SE1	
						AVG:	**82**			52
						STD. DEV.	**4**			
						1 Inside	61	0	SE1	
						2 Inside	62	0	SE1	
						3 Inside	63	0	SE1	
						4 Inside	67	0	SE1	
						5 Inside	89	0	SE1	
	AVG:	**99**			78	**AVG:**	**68**			52
	STD. DEV.	**3**				STD. DEV.	**12**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 6)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 7.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: ***Sevee and Maher***
PROJECT: ***Dolby Phase 3 Cover Upgrade***
DATE REC'D: ***16-Jun-23***

MATERIAL: ***HDPE SEAM***
SEAM TYPE: ***Fusion Weld***
TRI JOB #: ***CA230587***

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 16-Jun-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-12	**173371**	101	>50%	BRK		1 Outside	70	0	SE1	
P57/P59		100	>50%	BRK		2 Outside	72	0	SE1	
		97	>50%	BRK		3 Outside	71	0	SE1	
		98	>50%	BRK		4 Outside	71	0	SE1	
		102	>50%	BRK		5 Outside	74	0	SE1	
						AVG:	**72**			52
						STD. DEV.	**2**			
						1 Inside	95	0	SE1	
						2 Inside	93	0	SE1	
						3 Inside	86	0	SE1	
						4 Inside	91	0	SE1	
						5 Inside	94	0	SE1	
	AVG.	**100**			78	**AVG:**	**92**			52
	STD. DEV.	**2**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 7)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

GAI-LAP
Initial: CVZ #:0.13
DATE: 06/22/2023

June 22, 2023

Nick Thompson
Sevee & Maher
4 Blanchard Road, P.O. 85A
Cumberland, ME, 04021

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Thompson:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of two (2) HDPE Seam samples.

PROJECT NAME: Dolby Phase 3 Cover Upgrade DATE REPORTED: **June 22, 2023**

REFERENCE TRI JOB NO.: CA230618

DATE RECEIVED: June 22, 2023

SAMPLE(S) SENT BY: Sevee & Maher

TEST PERFORMED AT: TRI-CA Facility (see the complete contact info and address below), except otherwise noted.

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*TRI-CA CONTROL NUMBER*
DT-13 P29/R198	173529
DT-14 P49/R197	173530

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in the attached Table(s) 1.

Note: The general conditioning and testing of the material samples identified in this report were performed within the range of the laboratory environmental conditions; i.e., 20-24°C and 45-65% RH. Otherwise, the actual environmental conditions are indicated in the respective test method reported.

Respectfully,

TRI Environmental, Inc. - California

Maria Espitia
Quality Assurance

Chad Blackwell
TRI-CA Director

Signatures are on file

It shall be noted that the sample(s) tested per this report is(are) believed to be true representative(s) of the material produced under the designation stated herein. In addition, the attached laboratory test results are considered indicative only of the quality/property of samples/specimens that were actually tested. The designated test methods employed are based on the generally accepted and current industry standards/practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entities duly authorized by the respective client, or the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them for a longer period, please advise us in writing.

2 Pages Total *(including this sheet)*

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **22-Jun-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Extrusion Weld**
TRI JOB #: **CA230618**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 22-Jun-23

		Crosshead Speed: 2 in/min				Crosshead Speed: 2 in/min				
		SHEAR EVALUATION				PEEL EVALUATION				
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DT-13	**173529**	91	>50%	BRK		1 Outside	78	0	SE3	
P29/R198		94	>50%	BRK		2 Outside	79	0	SE3	
		91	>50%	BRK		3 Outside	68	0	SE3	
		92	>50%	BRK		4 Outside	68	0	SE3	
		91	>50%	BRK		5 Outside	67	0	SE3	
						AVG:	**72**			52
						STD. DEV.	**6**			
						1 Inside	N/A			
						2 Inside				
						3 Inside				
						4 Inside				
						5 Inside				
	AVG.	**92**			78	**AVG:**				
	STD. DEV.	**1**				STD. DEV.				
DT-14	**173530**	93	>50%	BRK		1 Outside	90	0	SE3	
P49/R197		96	>50%	BRK		2 Outside	92	0	SE3	
		90	>50%	BRK		3 Outside	82	0	SE3	
		94	>50%	BRK		4 Outside	82	0	SE3	
		92	>50%	BRK		5 Outside	92	0	SE3	
						AVG:	**88**			52
						STD. DEV.	**5**			
						1 Inside	N/A			
						2 Inside				
						3 Inside				
						4 Inside				
						5 Inside				
	AVG:	**93**			78	**AVG:**				
	STD. DEV.	**2**				STD. DEV.				

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

GAI-LAP
Initial: CVZ #:0.13
DATE: 06/28/2023

June 28, 2023

Nick Thompson
Sevee & Maher
4 Blanchard Road, P.O. 85A
Cumberland, ME, 04021

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Thompson:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of five (5) HDPE Seam samples.

PROJECT NAME: Dolby Phase 3 Cover Upgrade DATE REPORTED: **June 28, 2023**

REFERENCE TRI JOB NO.: CA230642

DATE RECEIVED: June 28, 2023

SAMPLE(S) SENT BY: Sevee & Maher

TEST PERFORMED AT: TRI-CA Facility (see the complete contact info and address below), except otherwise noted.

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*TRI-CA CONTROL NUMBER*
DS-15 P70/P72	173626
DS-16 P75/P77	173627
DS-17 P80/P81	173628
DS-18 P85/P87	173629
DS-19 P66/Phase 1	173630

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in the attached Table(s) 1 to 3.

Note: The general conditioning and testing of the material samples identified in this report were performed within the range of the laboratory environmental conditions; i.e., 20-24°C and 45-65% RH. Otherwise, the actual environmental conditions are indicated in the respective test method reported.

Respectfully,

TRI Environmental, Inc. - California

Maria Espitia
Quality Assurance

Chad Blackwell
TRI-CA Director

Signatures are on file

It shall be noted that the sample(s) tested per this report is(are) believed to be true representative(s) of the material produced under the designation stated herein. In addition, the attached laboratory test results are considered indicative only of the quality/property of samples/specimens that were actually tested. The designated test methods employed are based on the generally accepted and current industry standards/practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entities duly authorized by the respective client, or the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them for a longer period, please advise us in writing.

4 Pages Total *(including this sheet)*

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **28-Jun-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230642**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 28-Jun-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-15	**173626**	100	>50%	BRK		1 Outside	94	0	SE1	
P70/ P72		103	>50%	BRK		2 Outside	96	0	SE1	
		104	>50%	BRK		3 Outside	94	0	SE1	
		104	>50%	BRK		4 Outside	95	0	SE1	
		103	>50%	BRK		5 Outside	92	0	SE1	
						AVG:	**94**			52
						STD. DEV.	**1**			
						1 Inside	73	0	SE1	
						2 Inside	82	0	SE1	
						3 Inside	64	0	SE1	
						4 Inside	68	0	SE1	
						5 Inside	76	0	SE1	
	AVG.	**103**			78	**AVG:**	**72**			52
	STD. DEV.	**1**				STD. DEV.	**7**			
DS-16	**173627**	103	>50%	BRK		1 Outside	94	0	SE1	
P75/ P77		107	>50%	BRK		2 Outside	94	0	SE1	
		100	>50%	BRK		3 Outside	96	0	SE1	
		104	>50%	BRK		4 Outside	97	0	SE1	
		106	>50%	BRK		5 Outside	93	0	SE1	
						AVG:	**95**			52
						STD. DEV.	**2**			
						1 Inside	92	0	SE1	
						2 Inside	95	0	SE1	
						3 Inside	87	0	SE1	
						4 Inside	79	0	SE1	
						5 Inside	97	0	SE1	
	AVG:	**104**			78	**AVG:**	**90**			52
	STD. DEV.	**2**				STD. DEV.	**7**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 2.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **28-Jun-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230642**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 28-Jun-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-17	**173628**	101	>50%	BRK		1 Outside	96	0	SE1	
P80/ P81		105	>50%	BRK		2 Outside	98	0	SE1	
		100	>50%	BRK		3 Outside	98	0	SE1	
		102	>50%	BRK		4 Outside	98	0	SE1	
		103	>50%	BRK		5 Outside	94	0	SE1	
						AVG:	**97**			52
						STD. DEV.	**2**			
						1 Inside	94	0	SE1	
						2 Inside	82	0	SE1	
						3 Inside	91	0	SE1	
						4 Inside	87	0	SE1	
						5 Inside	97	0	SE1	
	AVG.	**102**			78	**AVG:**	**90**			52
	STD. DEV.	**2**				STD. DEV.	**6**			
DS-18	**173629**	100	>50%	BRK		1 Outside	81	0	SE1	
P85/ P87		103	>50%	BRK		2 Outside	85	0	SE1	
		102	>50%	BRK		3 Outside	84	0	SE1	
		105	>50%	BRK		4 Outside	83	0	SE1	
		103	>50%	BRK		5 Outside	86	0	SE1	
						AVG:	**84**			52
						STD. DEV.	**2**			
						1 Inside	84	0	SE1	
						2 Inside	93	0	SE1	
						3 Inside	96	0	SE1	
						4 Inside	96	0	SE1	
						5 Inside	90	0	SE1	
	AVG:	**102**			78	**AVG:**	**92**			52
	STD. DEV.	**2**				STD. DEV.	**5**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 2)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 3.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **28-Jun-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Extrusion Weld**
TRI JOB #: **CA230642**

QC'd By: María Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 28-Jun-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-19	**173630**	98	>50%	BRK		1 Outside	78	0	SE3	
P66/ PHASE 1		96	>50%	BRK		2 Outside	66	0	SE3	
		96	>50%	BRK		3 Outside	86	0	SE3	
		94	>50%	BRK		4 Outside	84	0	SE3	
		95	>50%	BRK		5 Outside	91	0	SE3	
						AVG:	**81**			52
						STD. DEV.	**9**			
						1 Inside	N/A			
						2 Inside				
						3 Inside				
						4 Inside				
						5 Inside				
	AVG.	**96**			78	**AVG:**				
	STD. DEV.	**2**				STD. DEV.				

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 3)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

GAI-LAP
Initial: EVZ #:0.13
DATE: 07/11/2023

July 11, 2023

Nick Thompson
Sevee & Maher
4 Blanchard Road, P.O. 85A
Cumberland, ME, 04021

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Thompson:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of three (3) HDPE Seam samples.

PROJECT NAME: Dolby Phase 3 Cover Upgrade DATE REPORTED: **July 11, 2023**

REFERENCE TRI JOB NO.: CA230712

DATE RECEIVED: July 11, 2023

SAMPLE(S) SENT BY: Sevee & Maher

TEST PERFORMED AT: TRI-CA Facility (see the complete contact info and address below), except otherwise noted.

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*TRI-CA CONTROL NUMBER*
DT-20 P98/P100	174048
DT-21 P89/P100	174049
DT-22 P106/P108	174050

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in the attached Table(s) 1 to 2.

Note: The general conditioning and testing of the material samples identified in this report were performed within the range of the laboratory environmental conditions; i.e., 20-24°C and 45-65% RH. Otherwise, the actual environmental conditions are indicated in the respective test method reported.

Respectfully,

TRI Environmental, Inc. - California

Maria Espitia
Quality Assurance

Chad Blackwell
TRI-CA Director

Signatures are on file

It shall be noted that the sample(s) tested per this report is(are) believed to be true representative(s) of the material produced under the designation stated herein. In addition, the attached laboratory test results are considered indicative only of the quality/property of samples/specimens that were actually tested. The designated test methods employed are based on the generally accepted and current industry standards/practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entities duly authorized by the respective client, or the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them for a longer period, please advise us in writing.

3 Pages Total *(including this sheet)*

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **11-Jul-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230712**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 11-Jul-23

		Crosshead Speed: 2 in/min				Crosshead Speed: 2 in/min				
		SHEAR EVALUATION				PEEL EVALUATION				
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DT-20	**174048**	103	>50%	BRK		1 Outside	95	0	SE1	
P98 / P100		104	>50%	BRK		2 Outside	97	0	SE1	
		102	>50%	BRK		3 Outside	92	0	SE1	
		103	>50%	BRK		4 Outside	94	0	SE1	
		102	>50%	BRK		5 Outside	95	0	SE1	
						AVG:	**94**			52
						STD. DEV.	**2**			
						1 Inside	69	0	SE1	
						2 Inside	93	0	SE1	
						3 Inside	95	0	SE1	
						4 Inside	73	0	SE1	
						5 Inside	95	0	SE1	
	AVG.	**103**			78	**AVG:**	**85**			52
	STD. DEV.	**1**				STD. DEV.	**13**			
DT-21	**174049**	89	>50%	BRK		1 Outside	75	0	SE1	
P89 / P10		93	>50%	BRK		2 Outside	86	0	SE1	
		87	>50%	BRK		3 Outside	76	0	SE1	
		90	>50%	BRK		4 Outside	87	0	SE1	
		89	>50%	BRK		5 Outside	89	0	SE1	
						AVG:	**83**			52
						STD. DEV.	**6**			
						1 Inside	86	0	SE1	
						2 Inside	86	0	SE1	
						3 Inside	89	0	SE1	
						4 Inside	90	0	SE1	
						5 Inside	88	0	SE1	
	AVG:	**90**			78	**AVG:**	**88**			52
	STD. DEV.	**2**				STD. DEV.	**2**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 2.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: ***Sevee and Maher***
PROJECT: ***Dolby Phase 3 Cover Upgrade***
DATE REC'D: ***11-Jul-23***

MATERIAL: ***HDPE SEAM***
SEAM TYPE: ***Fusion Weld***
TRI JOB #: ***CA230712***

QC'd By: María Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 11-Jul-23

		Crosshead Speed: 2 in/min				*Crosshead Speed: 2 in/min*				
		SHEAR EVALUATION				***PEEL EVALUATION***				
SAMPLE ID	*TRI CONTROL #*	*MAXIMUM STRENGTH (lb/in width)*	*Elongation Run up to*	*Locus of Break*	*PROJECT SPEC. (lb/in width)*	*SPECIMEN NUMBER*	*MAXIMUM STRENGTH (lb/in width)*	*% INCURSION (%)*	*LOCUS OF BREAK*	*PROJECT SPEC. (lb/in width)*
DT-22	**174050**	102	>50%	BRK		1 Outside	82	0	SE1	
P106 / P108		98	>50%	BRK		2 Outside	91	0	SE1	
		100	>50%	BRK		3 Outside	85	0	SE1	
		100	>50%	BRK		4 Outside	84	0	SE1	
		102	>50%	BRK		5 Outside	92	0	SE1	
						AVG:	**87**			52
						STD. DEV.	**5**			
						1 Inside	89	0	SE1	
						2 Inside	83	0	SE1	
						3 Inside	88	0	SE1	
						4 Inside	86	0	SE1	
						5 Inside	82	0	SE1	
	AVG.	**100**			78	**AVG:**	**86**			52
	STD. DEV.	**2**				STD. DEV.	**3**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 2)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

GAI-LAP
Initial: EVZ #:0.13
DATE: 07/21/2023

July 21, 2023

Nick Thompson
Sevee & Maher
4 Blanchard Road, P.O. 85A
Cumberland, ME, 04021

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Thompson:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of four (4) HDPE Seam samples.

PROJECT NAME: Dolby Phase 3 Cover Upgrade DATE REPORTED: **July 21, 2023**

REFERENCE TRI JOB NO.: CA230768

DATE RECEIVED: July 21, 2023

SAMPLE(S) SENT BY: Sevee & Maher

TEST PERFORMED AT: TRI-CA Facility (see the complete contact info and address below), except otherwise noted.

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*TRI-CA CONTROL NUMBER*
DS-23 P115/118	174356
DS-24 P122/124	174357
DS-25 P127/129	174358
DS-26 P103/121	174359

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in the attached Table(s) 1 to 2.

Note: The general conditioning and testing of the material samples identified in this report were performed within the range of the laboratory environmental conditions, i.e., 20-24°C and 45-65% RH. Otherwise, the actual environmental conditions are indicated in the respective test method reported.

Respectfully,

TRI Environmental, Inc. - California

Maria Espitia
Quality Assurance

Chad Blackwell
TRI-CA Director

Signatures are on file

It shall be noted that the sample(s) tested per this report is(are) believed to be true representative(s) of the material produced under the designation stated herein. In addition, the attached laboratory test results are considered indicative only of the quality/property of samples/specimens that were actually tested. The designated test methods employed are based on the generally accepted and current industry standards/practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entities duly authorized by the respective client, or the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them for a longer period, please advise us in writing.

3 Pages Total *(including this sheet)*

TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

Austin, TX - USA | CA - USA | SC - USA | Gold Coast - Australia | Suzhou - China | Sao Paulo, Brazil | Johannesburg - Africa

GAI-LAP

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **21-Jul-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230768**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 21-Jul-23

		Crosshead Speed: 2 in/min				Crosshead Speed: 2 in/min				
		SHEAR EVALUATION				PEEL EVALUATION				
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-23	**174356**	87	>50%	BRK		1 Outside	91	0	SE1	
P 115/118		91	>50%	BRK		2 Outside	91	0	SE1	
		88	>50%	BRK		3 Outside	92	0	SE1	
		91	>50%	BRK		4 Outside	85	0	SE1	
		91	>50%	BRK		5 Outside	91	0	SE1	
						AVG:	**90**			52
						STD. DEV.	**3**			
						1 Inside	75	0	SE1	
						2 Inside	78	0	SE1	
						3 Inside	84	0	SE1	
						4 Inside	77	0	SE1	
						5 Inside	72	0	SE1	
	AVG.	**90**			78	**AVG:**	**77**			52
	STD. DEV.	**2**				STD. DEV.	**5**			
DS-24	**174357**	88	>50%	BRK		1 Outside	96	0	SE1	
P 122/124		91	>50%	BRK		2 Outside	98	0	SE1	
		85	>50%	BRK		3 Outside	96	0	SE1	
		90	>50%	BRK		4 Outside	95	0	SE1	
		89	>50%	BRK		5 Outside	95	0	SE1	
						AVG:	**96**			52
						STD. DEV.	**1**			
						1 Inside	92	0	SE1	
						2 Inside	92	0	SE1	
						3 Inside	93	0	SE1	
						4 Inside	90	0	SE1	
						5 Inside	84	0	SE1	
	AVG:	**89**			78	**AVG:**	**90**			52
	STD. DEV.	**2**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 2.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **21-Jul-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230768**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 21-Jul-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-25	**174358**	92	>50%	BRK		1 Outside	92	0	SE1	
P 127/129		95	>50%	BRK		2 Outside	89	0	SE1	
		89	>50%	BRK		3 Outside	87	0	SE1	
		93	>50%	BRK		4 Outside	91	0	SE1	
		92	>50%	BRK		5 Outside	91	0	SE1	
						AVG:	**90**			52
						STD. DEV.	**2**			
						1 Inside	92	0	SE1	
						2 Inside	87	0	SE1	
						3 Inside	90	0	SE1	
						4 Inside	87	0	SE1	
						5 Inside	91	0	SE1	
	AVG.	**92**			78	**AVG:**	**89**			52
	STD. DEV.	**2**				STD. DEV.	**2**			
DS-26	**174359**	97	>50%	BRK		1 Outside	89	0	SE1	
P 103/121		96	>50%	BRK		2 Outside	91	0	SE1	
		95	>50%	BRK		3 Outside	89	0	SE1	
		99	>50%	BRK		4 Outside	86	0	SE1	
		100	>50%	BRK		5 Outside	88	0	SE1	
						AVG:	**89**			52
						STD. DEV.	**1**			
						1 Inside	70	0	SE1	
						2 Inside	73	0	SE1	
						3 Inside	81	0	SE1	
						4 Inside	77	0	SE1	
						5 Inside	78	0	SE1	
	AVG:	**97**			78	**AVG:**	**76**			52
	STD. DEV.	**2**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 2)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

GAI-LAP
Initial: EVZ #:0.13
DATE: 08/22/2023

August 22, 2023

Nick Thompson
Sevee & Maher
4 Blanchard Road, P.O. 85A
Cumberland, ME, 04021

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Thompson:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of twelve (12) HDPE Seam samples.

PROJECT NAME: Dolby Phase 3 Cover Upgrade DATE REPORTED: **August 22, 2023**

REFERENCE TRI JOB NO.: CA230920

DATE RECEIVED: August 22, 2023

SAMPLE(S) SENT BY: Sevee & Maher

TEST PERFORMED AT: TRI-CA Facility (see the complete contact info and address below), except otherwise noted.

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*TRI-CA CONTROL NUMBER*	*SAMPLE ID*	*TRI-CA CONTROL NUMBER*
DS-27 P 133/134	175116	DS-33 P 151/152	175122
DS-28 P 138/139	175117	DS-34 P 154/155	175123
DS-29 P 142/143	175118	DS-35 P 157/156	175124
DS-30 P 144/145	175119	DS-36 P 165/167	175125
DS-31 P 147/148	175120	DS-37 P 168/170	175126
DS-32 P 149/150	175121	DS-39 P 176/178	175127

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in the attached Table(s) 1 to 6.

Note: The general conditioning and testing of the material samples identified in this report were performed within the range of the laboratory environmental conditions, i.e., 20-24°C and 45-65% RH. Otherwise, the actual environmental conditions are indicated in the respective test method reported.

Respectfully,

TRI Environmental, Inc. - California

Maria Espitia
Quality Assurance

Chad Blackwell
TRI-CA Director

Signatures are on file

It shall be noted that the sample(s) tested per this report is(are) believed to be true representative(s) of the material produced under the designation stated herein. In addition, the attached laboratory test results are considered indicative only of the quality/property of samples/specimens that were actually tested. The designated test methods employed are based on the generally accepted and current industry standards/practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entities duly authorized by the respective client, or the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them for a longer period, please advise us in writing.

7 Pages Total *(including this sheet)*

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **22-Aug-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230920**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 22-Aug-23

		Crosshead Speed: 2 in/min				Crosshead Speed: 2 in/min				
		SHEAR EVALUATION				**PEEL EVALUATION**				
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-27	**175116**	100	>50%	BRK		1 Outside	94	0	SE1	
P 133/134		101	>50%	BRK		2 Outside	95	0	SE1	
		102	>50%	BRK		3 Outside	96	0	SE1	
		102	>50%	BRK		4 Outside	97	0	SE1	
		103	>50%	BRK		5 Outside	96	0	SE1	
						AVG:	**95**			52
						STD. DEV.	**1**			
						1 Inside	87	0	SE1	
						2 Inside	88	0	SE1	
						3 Inside	91	0	SE1	
						4 Inside	85	0	SE1	
						5 Inside	91	0	SE1	
	AVG.	**102**			78	**AVG:**	**88**			52
	STD. DEV.	**1**				STD. DEV.	**2**			
DS-28	**175117**	99	>50%	BRK		1 Outside	94	0	SE1	
P 138/139		104	>50%	BRK		2 Outside	88	0	SE1	
		103	>50%	BRK		3 Outside	91	0	SE1	
		101	>50%	BRK		4 Outside	93	0	SE1	
		104	>50%	BRK		5 Outside	102	0	SE1	
						AVG:	**94**			52
						STD. DEV.	**5**			
						1 Inside	83	0	SE1	
						2 Inside	96	0	SE1	
						3 Inside	88	0	SE1	
						4 Inside	94	0	SE1	
						5 Inside	97	0	SE1	
	AVG:	**102**			78	**AVG:**	**92**			52
	STD. DEV.	**2**				STD. DEV.	**6**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 2.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **22-Aug-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230920**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 22-Aug-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-29	**175118**	99	>50%	BRK		1 Outside	93	0	SE1	
P 142/143		101	>50%	BRK		2 Outside	90	0	SE1	
		96	>50%	BRK		3 Outside	100	0	SE1	
		98	>50%	BRK		4 Outside	101	0	SE1	
		99	>50%	BRK		5 Outside	91	0	SE1	
						AVG:	**95**			52
						STD. DEV.	**5**			
						1 Inside	76	0	SE1	
						2 Inside	81	0	SE1	
						3 Inside	77	0	SE1	
						4 Inside	95	0	SE1	
						5 Inside	79	0	SE1	
	AVG.	**99**			78	**AVG:**	**81**			52
	STD. DEV.	**2**				STD. DEV.	**8**			
DS-30	**175119**	100	>50%	BRK		1 Outside	87	0	SE1	
P 144/145		99	>50%	BRK		2 Outside	87	0	SE1	
		95	>50%	BRK		3 Outside	88	0	SE1	
		97	>50%	BRK		4 Outside	91	0	SE1	
		98	>50%	BRK		5 Outside	89	0	SE1	
						AVG:	**88**			52
						STD. DEV.	**2**			
						1 Inside	89	0	SE1	
						2 Inside	78	0	SE1	
						3 Inside	93	0	SE1	
						4 Inside	90	0	SE1	
						5 Inside	94	0	SE1	
	AVG:	**98**			78	**AVG:**	**89**			52
	STD. DEV.	**2**				STD. DEV.	**6**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 2)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 3.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **22-Aug-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230920**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 22-Aug-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-31	**175120**	97	>50%	BRK		1 Outside	87	0	SE1	
P 147/148		100	>50%	BRK		2 Outside	84	0	SE1	
		98	>50%	BRK		3 Outside	90	0	SE1	
		98	>50%	BRK		4 Outside	82	0	SE1	
		98	>50%	BRK		5 Outside	90	0	SE1	
						AVG:	**87**			52
						STD. DEV.	**4**			
						1 Inside	69	0	SE1	
						2 Inside	74	0	SE1	
						3 Inside	91	0	SE1	
						4 Inside	92	0	SE1	
						5 Inside	71	0	SE1	
	AVG.	**98**			78	**AVG:**	**80**			52
	STD. DEV.	**1**				STD. DEV.	**11**			
DS-32	**175121**	98	>50%	BRK		1 Outside	95	0	SE1	
P 149/150		101	>50%	BRK		2 Outside	89	0	SE1	
		98	>50%	BRK		3 Outside	85	0	SE1	
		103	>50%	BRK		4 Outside	89	0	SE1	
		101	>50%	BRK		5 Outside	83	0	SE1	
						AVG:	**88**			52
						STD. DEV.	**5**			
						1 Inside	98	0	SE1	
						2 Inside	99	0	SE1	
						3 Inside	99	0	SE1	
						4 Inside	100	0	SE1	
						5 Inside	97	0	SE1	
	AVG:	**100**			78	**AVG:**	**99**			52
	STD. DEV.	**2**				STD. DEV.	**1**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 3)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 4.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **22-Aug-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230920**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 22-Aug-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-33	**175122**	99	>50%	BRK		1 Outside	95	0	SE1	
P 151/152		103	>50%	BRK		2 Outside	102	0	SE1	
		97	>50%	BRK		3 Outside	103	0	SE1	
		98	>50%	BRK		4 Outside	97	0	SE1	
		99	>50%	BRK		5 Outside	95	0	SE1	
						AVG:	**98**			52
						STD. DEV.	**4**			
						1 Inside	98	0	SE1	
						2 Inside	99	0	SE1	
						3 Inside	97	0	SE1	
						4 Inside	99	0	SE1	
						5 Inside	99	0	SE1	
	AVG.	**99**			78	**AVG:**	**98**			52
	STD. DEV.	**2**				STD. DEV.	**1**			
DS-34	**175123**	103	>50%	BRK		1 Outside	92	0	SE1	
P 154/155		105	>50%	BRK		2 Outside	93	0	SE1	
		99	>50%	BRK		3 Outside	94	0	SE1	
		102	>50%	BRK		4 Outside	97	0	SE1	
		104	>50%	BRK		5 Outside	92	0	SE1	
						AVG:	**94**			52
						STD. DEV.	**2**			
						1 Inside	98	0	SE1	
						2 Inside	98	0	SE1	
						3 Inside	92	0	SE1	
						4 Inside	96	0	SE1	
						5 Inside	93	0	SE1	
	AVG:	**102**			78	**AVG:**	**96**			52
	STD. DEV.	**3**				STD. DEV.	**3**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 4)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 5.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **22-Aug-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230920**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 22-Aug-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-35	**175124**	96	>50%	BRK		1 Outside	82	0	SE1	
P 157/156		100	>50%	BRK		2 Outside	88	0	SE1	
		97	>50%	BRK		3 Outside	80	0	SE1	
		99	>50%	BRK		4 Outside	94	0	SE1	
		99	>50%	BRK		5 Outside	87	0	SE1	
						AVG:	**86**			52
						STD. DEV.	**6**			
						1 Inside	80	0	SE1	
						2 Inside	73	0	SE1	
						3 Inside	77	0	SE1	
						4 Inside	89	0	SE1	
						5 Inside	87	0	SE1	
	AVG.	**98**			78	**AVG:**	**81**			52
	STD. DEV.	**1**				STD. DEV.	**7**			
DS-36	**175125**	96	>50%	BRK		1 Outside	92	0	SE1	
P 165/167		98	>50%	BRK		2 Outside	93	0	SE1	
		97	>50%	BRK		3 Outside	97	0	SE1	
		94	>50%	BRK		4 Outside	94	0	SE1	
		94	>50%	BRK		5 Outside	91	0	SE1	
						AVG:	**93**			52
						STD. DEV.	**2**			
						1 Inside	87	0	SE1	
						2 Inside	84	0	SE1	
						3 Inside	88	0	SE1	
						4 Inside	87	0	SE1	
						5 Inside	87	0	SE1	
	AVG:	**96**			78	**AVG:**	**86**			52
	STD. DEV.	**2**				STD. DEV.	**2**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 5)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 6.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **22-Aug-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230920**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 22-Aug-23

		Crosshead Speed: 2 in/min				Crosshead Speed: 2 in/min				
		SHEAR EVALUATION				PEEL EVALUATION				
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-37	**175126**	95	>50%	BRK		1 Outside	87	0	SE1	
P 168/170		99	>50%	BRK		2 Outside	90	0	SE1	
		94	>50%	BRK		3 Outside	89	0	SE1	
		98	>50%	BRK		4 Outside	98	0	SE1	
		96	>50%	BRK		5 Outside	89	0	SE1	
						AVG:	**91**			52
						STD. DEV.	**4**			
						1 Inside	93	0	SE1	
						2 Inside	89	0	SE1	
						3 Inside	94	0	SE1	
						4 Inside	95	0	SE1	
						5 Inside	94	0	SE1	
	AVG.	**97**			78	**AVG:**	**93**			52
	STD. DEV.	**2**				STD. DEV.	**2**			
DS-39	**175127**	100	>50%	BRK		1 Outside	101	0	SE1	
P 176/178		100	>50%	BRK		2 Outside	98	0	SE1	
		98	>50%	BRK		3 Outside	101	0	SE1	
		99	>50%	BRK		4 Outside	102	0	SE1	
		101	>50%	BRK		5 Outside	101	0	SE1	
						AVG:	**101**			52
						STD. DEV.	**1**			
						1 Inside	100	0	SE1	
						2 Inside	99	0	SE1	
						3 Inside	95	0	SE1	
						4 Inside	96	0	SE1	
						5 Inside	99	0	SE1	
	AVG:	**100**			78	**AVG:**	**98**			52
	STD. DEV.	**1**				STD. DEV.	**2**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 6)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

GAI-LAP
Initial: EVZ #:0.13
DATE: 08/23/2023

August 23, 2023

Nick Thompson
Sevee & Maher
4 Blanchard Road, P.O. 85A
Cumberland, ME, 04021

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Thompson:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of five (5) HDPE Seam samples.

PROJECT NAME: Dolby Phase 3 Cover Upgrade DATE REPORTED: **August 23, 2023**

REFERENCE TRI JOB NO.: CA230928

DATE RECEIVED: August 23, 2023

SAMPLE(S) SENT BY: Sevee & Maher

TEST PERFORMED AT: TRI-CA Facility (see the complete contact info and address below), except otherwise noted.

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*TRI-CA CONTROL NUMBER*
DS-38A P176/ P174	175184
DS-38B P175/ P173	175185
DS-40 P183/ P181	175186
DS-41 P188/ P187	175187
DS-42 P192/ P188	175188

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in the attached Table(s) 1 to 3.

Note: The general conditioning and testing of the material samples identified in this report were performed within the range of the laboratory environmental conditions, i.e., 20-24°C and 45-65% RH. Otherwise, the actual environmental conditions are indicated in the respective test method reported.

Respectfully,

TRI Environmental, Inc. - California

Maria Espitia
Quality Assurance

Chad Blackwell
TRI-CA Director

Signatures are on file

It shall be noted that the sample(s) tested per this report is(are) believed to be true representative(s) of the material produced under the designation stated herein. In addition, the attached laboratory test results are considered indicative only of the quality/property of samples/specimens that were actually tested. The designated test methods employed are based on the generally accepted and current industry standards/practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entities duly authorized by the respective client, or the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them for a longer period, please advise us in writing.

4 Pages Total *(including this sheet)*

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **23-Aug-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230928**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 23-Aug-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-38A	**175184**	100	>50%	BRK		1 Outside	88	0	SE1	
P176/P174		102	>50%	BRK		2 Outside	93	0	SE1	
		100	>50%	BRK		3 Outside	89	0	SE1	
		102	>50%	BRK		4 Outside	90	0	SE1	
		98	>50%	BRK		5 Outside	94	0	SE1	
						AVG:	**91**			52
						STD. DEV.	**3**			
						1 Inside	91	0	SE1	
						2 Inside	94	0	SE1	
						3 Inside	86	0	SE1	
						4 Inside	92	0	SE1	
						5 Inside	95	0	SE1	
	AVG.	**101**			78	**AVG:**	**92**			52
	STD. DEV.	**2**				STD. DEV.	**4**			
DS-38B	**175185**	101	>50%	BRK		1 Outside	88	0	SE1	
P175/P173		102	>50%	BRK		2 Outside	88	0	SE1	
		102	>50%	BRK		3 Outside	91	0	SE1	
		99	>50%	BRK		4 Outside	91	0	SE1	
		103	>50%	BRK		5 Outside	91	0	SE1	
						AVG:	**90**			52
						STD. DEV.	**2**			
						1 Inside	92	0	SE1	
						2 Inside	86	0	SE1	
						3 Inside	82	0	SE1	
						4 Inside	91	0	SE1	
						5 Inside	83	0	SE1	
	AVG:	**102**			78	**AVG:**	**87**			52
	STD. DEV.	**1**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 2.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **23-Aug-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion Weld**
TRI JOB #: **CA230928**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 23-Aug-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-40	**175186**	103	>50%	BRK		1 Outside	96	0	SE1	
P183/P181		104	>50%	BRK		2 Outside	101	0	SE1	
		103	>50%	BRK		3 Outside	99	0	SE1	
		105	>50%	BRK		4 Outside	93	0	SE1	
		110	>50%	BRK		5 Outside	104	0	SE1	
						AVG:	**98**			52
						STD. DEV.	**4**			
						1 Inside	100	0	SE1	
						2 Inside	96	0	SE1	
						3 Inside	97	0	SE1	
						4 Inside	99	0	SE1	
						5 Inside	101	0	SE1	
	AVG.	**105**			78	**AVG:**	**99**			52
	STD. DEV.	**3**				STD. DEV.	**2**			
DS-41	**175187**	99	>50%	BRK		1 Outside	99	0	SE1	
P188/P187		103	>50%	BRK		2 Outside	97	0	SE1	
		99	>50%	BRK		3 Outside	98	0	SE1	
		102	>50%	BRK		4 Outside	97	0	SE1	
		102	>50%	BRK		5 Outside	88	0	SE1	
						AVG:	**96**			52
						STD. DEV.	**4**			
						1 Inside	82	0	SE1	
						2 Inside	95	0	SE1	
						3 Inside	78	0	SE1	
						4 Inside	83	0	SE1	
						5 Inside	93	0	SE1	
	AVG:	**101**			78	**AVG:**	**86**			52
	STD. DEV.	**2**				STD. DEV.	**7**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 2)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 3.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: ***Sevee and Maher***
PROJECT: ***Dolby Phase 3 Cover Upgrade***
DATE REC'D: ***23-Aug-23***

MATERIAL: ***HDPE SEAM***
SEAM TYPE: ***Fusion Weld***
TRI JOB #: ***CA230928***

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 23-Aug-23

Crosshead Speed: 2 in/min		***SHEAR EVALUATION***				*Crosshead Speed: 2 in/min*	***PEEL EVALUATION***			
SAMPLE ID	*TRI CONTROL #*	*MAXIMUM STRENGTH (lb/in width)*	*Elongation Run up to*	*Locus of Break*	*PROJECT SPEC. (lb/in width)*	*SPECIMEN NUMBER*	*MAXIMUM STRENGTH (lb/in width)*	*% INCURSION (%)*	*LOCUS OF BREAK*	*PROJECT SPEC. (lb/in width)*
DS-42	**175188**	101	>50%	BRK		1 Outside	89	0	SE1	
P192/P188		102	>50%	BRK		2 Outside	96	0	SE1	
		102	>50%	BRK		3 Outside	86	0	SE1	
		104	>50%	BRK		4 Outside	96	0	SE1	
		105	>50%	BRK		5 Outside	92	0	SE1	
						AVG:	**92**			52
						STD. DEV.	**5**			
						1 Inside	89	0	SE1	
						2 Inside	93	0	SE1	
						3 Inside	97	0	SE1	
						4 Inside	91	0	SE1	
						5 Inside	87	0	SE1	
	AVG.	**103**			78	**AVG:**	**91**			52
	STD. DEV.	**1**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 3)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

GAI-LAP
Initial: EVZ #:0.13
DATE: 08/24/2023

August 24, 2023

Nick Thompson
Sevee & Maher
4 Blanchard Road, P.O. 85A
Cumberland, ME, 04021

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Thompson:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of four (4) HDPE Seam samples.

PROJECT NAME: Dolby Phase 3 Cover Upgrade DATE REPORTED: **August 24, 2023**

REFERENCE TRI JOB NO.: CA230936

DATE RECEIVED: August 24, 2023

SAMPLE(S) SENT BY: Sevee & Maher

TEST PERFORMED AT: TRI-CA Facility (see the complete contact info and address below), except otherwise noted.

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*TRI-CA CONTROL NUMBER*
DS-43 P191/ Phase 1	175209
DS-44 P188/ P66	175210
DS-45 P172/ Cap Strip	175211
DS-46 P147/ P165	175212

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in the attached Table(s) 1 to 2.

Note: The general conditioning and testing of the material samples identified in this report were performed within the range of the laboratory environmental conditions, i.e., 20-24°C and 45-65% RH. Otherwise, the actual environmental conditions are indicated in the respective test method reported.

Respectfully,

TRI Environmental, Inc. - California

Maria Espitia
Quality Assurance

Chad Blackwell
TRI-CA Director

Signatures are on file

It shall be noted that the sample(s) tested per this report is(are) believed to be true representative(s) of the material produced under the designation stated herein. In addition, the attached laboratory test results are considered indicative only of the quality/property of samples/specimens that were actually tested. The designated test methods employed are based on the generally accepted and current industry standards/practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entities duly authorized by the respective client, or the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them for a longer period, please advise us in writing.

3 Pages Total *(including this sheet)*

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **24-Aug-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Extrusion Weld**
TRI JOB #: **CA230936**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 24-Aug-23

		Crosshead Speed: 2 in/min				Crosshead Speed: 2 in/min				
		SHEAR EVALUATION				PEEL EVALUATION				
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-43	**175209**	116	>50%	BRK		1 Outside	77	0	SE3	
P191/ PH 1		119	>50%	BRK		2 Outside	86	0	SE3	
		117	>50%	BRK		3 Outside	77	0	SE3	
		119	>50%	BRK		4 Outside	71	0	SE3	
		119	>50%	BRK		5 Outside	89	0	SE3	
						AVG:	**80**			52
						STD. DEV.	**7**			
						1 Inside	N/A			
						2 Inside				
						3 Inside				
						4 Inside				
						5 Inside				
	AVG.	**118**			78	**AVG:**				
	STD. DEV.	**2**				STD. DEV.				
DS-44	**175210**	97	>50%	BRK		1 Outside	90	0	SE3	
P188/ P66		98	>50%	BRK		2 Outside	92	0	SE3	
		98	>50%	BRK		3 Outside	92	0	SE3	
		102	>50%	BRK		4 Outside	86	0	SE3	
		100	>50%	BRK		5 Outside	93	0	SE3	
						AVG:	**90**			52
						STD. DEV.	**3**			
						1 Inside	N/A			
						2 Inside				
						3 Inside				
						4 Inside				
						5 Inside				
	AVG:	**99**			78	**AVG:**				
	STD. DEV.	**2**				STD. DEV.				

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

TABLE 2.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Sevee and Maher**
PROJECT: **Dolby Phase 3 Cover Upgrade**
DATE REC'D: **24-Aug-23**

MATERIAL: **HDPE SEAM**
SEAM TYPE: **Fusion/ Extrusion Weld**
TRI JOB #: **CA230936**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 24-Aug-23

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	TRI CONTROL #	MAXIMUM STRENGTH (lb/in width)	Elongation Run up to	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-45	**175211**	92	>50%	BRK		1 Outside	79	0	SE1	
P172/		92	>50%	BRK		2 Outside	88	0	SE1	
CAP STRIP		92	>50%	BRK		3 Outside	88	0	SE1	
		92	>50%	BRK		4 Outside	84	0	SE1	
FUS		93	>50%	BRK		5 Outside	88	0	SE1	
						AVG:	**85**			52
						STD. DEV.	**4**			
						1 Inside	78	0	SE1	
						2 Inside	85	0	SE1	
						3 Inside	82	0	SE1	
						4 Inside	85	0	SE1	
						5 Inside	71	0	SE1	
	AVG.	**92**			78	**AVG:**	**80**			52
	STD. DEV.	**0**				STD. DEV.	**6**			
DS-46	**175212**	95	>50%	BRK		1 Outside	92	0	SE3	
P147/ P165		98	>50%	BRK		2 Outside	89	0	SE3	
		95	>50%	BRK		3 Outside	75	0	SE3	
		97	>50%	BRK		4 Outside	94	0	SE3	
EXT		96	>50%	BRK		5 Outside	86	0	SE3	
						AVG:	**87**			52
						STD. DEV.	**7**			
						1 Inside	N/A			
						2 Inside				
						3 Inside				
						4 Inside				
						5 Inside				
	AVG:	**96**			78	**AVG:**				
	STD. DEV.	**1**				STD. DEV.				

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

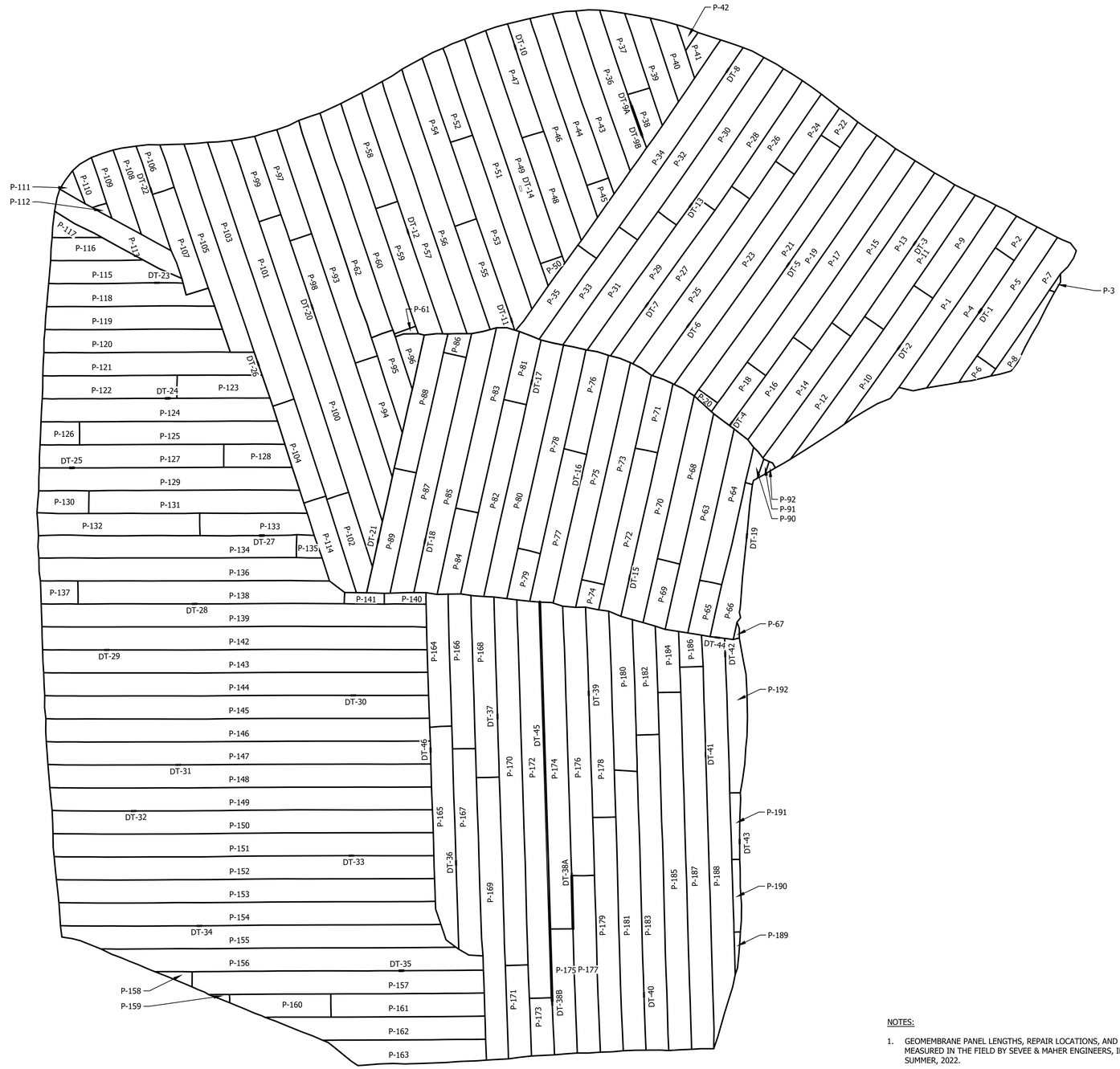
AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 2)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.

- **40-MIL HDPE AS-BUILT PANEL LAYOUT**

SME
SEVEE & MAHER
ENGINEERS



LEGEND

P-6	PANEL #6
⊕	REPAIR LOCATIONS
DT-4	DESTRUCTIVE TEST #4 (REPAIR DIMENSION IS 2'x5', TYPICAL)
———	PANEL LIMIT LINE

DWG: LINER LMN: LINER-PH3 CTB: SME-STD REV: 11/29/2023

NOTES:

1. GEOMEMBRANE PANEL LENGTHS, REPAIR LOCATIONS, AND DESTRUCTIVE TEST LOCATIONS WERE MEASURED IN THE FIELD BY SEVEE & MAHER ENGINEERS, INC, DURING COVER UPGRADE CONSTRUCTION, SUMMER, 2022.
2. PANEL LOCATIONS AS SURVEYED BY GORDON CONTRACTING. (VARIOUS DATES).
3. LENGTH OF PANELS SHOWN ON THIS PLAN ARE MEASURED IN THE FIELD. GEOMEMBRANE PANEL WIDTHS VARY. SEE GEOMEMBRANE PANEL PLACEMENT, PANEL SEAMING, AND REPAIR LOGS FOR ADDITIONAL INFORMATION.
4. COVER UPGRADE GEOMEMBRANE LINER INSTALLED BY INTEGRITY LINING SYSTEMS, OF CORTLAND, NEW YORK. INSTALLATION WAS COMPLETE IN SEPTEMBER, 2022.
5. COVER UPGRADE GEOMEMBRANE LINER WAS PLACED DIRECTLY ON GAS COLLECTION SAND. DRAINAGE GEOCOMPOSITE AS MANUFACTURED BY SOLMAX INTERNATION, INC. CANADA, WAS PLACED DIRECTLY OVER THE COVER UPGRADE GEOMEMBRANE LINER.

FIGURE 2
PANEL LAYOUT PLAN
MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE - PHASE 3
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

\\Barnardofpfpc04\Civil\EVERGREEN\PROJECTS\2021 Phase 3 Backfill\gmsheets\MXD\PANEL LAYOUT - 11292023 9:15:56 AM .bak

ATTACHMENT 8

SME DAILY AND WEEKLY REPORTS

SME
SEVEE & MAHER
ENGINEERS

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday May 3, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	38-46 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	9 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 86%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 Foreman (Nick Schmeidlehner), 2 truck drivers, 2 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0730-1700	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-Volvo A30G haul truck
- Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-water truck

TODAY'S CONSTRUCTION ACTIVITIES

- Dig test pits in potential borrow source area.
- Fix existing culvert at entrance to temporary open waste area.
- Begin stripping existing 6-inch layer of topsoil on Phase 3. Approx. Area 1.87 acres, Estimated Volume 1,500 cy

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue stripping existing topsoil in Area 1 of Phase 3.
- Begin stripping cover soil in Area 1 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Oversaw test pitting of potential borrow area and took samples of material.
- Verified existing drainage structures are protected from sediment with staked hay bales.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon fixing culvert at the entrance to the temporary open waste area. Photo taken looking south.



Photo 2 – Southern stockpile area used for cover soil. Photo taken looking east.



Photo 3 – Test pitting in potential borrow area next to Sediment Pond #1.



Photo 4 – Gordon beginning to strip the existing topsoil in Area 1 of Phase 3. Photo taken looking east.



Photo 5 – Staked hay bales for sediment protection installed around MH#3. Photo taken looking east.



Photo 6 – Staked hay bales for sediment protection installed around the inlet to Sediment Pond #2.



Photo 7 – Northern stockpile area used for topsoil. Photo taken looking north.



Photo 8 – Existing riprap downspouts being separated from the stripped topsoil. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday May 4, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy/Light Rain
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	38-49 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 92%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 Foreman (Nick Schmeidlehner), 2 truck drivers, 2 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0555-1630	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-Volvo A30G haul truck
- Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-water truck

TODAY'S CONSTRUCTION ACTIVITIES

- Finalize stripping existing 6" layer of topsoil in Area 1 of Phase 3. Approx. 3.2 acres of topsoil stripped. Estimated quantity stripped 4,000 cy.
- Build gas vents for the gas collection system.
- Cored concrete tops for the 4" gas vents to be installed on the existing leachate collection structures as part of the gas collection system.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize moving stripped topsoil in Area 1 of Phase 3 to the northern stockpile area.
- Begin stripping cover soil in Area 1 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Verified gas vents were built according to the details on C-302.
- Verified Gordon is sifting through the topsoil stockpile removing any rocks greater than 6" in diameter.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon is continuing to strip the existing 6” topsoil layer in Area 1 of Phase 3. Photo taken looking south.



Photo 2 – Verified gas vents are built per the approved detail.



Photo 3 – Gordon has a skid steer with an attachment sifting through rocks as the topsoil is stockpile Photo taken looking north.



Photo 4 – Gordon finalized stripping existing topsoil in Area 1 of Phase 3. Photo taken looking northeast.



Photo 5 – Gordon coring concrete plugs for gas vents for existing structure abandonment.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday May 5, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	40-60 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	8 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 77%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0620-1415	Trevor Michaud	SME	Construction Oversight
1130	-	American Concrete	Concrete top delivery

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-Volvo A30G haul truck
- Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-water truck
-(1) rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Haul stripped topsoil from Area 1 of Phase 3 to the northern stockpile.
- Cored concrete tops for the 4" gas vents to be installed on the existing leachate collection structures as part of the gas collection system.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize moving stripped topsoil in Area 1 of Phase 3 to the northern stockpile area.
- Begin stripping cover soil in Area 1 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Stormwater inspection.
- Verified Gordon is sifting through the topsoil stockpile removing any rocks greater than 6" in diameter.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon is using road ties to keep sediment out of existing perimeter ditch. Photo taken looking east.



Photo 2 – Area 1 of Phase 3 stripped of existing topsoil layer. Photo taken looking northeast.



Photo 3 – Gordon has a skid steer with an attachment sifting through rocks as the topsoil is stockpile Photo taken looking north.



Photo 4 – Rock spoils pile from sifting through the topsoil pile. Photo taken looking west.



Photo 5 – Gordon coring concrete plugs for gas vents for existing structure abandonment.



Photo 6 – Gordon installed staked haybales at inlet to culvert going to Sediment Pond #1.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday May 8, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	39-57 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	6 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 64%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 5 operators

VISITOR

Time	Name	Representing	Remarks
0600-1730	Trevor Michaud	SME	Construction Oversight
1145-1430	Nick Thompson	SME	Test pitting

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Haul stripped topsoil from Area 1 of Phase 3 to the northern stockpile.
- Begin stripping existing cover soil from Area 1 of Phase 3. Approx. 0.5 acres stripped.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize moving stripped topsoil in Area 1 of Phase 3 to the northern stockpile area.
- Continue stripping cover soil in Area 1 of Phase 3 and hauling to the southern stockpile area.
- Begin exposing the Phase 1 liner system.

QUALITY ASSURANCE

- Construction oversight
- Verified existing gas collection sand layer has minimum required thickness of 6-inches.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon is continuing to haul topsoil to the northern stockpile. Photo taken looking north.



Photo 2 – Northern stockpile area. Photo taken looking north.



Photo 3 – Gordon has begun stripping the existing cover soil layer in Area 1 of Phase 3 in NW corner. Photo taken looking north.



Photo 4 – Gordon installed silt sock around perimeter of leachate pond adjacent to construction. Photo taken looking north.



Photo 5 – Verifying gas collection sand layer thickness.



Photo 6 – Remaining topsoil to be hauled to northern stockpile area. Photo taken looking north-west.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday May 9, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	31-55 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 74%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 5 operators

VISITOR

Time	Name	Representing	Remarks
0620-1830	Trevor Michaud	SME	Construction Oversight
0930-1150	-	Chadwick BaRoss	Mechanic fixing equipment

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Finalized hauling stripped topsoil from Area 1 of Phase 3 to the northern stockpile.
- Continue stripping existing cover soil from Area 1 of Phase 3. Approx. 0.75 acres stripped.
- Begin exposing the Phase 1 tie-in. Approx. 220 LF exposed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue stripping cover soil in Area 1 of Phase 3 and hauling to the southern stockpile area.
- Continue exposing the Phase 1 liner system.

QUALITY ASSURANCE

- Construction oversight
- Saturated area between DMH D3-#5 and DMH D3-#4. Area will continue to be monitored for further actions.
- Verified existing gas collection sand layer has minimum required thickness of 6-inches.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon is continuing to strip cover soil. Photo taken looking south.



Photo 2 – Gordon exposing Phase 1 tie-in. Photo taken looking east.



Photo 3 – Verified enough of Phase 1 is exposed for the proper overlap of Phase 1 and Phase 3.



Photo 4 – Verifying gas collection sand thickness.



Photo 5 – Site overview. Photo taken looking south-east.

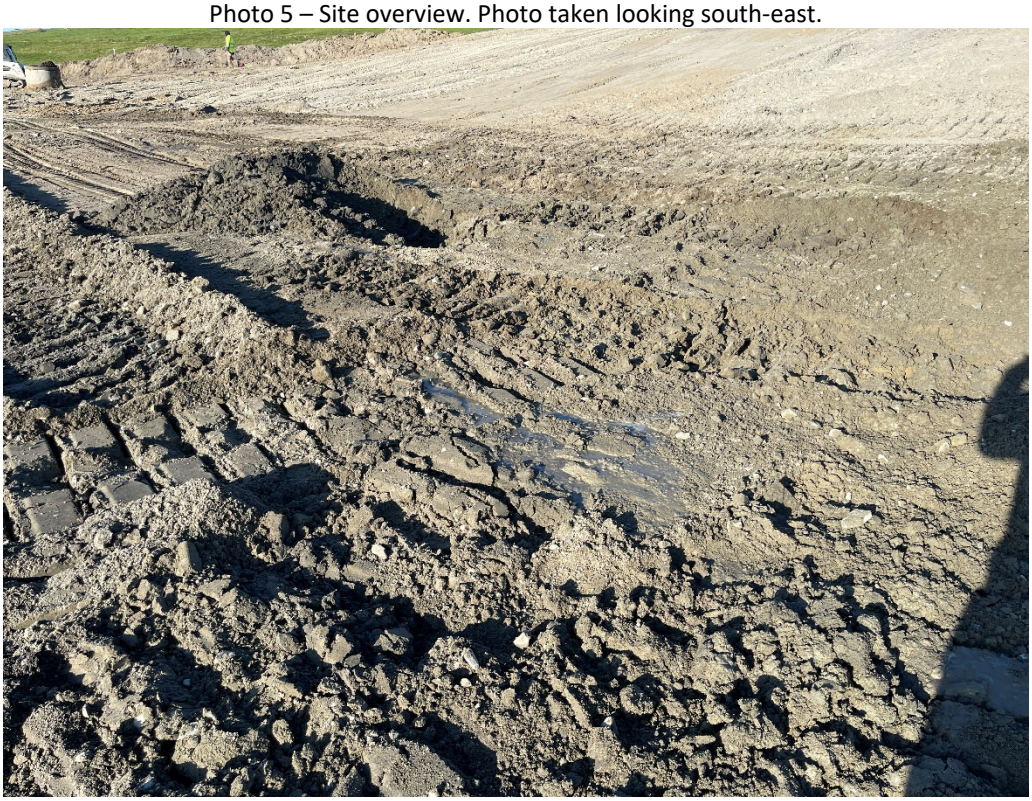


Photo 6 – Saturated area between DMH D3-#5 and DMH D3-#4.. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday May 10, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly cloudy in morning/Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	32-67 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	6 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 63%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 5 operators

VISITOR

Time	Name	Representing	Remarks
0625-1710	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil from Area 1 of Phase 3. Approx. 1.5 acres stripped.
- Continue exposing the Phase 1 tie-in. Approx. 60 LF exposed.
- Expose leachate line from DMH D3-#5 to DMH D3-#4. Line runs through the saturated area. Area left open for the evening.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue stripping cover soil in Area 1 of Phase 3 and hauling to the southern stockpile area.
- Continue exposing the Phase 1 liner system.

QUALITY ASSURANCE

- Construction oversight
- Saturated area between DMH D3-#5 and DMH D3-#4. Area will continue to be monitored for further actions.
- Verified existing gas collection sand layer has minimum required thickness of 6-inches.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon is continuing to expose Phase 1 tie-in soil. Photo taken looking west.



Photo 2 – Gordon exposing leachate line from DMH D3-#5 to DMH D3-#4. Photo taken looking south-west.



Photo 3 – Gordon continuing to strip existing cover soil in Area 1 of Phase 3. Photo taken looking south-west.



Photo 4 – Verifying gas collection sand thickness.



Photo 5 – Saturated area between DMH D3-#5 and DMH D3-#4. Photo taken looking south.



Photo 6 – Site overview. Photo taken looking south-east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday May 11, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	41-74 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 74%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 5 operators

VISITOR

Time	Name	Representing	Remarks
0625-1800	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil from Area 1 of Phase 3. Approx. 1.5 acres stripped.
- Finalized exposing the Phase 1 tie-in for Area 1. Approx. 90 LF exposed.
- Culvert connecting DMH D3-#4 to CB#5 was exposed. Section of pipe is above the gas collection sand layer. Gordon reset pipe to be below the sand layer and will get the necessary components to fix the pipe tomorrow.
- Continue hauling gas collection sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue stripping cover soil in Area 1 of Phase 3 and hauling to the southern stockpile area.
- Begin gas collection system installation.
- Begin existing structure abandonment.

QUALITY ASSURANCE

- Construction oversight
- Saturated area between DMH D3-#5 and DMH D3-#4. Area has dried up. No for further actions required.
- Verified existing gas collection sand layer has minimum required thickness of 6-inches.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon is importing gas collection sand. Photo taken looking west.



Photo 2 – Gordon continuing to haul cover soil. Photo taken looking south-west.



Photo 3 – Gordon continuing to expose the Phase 1 tie-in for Phase 3. Photo taken looking north.



Photo 4 – Verifying gas collection sand thickness.



Photo 5 – Gordon using the rake attachment on skid steer to remove >1” rocks. Photo taken looking south.



Photo 6 – Section of west slope Gordon is working on stripping cover soil. Photo taken looking north-east.



Photo 7 – Gordon reset culvert to below sand grade. Photo taken looking east.



Photo 8 – Site overview. Photo taken looking north-east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday May 12, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Partly Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	42-72 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	1 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 74%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 5 operators

VISITOR

Time	Name	Representing	Remarks
0630-1330	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil from Area 1 of Phase 3.
- Continue using the rake attachment on the skid steer to remove rocks greater than 1-inch in the gas collection sand layer.
- Culvert connecting DMH D3-#4 to CB#5 was fixed and backfilled.
- Continue hauling gas collection sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue stripping cover soil in Area 1 of Phase 3 and hauling to the southern stockpile area.
- Begin gas collection system installation.
- Begin existing structure abandonment.

QUALITY ASSURANCE

- Construction oversight
- Verified culvert connecting DMH D3-#4 to CB#5 was fixed.
- Verified existing gas collection sand layer has minimum required thickness of 6-inches. See associated spreadsheets.
- Obtained borrow source sample for imported gas collection sand.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Southern stockpile for cover soil. Photo taken looking east.



Photo 2 – Gordon continuing to strip cover soil. Photo taken looking north-west.



Photo 3 – Gordon continuing to using the rake attachment to remove >1-inch rocks. Photo taken looking north.



Photo 4 – Verifying gas collection sand thickness.



Photo 5 – Gordon fixed the culvert connecting DMH D3-#4 to CB#5.



Photo 6 – Section of west slope Gordon is working on stripping cover soil. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday May 15, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny, cloudy in afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	40-70 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	6 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 55%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 5 operators

VISITOR

Time	Name	Representing	Remarks
0610-1715	Trevor Michaud	SME	Construction Oversight
1130-1430	Nick Thompson	SME	Check on site, inspect drainage structures
0830	-	Gordon	Dropped off equipment

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil from Area 1 of Phase 3. Approx. 0.75 acres stripped. Area still requires final grading.
- Continue using the rake attachment on the skid steer to remove rocks greater than 1-inch in the gas collection sand layer.
- Continue hauling gas collection sand.
- Continue hauling cover soil to the southern stockpile.
- Removed cover soil that had filled perimeter ditch while stripping in the event rain comes tomorrow.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Complete hauling cover soil in Area 1 of Phase 3 to the southern stockpile area.
- Begin gas collection system installation.
- Begin existing structure abandonment.
- Begin shaping perimeter ditch and downspout.

QUALITY ASSURANCE

- Construction oversight
- Leachate collection pipe connecting DMH D3-#4 to DMH D3-#2 was hit while trying to find the sand layer. Pipe was exposed today and will be fixed tomorrow.
- Verified existing gas collection sand layer has minimum required thickness of 6-inches.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Southern stockpile for cover soil. Photo taken looking east.



Photo 2 – Gordon continuing to strip cover soil. Photo taken looking north.



Photo 3 – Gordon continuing to using the rake attachment to remove >1-inch rocks. Photo taken looking west.



Photo 4 – Verifying gas collection sand thickness.



Photo 5 – Gordon exposing damaged leachate collection pipe connecting DMH D3-#4 and DMH D3-#2.



Photo 6 – Gordon removing cover soil in perimeter ditch in case of rain event. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday May 16, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy, rain in afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	40-56 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	6 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 75%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.25"**

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 5 operators

VISITOR

Time	Name	Representing	Remarks
0620-1615	Trevor Michaud	SME	Construction Oversight
1145-1215	-	Robinson Energy	Fuel delivery
1400-1500	-	Gordon	Estimate potential borrow source
0930-0940	Andy Boucher	Roofing Systems of America	Waste Disposal
0830-0940	-	Anderson Equipment Company	Fixing Equipment

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue hauling gas collection sand.
- Continue hauling cover soil to the southern stockpile.
- Fix pipe connecting DMH D3-#4 to DMH D3-#2.
- Grade area around DMH D3-#4.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Complete hauling cover soil in Area 1 of Phase 3 to the southern stockpile area.
- Begin gas collection system installation.
- Begin existing structure abandonment.
- Begin constructing perimeter ditch and downspout.

QUALITY ASSURANCE

- Construction oversight
- Leachate collection pipe connecting DMH D3-#4 to DMH D3-#2 was hit while trying to find the sand layer. Pipe was fixed today.
- Verified existing gas collection sand layer has minimum required thickness of 6-inches.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon fixed leachate collection pipe connecting DMH D3-#4 and DMH D3-#2.



Photo 2 – Gordon regrading area around DMH D3-#4. Photo taken looking west.



Photo 3 – Gordon regrading area around Phase 1 tie-in. Photo taken looking west.



Photo 4 – Site overview. Photo taken looking southeast.



Photo 5 – Gordon continuing to haul cover soil to the southern stockpile. Photo taken looking north.



Photo 6 – Gordon fixing perimeter road around Phase 2. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday May 17, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	36-47 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	8 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 70%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 5 operators

VISITOR

Time	Name	Representing	Remarks
0615-1830	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue hauling gas collection sand.
- Continue hauling cover soil to the southern stockpile.
- Grade existing gas collection sand layer.
- Begin shaping perimeter ditch.
- Begin installing gas collection system. Approx. 980 LF of gas collection pipe and 4 gas vents installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize hauling cover soil in Area 1 of Phase 3 to the southern stockpile area.
- Continue gas collection system installation.
- Begin existing structure abandonment.
- Continue shaping perimeter ditch and downspout.

QUALITY ASSURANCE

- Construction oversight
- Verified existing gas collection sand layer has minimum required thickness of 6-inches.
- Verified gas collection system is installed per the approved plans.
- Verified perimeter ditch is installed per the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon continuing to haul cover soil. Photo taken looking northeast.



Photo 2 – Southern stockpile. Photo taken looking east.



Photo 3 – Gordon working on the perimeter ditch. Photo taken looking south.



Photo 4 – Gordon working on fine grading the slope of Area 1 of Phase 3. Photo taken looking northwest.



Photo 5 – Gordon went around structure for gas collection to avoid the pipes entering and leaving the structure. Photo taken looking west.



Photo 6 – Gordon backfilling the gas collection piping and vents. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday May 18, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	32-57 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 63%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 5 operators

VISITOR

Time	Name	Representing	Remarks
0620-1700	Trevor Michaud	SME	Construction Oversight
0930-1130	Nick Thompson	SME	Construction Meeting
1000-1100	Vera Maheu	MEDEP	Construction Meeting
1000-1100	Daniel Emerson	MEDEP	Construction Meeting

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue hauling gas collection sand.
- Continue hauling cover soil to the southern stockpile.
- Grade existing gas collection sand layer.
- Continue shaping perimeter ditch.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize hauling cover soil in Area 1 of Phase 3 to the southern stockpile area.
- Continue gas collection system installation.
- Begin existing structure abandonment.
- Continue shaping perimeter ditch and downspout.
- Begin installation of intermediate underdrain berms.

QUALITY ASSURANCE

- Construction oversight
- Verified existing gas collection sand layer has minimum required thickness of 6-inches.
- Verified perimeter ditch is installed per the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Site overview. Photo taken looking southeast.



Photo 2 – Gordon continuing to remove cover soil from Area 1. Photo taken looking west.



Photo 3 – Gordon working on getting the shape of the perimeter ditch. Photo taken looking south.



Photo 4 – Gordon working on getting perimeter ditch to grade. Photo taken looking south.



Photo 5 – Perimeter ditch RD-8 going to CB-2C has been excavated to grade. Photo taken looking north.



Photo 6 – Remaining cover soil to be hauled to the southern stockpile. Photo taken looking northeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday May 19, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	32-69 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	6 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 93%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 5 operators

VISITOR

Time	Name	Representing	Remarks
0620-1300	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue hauling gas collection sand.
- Finalize hauling cover soil to the southern stockpile.
- Grade existing gas collection sand layer.
- Continue shaping perimeter ditch.
- Remove rocks greater than 1-inch from existing sand layer.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue gas collection system installation.
- Begin existing structure abandonment.
- Continue shaping perimeter ditch and downspout.
- Begin installation of intermediate underdrain berms.

QUALITY ASSURANCE

- Construction oversight
- Verified existing gas collection sand layer has minimum required thickness of 6-inches.
- Verified perimeter ditch is installed per the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon working on removing cover soil. Photo taken looking northwest.



Photo 2 – Gordon working on removing rocks greater than 1-inch from existing sand. Photo taken looking west.



Photo 3 – Gordon working on getting the shape of the perimeter ditch. Photo taken looking south.



Photo 4 – Verifying bottom width of perimeter ditch.

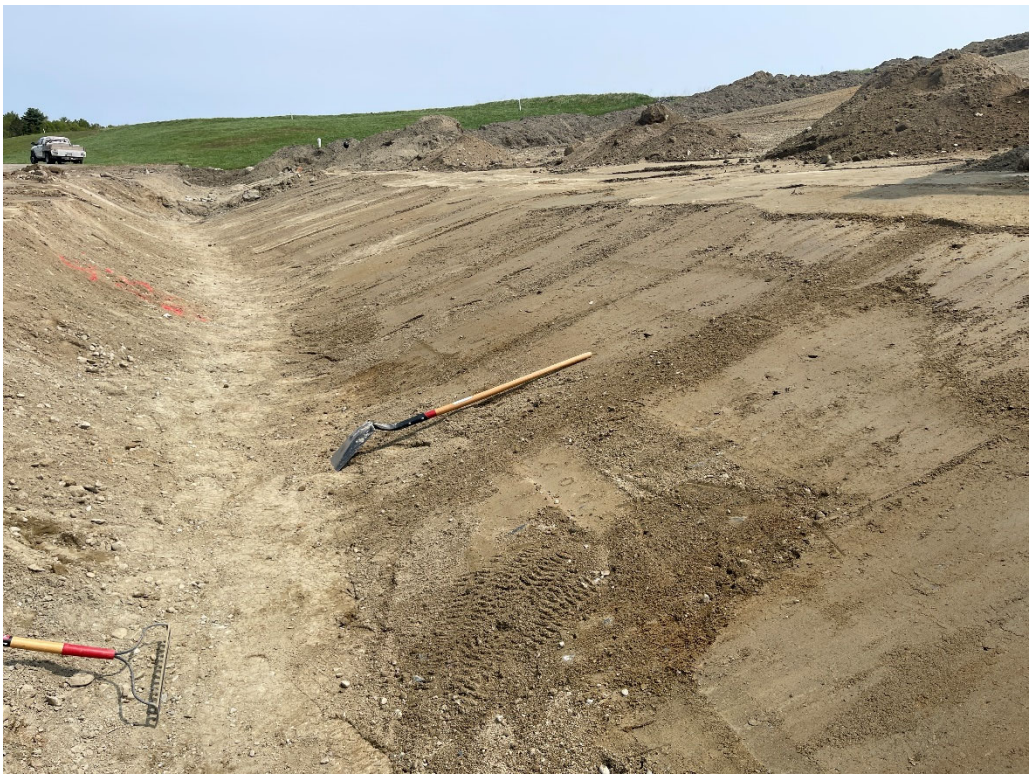


Photo 5 – Landfill side of perimeter ditch for RD-8 section going to CB-2C. Photo taken looking north.



Photo 6 – Southern stockpile. Photo taken looking northeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday May 22, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	38-68 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 37%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**1.56**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0610-1730	Trevor Michaud	SME	Construction Oversight
1345	Dick Angotti	-	Onsite to confirm roofing waste from mill was not being disposed of at Dolby landfill

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Repair west slope of Phase 3 after rain event.
- Repair section of gas collection pipe.
- Abandon structures DMH D3-#4 and #5.
- Pump stormwater from perimeter ditch into the leachate transport system to the leachate pond.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize repairing the gas collection sand surface.
- Continue existing structure abandonment.
- Continue construction of perimeter ditch.
- Install CB-2C and culvert.
- Construct western slope downspout.
- Begin installation of intermediate underdrain berms.

QUALITY ASSURANCE

- Construction oversight
- Confirmed existing structures DMH D3-#4 and #5 were abandoned per the approved plans.
- Confirmed the gas collection pipe was repaired.
- Verified the stormwater being pumped had the sediment removed prior to discharging into the structures.
- Performed stormwater inspection.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**

4 Gordon Contracting

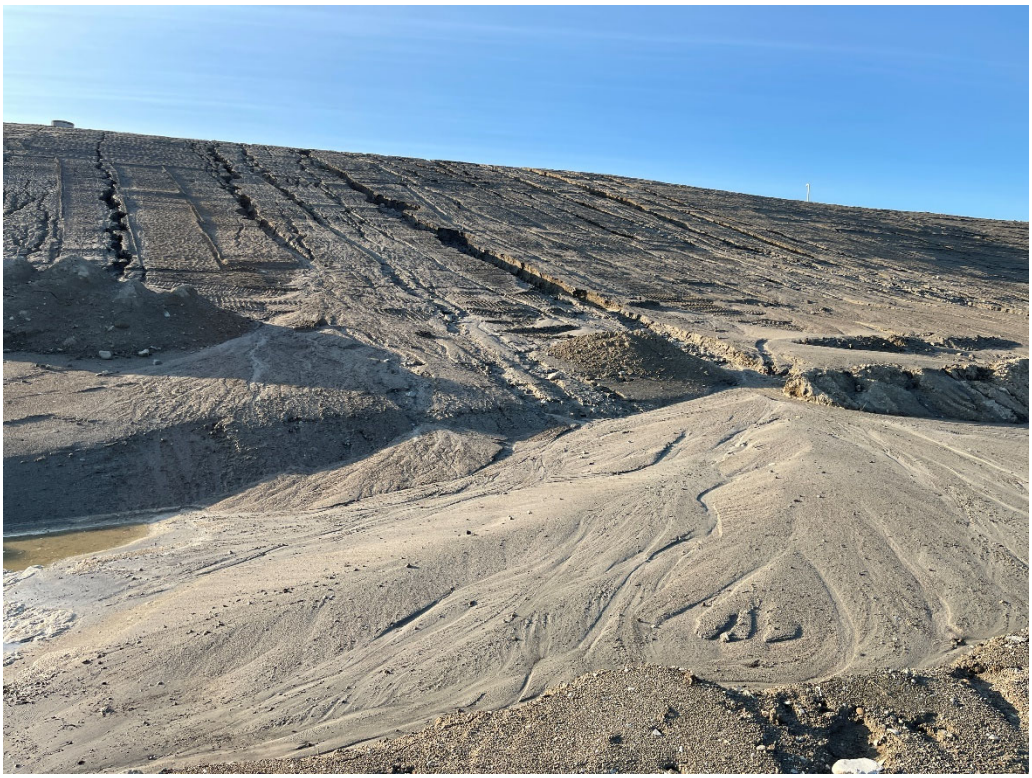


Photo 1 – West slope of Phase 3 after rain event. Photo taken looking east.



Photo 2 – Gordon pumping stormwater out from the perimeter ditch. Photo taken looking west.



Photo 3 – Gordon working on cleaning the perimeter ditch and repairing the west slope of Phase 3. Photo taken looking southeast.



Photo 4 – Existing gas collection pipe has been repaired.



Photo 5 – Existing structure abandonment. Culverts covered with wire mesh.



Photo 6 – Existing structure backfilled with ¾-inch crushed stone.



Photo 7 – Existing structure abandonment covered with fabric per approved plans.



Photo 8 – West slope of Phase 3 has been repaired. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday May 23, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	33-69 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	2 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 94%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 2 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0620-1700	Trevor Michaud	SME	Construction Oversight
0930-1110	-	Chadwick BaRoss	Equipment mechanic

EQUIPMENT

-Volvo ECR 355 excavator
-Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Fine grade and use rake attachment on skid steer to remove rocks greater than 1-inch from the gas collection sand surface.
- Existing structure abandonment for CB-#2.
- Begin installing the intermediate underdrain berms. Approx. 643 LF of intermediate underdrain berms installed.
- Expose leachate collection toe drain connecting CB-#6A and CB-#6. Approx. 115 LF exposed and recorded on GPS.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue existing structure abandonment.
- Continue construction of perimeter ditch.
- Install CB-2C and culvert.
- Construct western slope downspout.
- Continue installation of intermediate underdrain berms.

QUALITY ASSURANCE

- Construction oversight
- Verified CB-#2 was abandoned per the approved plans.
- Verified the intermediate underdrain berm dimensions were constructed per the approved plans.
- Confirmed the intermediate underdrain berms had the minimum slope of 2% per the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon fine grading gas collection sand surface. Photo taken looking southwest.



Photo 2 – Gordon removed first barrel section from CB-#2.



Photo 3 – Gordon installed new concrete top with concrete plug with gas vent for CB-#2.



Photo 4 – Gordon using the rake attachment on the skid steer to remove rocks greater than 1-inch. Photo taken looking southeast.



Photo 5 – Gordon using GPS to record elevation and location of leachate toe drain between CB-#6 and CB-#6A.



Photo 6 – Back side of berm height verified to be 1-foot. Photo taken looking southeast.



Photo 7 – Top width of intermediate underdrain berms verified to be 2-feet.



Photo 8 – Gordon installing the intermediate underdrain berms. Photo taken looking northwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday May 24, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy/ rain in the afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	42-60 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	8 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 74%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.97"**

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	7	1 Foreman (Nick Schmeidlehner), 1 truck drivers, 2 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0620-1700	Trevor Michaud	SME	Construction Oversight
1200-1415	Nick Thompson	SME	Onsite to confirm intermediate underdrain berms are built to approved plans

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue installing the intermediate underdrain berms. Approx. 800 LF of intermediate underdrain berms installed.
- Continue bringing in geocomposite rolls for Phase 3.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue existing structure abandonment.
- Continue construction of perimeter ditch.
- Install CB-2C and culvert.
- Construct western slope downspout.
- Continue installation of intermediate underdrain berms.
- Continue bringing in geocomposite rolls for Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Verified the intermediate underdrain berm dimensions were constructed per the approved plans.
- Confirmed the intermediate underdrain berms had the minimum slope of 2% per the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon continuing to install intermediate underdrain berms. Photo taken looking north.



Photo 2 – Intermediate underdrain berm completed. Photo taken looking north.



Photo 3 – Verifying height of berm to be 1-foot.



Photo 4 – Completed sections of intermediate underdrain berms north of the downspout. Photo taken looking northwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday May 25, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Partly sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	42-53 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	11 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 78%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	7	1 Foreman (Nick Schmeidlehner), 1 truck drivers, 2 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0620-1000	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-(1) rear dump triaxle
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Pump stormwater into existing leachate collection system.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue existing structure abandonment.
- Continue construction of perimeter ditch.
- Install CB-2C and culvert.
- Construct western slope downspout
- Continue installation of intermediate underdrain berms.
- Continue bringing in geocomposite rolls for Phase 3.

QUALITY ASSURANCE

- Construction oversight

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – West slope condition after overnight rain event. Photo taken looking east.



Photo 2 – Gordon pumping stormwater into existing leachate collection system. Photo taken looking north.



Photo 3 – Section of intermediate underdrain berm where slope will need to be adjusted. Photo taken looking south.



Photo 4 – Intermediate underdrain berms working properly. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday May 30, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	41-77 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 89%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 Foreman (Nick Schmeidlehner), 2 truck drivers, 3 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0600-1700	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Complete installation of intermediate underdrain berms in Area 1 of Phase 3. Approx. 940 LF of berms installed.
- Repair west slope of Phase 3 from last week's rain event.
- Continue bringing in geocomposite.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue existing structure abandonment.
- Continue construction of perimeter ditch.
- Install CB-2C and culvert.
- Construct western slope downspout.
- Continue bringing in geocomposite rolls for Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Field verified intermediate underdrain berms are installed per the approved plans.
- Field verified the intermediate underdrain berms are installed at the minimum slope of two percent.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon smoothing the gas collection sand surface. Photo taken looking south.



Photo 2 – Gordon continuing to install intermediate underdrain berms. Photo taken looking north.



Photo 3 – Verifying height of the intermediate underdrain berms. Photo taken looking north.



Photo 4 – Geocomposite rolls for Phase 3 being delivered to the site. Photo taken looking north.



Photo 5 – Overview of site. Photo taken looking southeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday May 31, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	45-86 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 58%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 Foreman (Nick Schmeidlehner), 2 truck drivers, 4 laborers, 2 operators

VISITOR

Time	Name	Representing	Remarks
0610-1700	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue excavation of perimeter ditch around the west slope of Phase 3.
- Abandoned existing structures CB-#4 and CB-#6.
- Finalized installation of intermediate berms in Area 1. Approx. 50 LF of berms installed.
- Finalized hauling in geocomposite for Phase 3.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue existing structure abandonment.
- Continue construction of perimeter ditch.
- Install CB-2C and culvert.
- Shape downspout into the gas collection sand surface.

QUALITY ASSURANCE

- Construction oversight
- Field verified perimeter ditch was excavated to the grades shown in the approved plans.
- Field verified perimeter ditch was shaped to the dimensions shown in the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon beginning to excavate the perimeter ditch. Photo taken looking southwest.



Photo 2 – Gordon removing the top barrel section from CB-#6. Photo taken looking north.



Photo 3 – Gordon abandoned CB-#6. Photo taken looking north.



Photo 4 – Gordon abandoned CB-#4. Photo taken looking north.



Photo 5 – Perimeter ditch on west slope of Phase 3. Photo taken looking northeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday June 1, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	52-91 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 66%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 Foreman (Nick Schmeidlehner), 2 truck drivers, 2 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0620-1800	Trevor Michaud	SME	Construction Oversight
0900-1100	Nick Thompson	SME	Construction Meeting
1000-1100	Vera Maheu	MEDEP	Construction Meeting

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue excavating perimeter ditch around the west slope of Phase 3.
- Begin constructing downspout on west slope of Phase 3.
- Use rake attachment to remove rocks greater than 1 inch from gas collection sand surface.
- Begin stripping topsoil in SW corner of Phase 3. Approx. 0.25 acres stripped.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue existing structure abandonment.
- Continue constructing perimeter ditch.
- Install CB-2C and culvert.
- Complete constructing downspout into the gas collection sand surface.
- Fix section of intermediate underdrain berm.
- Continue stripping topsoil in SW corner of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Field verified perimeter ditch was excavated to the grades shown in the approved plans.
- Field verified perimeter ditch was shaped to the dimensions shown in the approved plans.
- Field verified the downspout was constructed per the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon continuing to excavate the perimeter ditch. Photo taken looking west.



Photo 2 – Area Gordon stripped of topsoil. Photo taken looking east.



Photo 3 – Gordon excavating large rock in SW corner of Phase 3. Photo taken looking northeast.



Photo 4 – Gordon using the rake attachment for the skid steer on the gas collection sand. Photo taken looking east.



Photo 5 – Gordon constructing downspout on west slope of Phase 3. Photo taken looking southwest.



Photo 5 – Downspout on west slope of Phase 3. Photo taken looking east.

SME
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ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

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DAILY CONSTRUCTION REPORT

Date: Friday June 2, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny/ rain in afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	50-80 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 52%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 Foreman (Nick Schmeidlehner), 1 truck drivers, 3 laborers, 4 operators
Integrity Lining Systems	1	4	Liner company

VISITOR

Time	Name	Representing	Remarks
0620-1530	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Completed construction of the downspout on the west slope of Phase 3.
- Installed CB-2C.
- Removed existing culvert going to Sediment Pond #2.
- Removed existing large rock from the SW corner of Phase 3.
- Completed stripping topsoil in SW corner of Phase 3. Approx. 0.75 acres stripped.
- Liner company filling sandbags.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Complete existing structure abandonment in Area 1 of Phase 3.
- Complete construction of perimeter ditch in Area 1 of Phase 3.
- Complete installation of culvert from CB-2C to Sediment Pond #2.
- Fix section of intermediate underdrain berm.
- Begin stripping existing cover soil in SW corner of Phase 3.
- Begin liner installation in Area 1 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Field verified structure CB-2C was installed per the approved plans.
- Field verified the downspout was constructed per the approved plans.
- Field verified 6-inches of ¾-inch crushed stone was placed above and below the pipe per the project specifications.
- Field verified that 1-foot of ¾-inch crushed stone and woven geotextile was installed below CB-2C.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon continuing to form the downspout on the west slope. Photo taken looking west.



Photo 2 – Gordon removed the large rock in the SW corner of Phase 3. Photo taken looking north.



Photo 3 – Gordon continuing to strip existing topsoil in the SW corner of Phase 3. Photo taken looking northeast.



Photo 4 – Gordon removing the existing culvert going to Sediment Pond #2. Photo taken looking west.



Photo 5 – Gordon compacting area existing culvert used to be located. Photo taken looking southwest.



Photo 6 – Woven textile and crushed stone installed below CB-2C.



Photo 7 – Gordon installing stone around culvert. Photo taken looking west.



Photo 8 – Soil around CB-2C compacted. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday June 5, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Rain
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	47-55 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	9 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 82%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**1.7**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 Foreman (Nick Schmeidlehner), 3 truck drivers, 3 laborers, 3 operators
Integrity Lining Systems	1	7	Liner company

VISITOR

Time	Name	Representing	Remarks
0600-1330	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH82 lull
-(1) rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Complete installing 18-inch culvert going from CB-2C to Sediment Pond #2 and backfilling with bedding stone.
- Liner company filling sandbags.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment in Area 1 of Phase 3.
- Finalize construction of perimeter ditch in Area 1 of Phase 3.
- Finalize backfilling culvert from CB-2C to Sediment Pond #2.
- Fix section of intermediate underdrain berm.
- Begin stripping existing cover soil in SW corner of Phase 3.
- Begin liner installation in Area 1 of Phase 3.

QUALITY ASSURANCE

- Construction oversight

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**

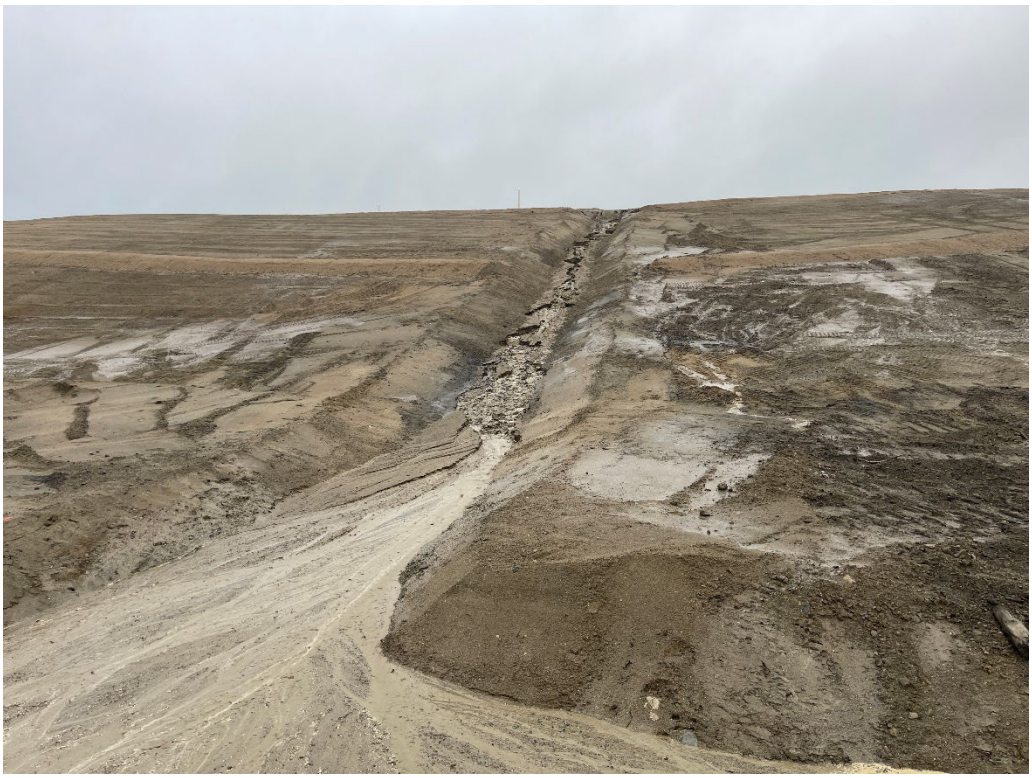

Photo 1 – The downspout on the west slope after the weekend rain event. Photo taken looking east.



Photo 2 – CB-2C after the weekend rain event. Photo taken looking south.



Photo 3 – Gordon adding bedding stone around culvert going to Sediment Pond #2. Photo taken looking southwest.



Photo 4 – Gordon finalized adding bedding stone around culvert going to Sediment Pond #2. Photo taken looking southwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday June 7, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy, scattered showers
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	47-55 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 76%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.1**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	5	1 Foreman (Nick Schmeidlehner), 3 laborers, 2 operators
Integrity Lining Systems	1	7	Liner company

VISITOR

Time	Name	Representing	Remarks
0745-1530	Trevor Michaud	SME	Construction Oversight
1230-1430	Adam Qualey	-	Onsite to fix outlet culvert to Sediment Pond #3.

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH82 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Finalize backfilling 18-inch culvert going from CB-2C to Sediment Pond #2.
- Liner company making pipe boots for gas vents.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment in Area 1 of Phase 3.
- Finalize construction of perimeter ditch in Area 1 of Phase 3.
- Excavate anchor trench in Area 1 of Phase 3.
- Fix section of intermediate underdrain berm.
- Begin stripping existing cover soil in SW corner of Phase 3.
- Begin liner installation in Area 1 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Verified pipe boots are spark tested and are the right dimensions per the approved plans.
- Verified the backfilling of the culvert was done in 12-inch lifts and compacted.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity working on making pipe boots for gas vents.



Photo 2 – Gordon backfilling 18-inch culvert going from CB-2C to Sediment Pond #2. Photo taken looking southeast.



Photo 3 – Gordon smoothing access road over culvert. Photo taken looking southwest.



Photo 4 – Gordon adding soil berms in perimeter ditch for future rain events. Photo taken looking north.



Photo 5 – Integrity spark testing pipe boots.

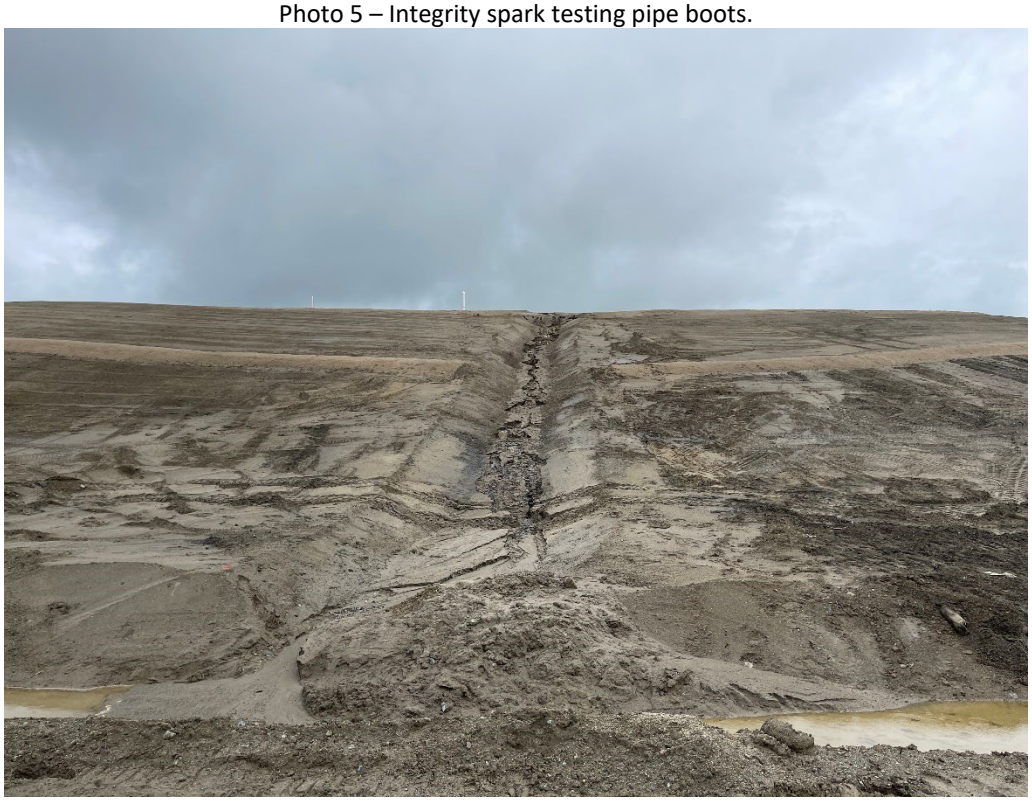

Photo 6 – Downspout on west slope of Phase 3 after rain events. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Sunday June 11, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	45-74 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	2 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 95%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	5	1 Foreman (Nick Schmeidlehner), 1 laborer, 2 operators, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0610-1700	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Finalize grade of perimeter ditch along west slope of Phase 3.
- Clean around MH-#3 for manhole boot during liner deployment.
- Fix intermediate underdrain berms.
- Fix west slope from rain damage.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 1 of Phase 3.
- Excavate anchor trench for Area 1 of Phase 3.
- Fix section of intermediate underdrain berm.
- Begin stripping existing cover soil in SW corner of Phase 3.
- Begin liner installation in Area 1 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Verified intermediate underdrain berms are sloped properly per the approved plans.
- Verified the perimeter ditch is excavated to the grades on the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon excavating perimeter ditch along west slope of Phase 3. Photo taken looking south.



Photo 2 – Gordon cleaning around MH-#3 for structure boot during liner installation. Photo taken looking south.



Photo 3 – Gordon smoothing gas collection sand surface. Photo taken looking southwest.



Photo 4 – Gordon fixing intermediate underdrain berms. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday June 12, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	50-80 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	2 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 96%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	7	1 Foreman (Nick Schmeidlehner), 2 laborers, 3 operators, 2 truck drivers
Integrity Lining Systems	1	11	Liner company

VISITOR

Time	Name	Representing	Remarks
0745-1530	Trevor Michaud	SME	Construction Oversight
1215-1415	Nick Thompson	SME	Onsite to check in with liner deployment
1215-1730	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Excavate anchor trench. Approx. 855 LF excavated.
- Begin liner installation. Approx. 2.7 acres installed.
- Fix intermediate underdrain berms.
- Repair downspout from rain events.
- Continue stripping topsoil and cover soil in SW corner of Phase 3.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 1 of Phase 3.
- Finalize excavating anchor trench for Area 1 of Phase 3.
- Continue stripping existing cover soil in SW corner of Phase 3.
- Continue liner installation in Area 1 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- See associated spreadsheets for geomembrane installation.
- Verified the intermediate underdrain berms are installed per the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon is digging an anchor trench along the top of the west slope of Phase 3 for liner installation. Photo taken looking east.



Photo 2 – Gordon is digging the anchor trench along the access road for liner installation. Photo taken looking south.



Photo 3 – Gordon is finalizing exposing the tie-in along Phase 1 for liner installation. Photo taken looking southeast.



Photo 4 – Gordon is repairing the downspout on the west slope of Phase 3. Photo taken looking west.



Photo 5 – Integrity fusion welding seams of geomembrane. Photo taken looking west.



Photo 6 – Gordon smoothing existing gas collection sand surface. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday June 13, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	53-74 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 95%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 Foreman (Nick Schmeidlehner), 2 laborers, 4 operators, 2 truck drivers
Integrity Lining Systems	1	11	Liner company

VISITOR

Time	Name	Representing	Remarks
0530-2030	Trevor Michaud	SME	Geomembrane Oversight
0605-1805	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Excavate anchor trench along top of Area 1 to key leading edge of liner into.
- Continue liner installation. Liner installed approx. 2.6 acres.
- Continue stripping topsoil at SW corner of Phase 3. Approx. 1.2 acres.
- Continue stripping cover soil at SW corner of Phase 3. Approx. 1.1 acres.
- CB-#5 abandoned temporarily until vacuum truck onsite for structure cleaning.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil in SW corner of Phase 3.
- Continue liner installation in Area 1 of Phase 3.
- Begin gas collection installation in Area 2 of Phase 3.
- Begin existing structure abandonment in Area 2 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- See associated spreadsheets for geomembrane installation.
- Verified existing gas collection sand depth.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon is digging an anchor trench along the top of the west slope of Phase 3 for liner installation. Photo taken looking south.



Photo 2 – Integrity continuing liner installation at west slope of Phase 3. Photo taken looking northeast.



Photo 3 – Integrity extrusion welding boot around CB-2C.

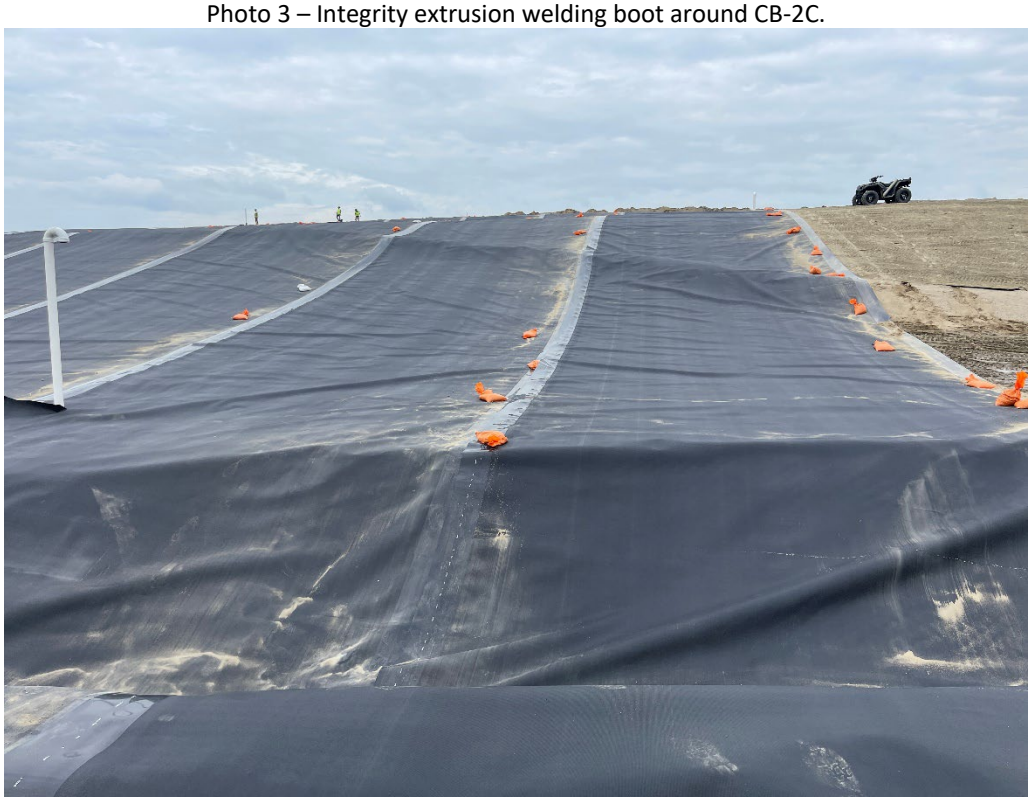

Photo 4 – Extent of liner installed along the west slope. Photo taken looking east.



Photo 5 – Gordon continuing to strip existing topsoil at the SW corner of Phase 3. Photo taken looking east.



Photo 6 – Gordon beginning to strip existing cover soil at the SW corner of Phase 3. Photo taken looking south.



Photo 7 – Gordon beginning to strip existing cover soil at the SW corner of Phase 3. Photo taken looking south.



Photo 8 – Gordon abandoning existing structure CB-#5.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday June 14, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	56-66 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 89%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 2 laborers, 5 operators, 3 truck drivers
Integrity Lining Systems	1	11	Liner company

VISITOR

Time	Name	Representing	Remarks
0530-1900	Trevor Michaud	SME	Geomembrane Oversight
0645-1820	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Air testing geomembrane seams.
- Repair work on geomembrane.
- Continue stripping cover soil at SW corner of Phase 3. Approx. 0.9 acres.
- Begin stripping cover soil at top of Phase 3.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize stripping existing cover soil in SW corner of Phase 3.
- Continue stripping existing cover soil at top of Phase 3.
- Continue detail work on geomembrane.
- Begin gas collection installation in Area 2 of Phase 3.
- Begin existing structure abandonment in Area 2 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- See associated spreadsheets for geomembrane installation.
- Verified existing gas collection sand depth.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity making repairs to geomembrane.



Photo 2 – Integrity air testing geomembrane seams.



Photo 3 – Gordon continuing to strip existing cover soil at SW corner. Photo taken looking southwest.



Photo 4 – Gordon repairing roadway where culvert from CB-2C crosses. Photo taken looking north.



Photo 5 – Roadway and slope around culvert outlet from CB-2C repaired. Photo taken looking south.



Photo 6 – Gordon continuing to move cover soil to southern stockpile area. Photo taken looking east.



Photo 7 – Gordon beginning to strip existing cover soil at top of Phase 3. Photo taken looking northeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday June 15, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	57-70 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 69%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 2 laborers, 5 operators, 3 truck drivers
Integrity Lining Systems	1	11	Liner company

VISITOR

Time	Name	Representing	Remarks
0630-1945	Trevor Michaud	SME	Geomembrane Oversight
0615-1740	Ben Monohon	SME	Construction Oversight
0930-1200	Nick Thompson	SME	Construction meeting
1000-1100	Vera Maheu	MEDEP	Construction meeting
1000-1100	Daniel Emerson	MEDEP	Construction meeting
1000-1100	Wallace Giakas	MEBGS	Construction meeting

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Finalize air testing geomembrane seams on Area 1.
- Continue repair work on geomembrane.
- Continue stripping cover soil at top of Phase 3. Approx. 1.3 acres.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil at top of Phase 3.
- Finalize detail work on geomembrane on Area 1.
- Begin geocomposite installation.
- Begin gas collection installation in Area 2 of Phase 3.
- Begin existing structure abandonment in Area 2 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- See associated spreadsheets for geomembrane installation.
- Verified existing gas collection sand depth.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity making repairs to geomembrane.



Photo 2 – Integrity welding structure boot on CB-#3. Photo taken looking east.



Photo 3 – Integrity performing vacuum box testing on repairs.



Photo 4 – Gordon continuing to strip cover soil at top of Phase 3. Photo taken looking north.



Photo 5 – Gordon finalizing stripping cover soil at SW corner of Phase 3. Photo taken looking east.



Photo 6 – Gordon continuing to move cover soil to southern stockpile area. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday June 16, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	55-72 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 91%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 Foreman (Nick Schmeidlehner), 2 laborers, 5 operators, 2 truck drivers
Integrity Lining Systems	1	11	Liner company

VISITOR

Time	Name	Representing	Remarks
0530-1700	Trevor Michaud	SME	Geomembrane Oversight
0625-1510	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Continue repair work on geomembrane.
- Begin geocomposite installation. Approx. 1 acre installed.
- Continue exposing Phase 1 tie-in.
- Continue stripping cover soil at top of Phase 3. Approx. 0.2 acres.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil at top of Phase 3.
- Finalize detail work on geomembrane on Area 1.
- Continue geocomposite installation.
- Begin gas collection installation in Area 2 of Phase 3.
- Begin existing structure abandonment in Area 2 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- See associated spreadsheets for geomembrane installation.
- Verified existing gas collection sand depth.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity making repairs to geomembrane.



Photo 2 – Integrity vacuum box testing repairs.



Photo 3 – Integrity adding zip ties to geocomposite overlap.



Photo 4 – Integrity sewing seams of geocomposite.



Photo 5 – Gordon continuing to strip at top of Phase 3 and expose tie-in. Photo taken looking east.



Photo 6 – Overview of site. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday June 19, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	51-64 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 70%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 Foreman (Nick Schmeidlehner), 2 laborers, 4 operators, 2 truck drivers
Integrity Lining Systems	1	11	Liner company

VISITOR

Time	Name	Representing	Remarks
0600-1845	Trevor Michaud	SME	Construction and Liner Oversight
0930-1305	Nick Thompson	SME	Onsite to observe rain damage to the west slope of Phase 3
1130-1700	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Repair damage to subgrade beneath the liner on the west slope of Phase 3.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue repairing the liner on the west slope of Phase 3.
- Finalize hauling cover soil to the southern stockpile.
- Begin gas collection installation for Area 2 of Phase 3.
- Begin existing structure abandonment for Area 2 of Phase 3.
- Begin intermediate underdrain berm installation for Area 2 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Verified subgrade was repaired appropriately and intermediate underdrain berms was reconstructed per the approved plans.
- See associated spreadsheets for geomembrane installation oversight.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon pumping stormwater out of perimeter ditch. Photo taken looking northwest.



Photo 2 – Integrity cutting liner along the intermediate berm at the top of Phase 3. Photo taken looking southwest.



Photo 3 – Integrity cutting the liner along the downspout on the west slope of Phase 3. Photo taken looking west.

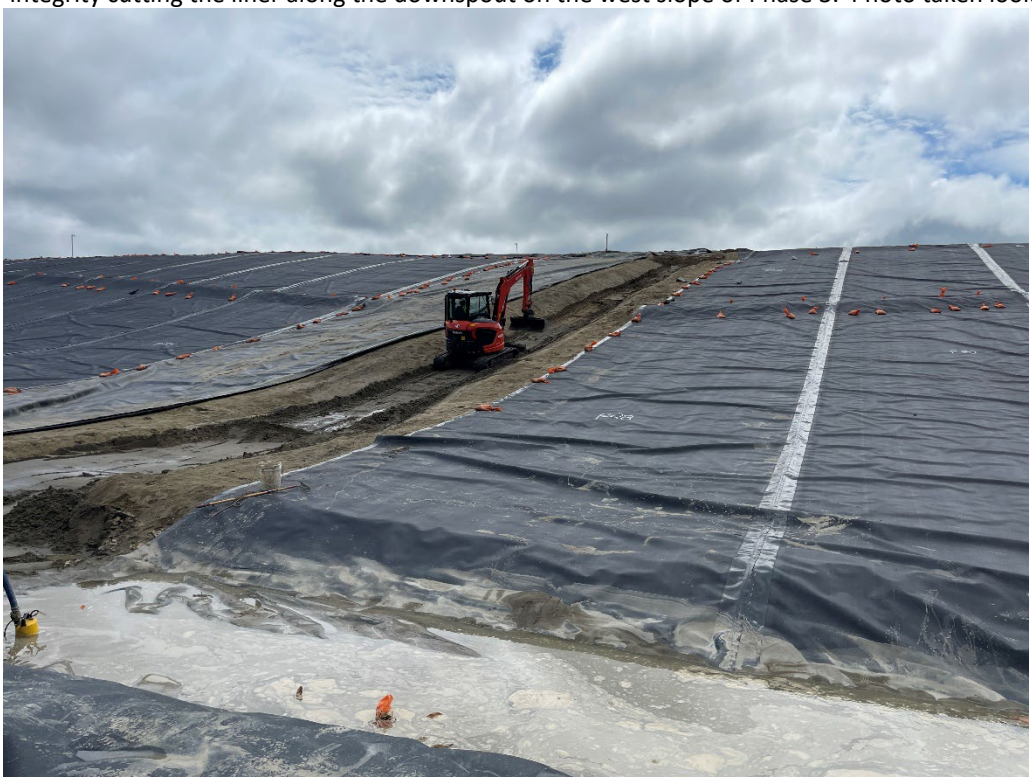

Photo 4 – Gordon repairing the downspout on the west slope of Phase 3. Photo taken looking east.



Photo 5 – Integrity cutting liner around the intermediate berms that got washed out. Photo taken looking east.



Photo 6 – Gordon repaired the intermediate berms after the rain damage. Photo taken looking south.



Photo 7 – Integrity cut liner around CB-2C to remove water under the liner. Photo taken looking north.



Photo 8 – Integrity cut the liner along the perimeter ditch to remove water from under the liner. Photo taken looking south.



Photo 9 – Integrity is beginning to repair the liner from the rain damage. Photo taken looking northeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday June 20, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Partly Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	54-68 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 65%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.03**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 Foreman (Nick Schmeidlehner), 2 laborers, 4 operators, 3 truck drivers
Integrity Lining Systems	1	10	Liner company

VISITOR

Time	Name	Representing	Remarks
0530-1745	Trevor Michaud	SME	Liner Oversight
0615-1720	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Repair existing gas collection sand layer at SW corner of Phase 3.
- Continue stripping cover soil at top of Phase 3. Approx. 1.2 acres stripped.
- Continue hauling cover soil.
- Continue exposing Phase 1 tie-in.
- Repair geomembrane.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue repairing the liner on the west slope of Phase 3.
- Finalize hauling cover soil to the southern stockpile.
- Begin gas collection installation for Area 2 of Phase 3.
- Begin existing structure abandonment for Area 2 of Phase 3.
- Begin intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue geocomposite installation.

QUALITY ASSURANCE

- Construction oversight
- Verified subgrade was repaired appropriately and intermediate underdrain berms was reconstructed per the approved plans.
- See associated spreadsheets for geomembrane installation oversight and gas collection sand thickness.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity repairing geomembrane.



Photo 2 – Integrity vacuum box testing repairs.



Photo 3 – Integrity repairing geomembrane.



Photo 4 – Gordon repairing the gas collection sand in the SW corner of Phase 3. Photo taken looking southwest.



Photo 5 – Gordon repairing perimeter ditch beneath geomembrane. Photo taken looking north.



Photo 6 – Gordon continuing to expose Phase 1 tie-in. Photo taken looking west.



Photo 7 – Gordon continuing to strip existing cover soil and haul to the southern stockpile. Photo taken looking south.



Photo 8 – Gordon continuing to haul existing cover soil. Gas collection sand surface has been smoothed. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday June 21, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	50-76 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	1 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 93%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.03**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 Foreman (Nick Schmeidlehner), 2 laborers, 4 operators, 3 truck drivers
Integrity Lining Systems	1	10	Liner company

VISITOR

Time	Name	Representing	Remarks
0545-1730	Trevor Michaud	SME	Liner Oversight
0615-1905	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Finalized gas collection installation in Area 2 of Phase 3.
- Continue hauling cover soil to southern stockpile.
- Continue stripping cover soil. Approx. 0.4 acres stripped.
- Continued to repair geomembrane and vacuum test.
- Finalized existing structure abandonment for Area 2 of Phase 3.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize repairing the liner on the west slope of Phase 3.
- Finalize hauling cover soil to the southern stockpile.
- Begin intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue geocomposite installation.

QUALITY ASSURANCE

- Construction oversight
- Verified subgrade was repaired appropriately and intermediate underdrain berms was reconstructed per the approved plans.
- See associated spreadsheets for geomembrane installation oversight and gas collection sand thickness.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity vacuum box testing repairs.



Photo 2 – Integrity repairing geomembrane.



Photo 3 – CB-2C has been cleaned around and is ready for structure boot.



Photo 4 – Integrity has completed structure boot for CB-2C.



Photo 5 – Gordon smoothing existing gas collection sand surface. Photo taken looking north.



Photo 6 – Gordon installing gas collection piping. Photo taken looking south.



Photo 7 – Gordon continuing to expose Phase 1 tie-in. Photo taken looking east.



Photo 8 – Gordon installing gas collection vents. Photo taken looking southeast.



Photo 9 – Gordon beginning to abandon existing structure.



Photo 10 – Existing structure abandonment completed.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday June 22, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	51-81 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 86%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 Foreman (Nick Schmeidlehner), 2 laborers, 5 operators, 3 truck drivers
Integrity Lining Systems	1	10	Liner company

VISITOR

Time	Name	Representing	Remarks
0610-1800	Trevor Michaud	SME	Liner Oversight
0615-1905	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Finalized gas collection installation in Area 2 of Phase 3.
- Finalize hauling cover soil to southern stockpile from top Phase 3.
- Continued to repair geomembrane and vacuum test.
- Continue geocomposite installation. Approx. 1.4 acres installed.
- Begin underdrain berm installation at top of Phase 3.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue geomembrane installation.
- Continue geocomposite installation.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Verified intermediate underdrain berms were installed per the approved plans.
- See associated spreadsheets for geomembrane installation oversight and gas collection sand thickness.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity repairing geomembrane.



Photo 2 – Integrity vacuum box testing repairs.

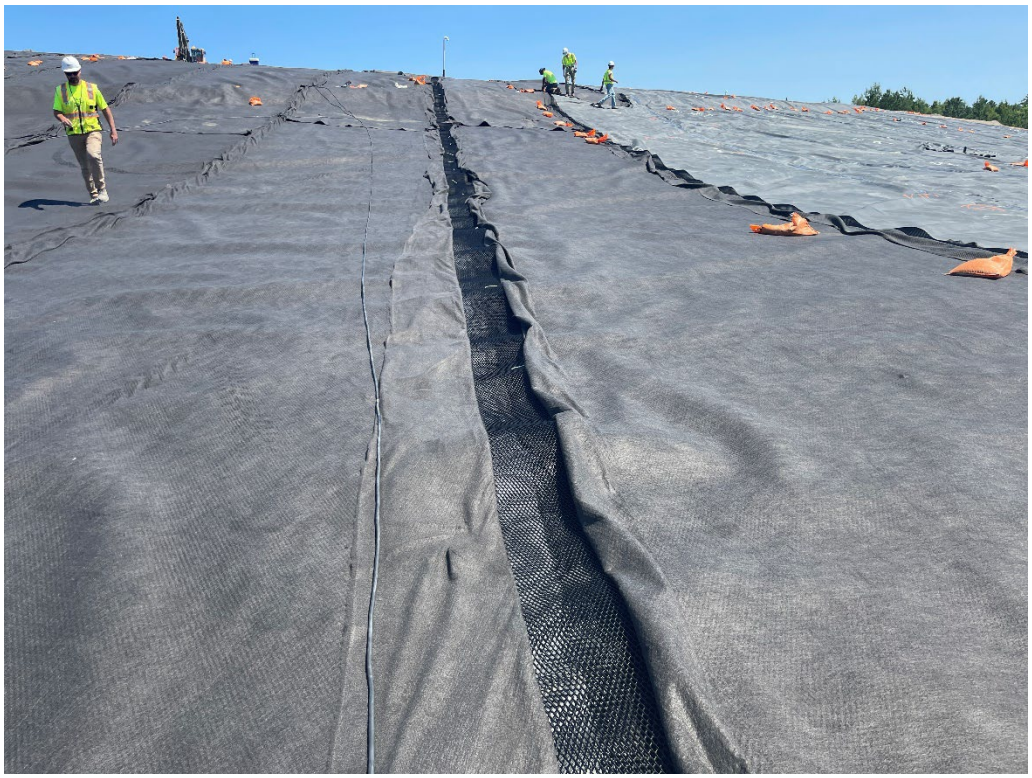

Photo 3 – Integrity adding zip-ties to geocomposite seams. Photo taken looking east.



Photo 4 – Integrity seaming geocomposite. Photo taken looking west.



Photo 5 – Gordon backfilling over gas collection piping. Photo taken looking south.

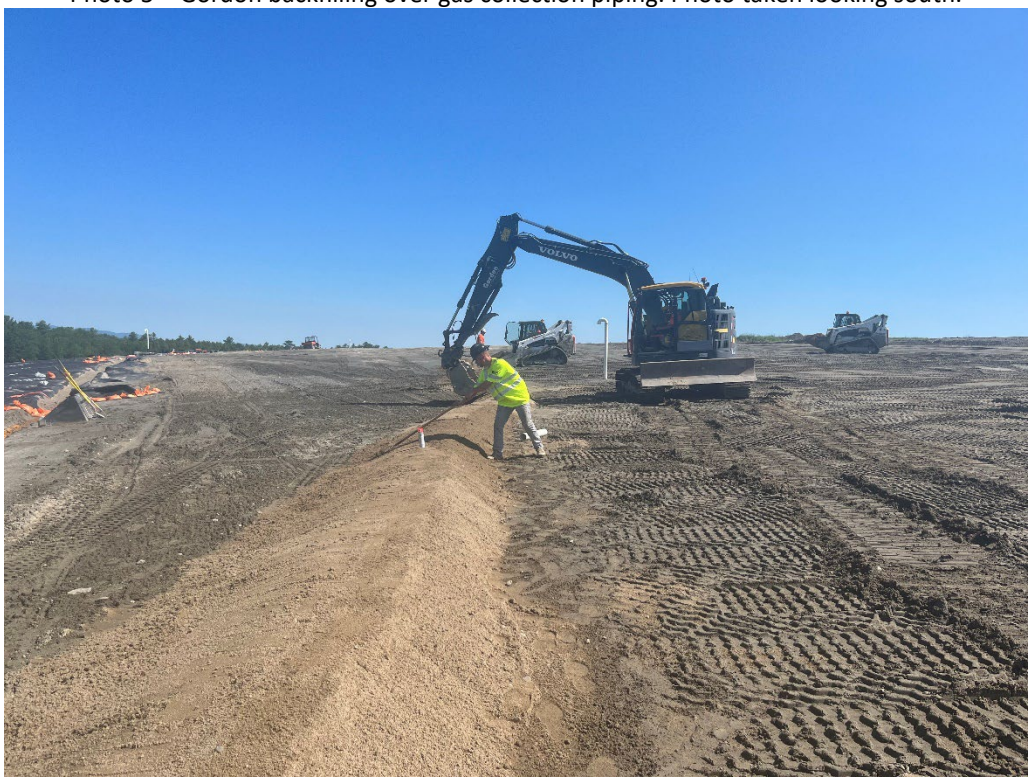

Photo 6 – Gordon installing intermediate underdrain berms. Photo taken looking north.



Photo 7 – Area at top of Phase 3 being prepared for geomembrane. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday June 23, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	51-84 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 82%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 Foreman (Nick Schmeidlehner), 2 laborers, 4 operators, 2 truck drivers
Integrity Lining Systems	1	8	Liner company

VISITOR

Time	Name	Representing	Remarks
0620-1730	Trevor Michaud	SME	Liner Oversight
0600-1540	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Installed geomembrane. Approx. 2.2 acres installed.
- Finalize top of Phase 3 prior to geomembrane deployment.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue geomembrane detailing.
- Continue geocomposite installation.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Verified intermediate underdrain berms were installed per the approved plans.
- See associated spreadsheets for geomembrane installation oversight and gas collection sand thickness.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity fusion welding geomembrane seams.

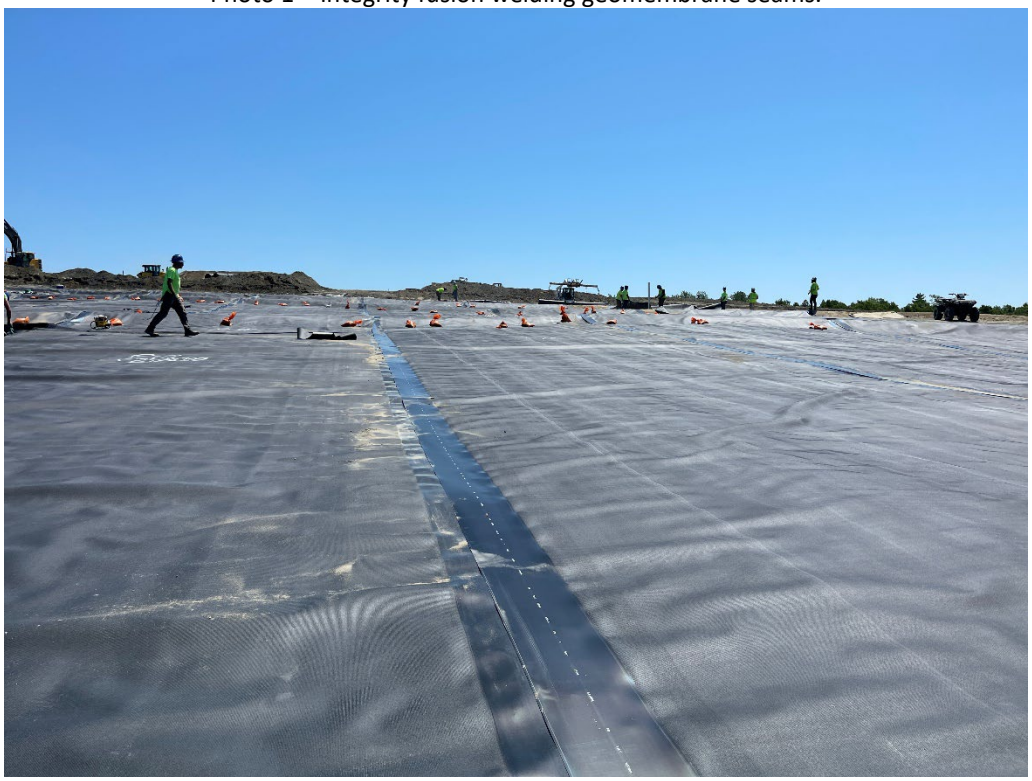

Photo 2 – Integrity deploying geomembrane at top of Phase 3. Photo taken looking east.



Photo 3 – Integrity preparing Phase 1 tie-in.



Photo 4 – Gordon backfilling anchor trench for liner tie-in. Photo taken looking south.



Photo 5 – Gordon adding rub sheet to leading edge of geomembrane. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Saturday June 24, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	60-64 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	0 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 95%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Integrity Lining Systems	1	6	Liner company

VISITOR

Time	Name	Representing	Remarks
0700-1430	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Air testing seams
- Extrusion welding Phase 1 tie-in and along the west slope of Phase 3.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize geomembrane repairs and vacuum box testing for the liner already installed.
- Finalize installation of intermediate underdrain berms for Area 2 of Phase 3.
- Finalize installation of gas collection system in Area 2 of Phase 3.

QUALITY ASSURANCE

- Liner oversight
- See associated spreadsheets for geomembrane testing results.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**

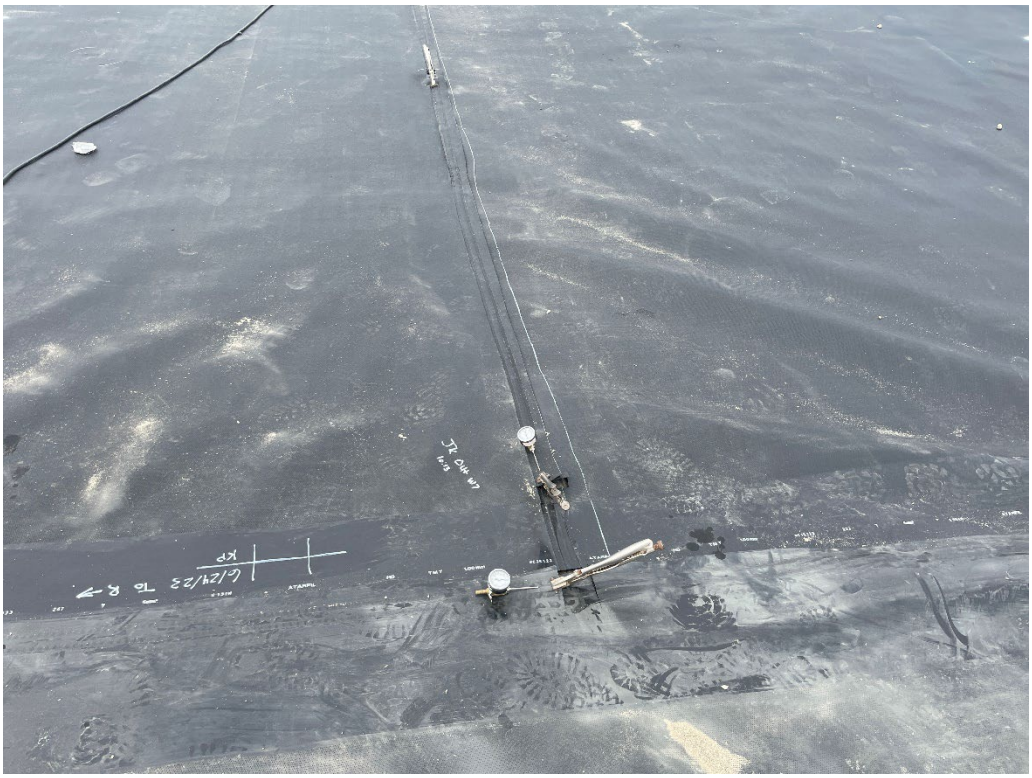

Photo 1 – Integrity working on air testing seams.



Photo 2 – Integrity welding liner connection along Phase 1. Photo taken looking west.



Photo 3 – Integrity welded liner connection along the top of the west slope of Phase 3. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday June 26, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Rain
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	59-68 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 92%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**1.44"**

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 Foreman (Nick Schmeidlehner), 2 laborers, 4 operators, 3 truck drivers
Integrity Lining Systems	1	5	Liner company

VISITOR

Time	Name	Representing	Remarks
0530-1230	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Vacuum box testing repairs on geomembrane.
- Repair erosion rills along SW and south slope of Phase 3 and clean out perimeter ditch.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 2 of Phase 3.
- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Install geocomposite over lined area of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Observed vacuum box testing of repairs. See associated spreadsheets.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon backfilling erosion rills on Area 2 of Phase 3. Photo taken looking east.



Photo 2 – Gordon cleaning perimeter ditch along Area 2 of Phase 3. Photo taken looking east.



Photo 3 – Integrity leaf blowing liner prior to geocomposite installation. Photo taken looking south.

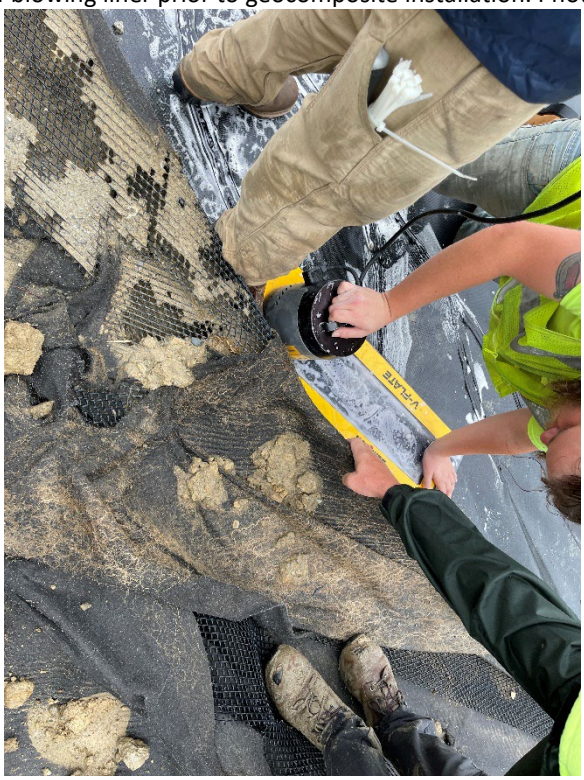

Photo 4 – Integrity vacuum box testing repairs.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday June 27, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy, scattered showers
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	58-71 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	8 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 85%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.58**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 Foreman (Nick Schmeidlehner), 2 laborers, 4 operators, 2 truck drivers
Integrity Lining Systems	1	21	Liner company

VISITOR

Time	Name	Representing	Remarks
0600-1800	Trevor Michaud	SME	Liner Oversight
0825-1630	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Vacuum box testing repairs on geomembrane.
- Repair erosion rills along SW and south slope of Phase 3 and clean out perimeter ditch.
- Continue geocomposite installation. Approx. 2.3 acres installed.
- Continue installation of intermediate underdrain berms.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 2 of Phase 3.
- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Install geocomposite over lined area of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Observed vacuum box testing of repairs. See associated spreadsheets.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity cleaning geomembrane prior to geocomposite placement. Photo taken looking west.



Photo 2 – Integrity making repairs to geomembrane.



Photo 3 – Integrity installing geocomposite. Photo taken looking north.



Photo 4 – Area of installed geocomposite. Photo taken looking east.



Photo 5 – Gordon excavating perimeter ditch. Photo taken looking south.



Photo 6 – Gordon adding protective sheet over intermediate underdrain berms. Photo taken looking northwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday June 28, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy, scattered showers
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	64-73 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 91%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.25**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	7	1 Foreman (Nick Schmeidlehner), 2 laborers, 4 operators, 1 truck driver
Integrity Lining Systems	1	21	Liner company

VISITOR

Time	Name	Representing	Remarks
0600-2000	Trevor Michaud	SME	Liner Oversight
0620-2000	Ben Monohon	SME	Construction Oversight
0910-2000	-	Republic Services	Vacuum truck company

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Vacuum box testing repairs on geomembrane.
- Vacuum existing leachate collection lines.
- Continue geocomposite installation. Approx. 2.3 acres installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 2 of Phase 3.
- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Install geocomposite over lined area of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Observed vacuum box testing of repairs. See associated spreadsheets.
- Observed leachate transport line cleaning.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity vacuum box testing repairs. Photo taken looking west.



Photo 2 – Integrity sewing geocomposite seams. Photo taken looking west.



Photo 3 – Integrity repairing geomembrane.



Photo 4 – Area of installed geocomposite. Photo taken looking east.



Photo 5 – Existing structures and leachate transport lines getting cleaned.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday June 29, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly cloudy, sunny in afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	63-74 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 80%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	7	1 Foreman (Nick Schmeidlehner), 2 laborers, 4 operators, 1 truck driver
Integrity Lining Systems	1	21	Liner company

VISITOR

Time	Name	Representing	Remarks
0600-2030	Trevor Michaud	SME	Liner Oversight
0620-2000	Ben Monohon	SME	Construction Oversight
0910-2000	-	Republic Services	Vacuum truck company
0900-1130	Nick Thompson	SME	Construction Meeting
1000-1100	Daniel Emerson	MEDEP	Construction Meeting
1000-1100	Wallace Giakas	MEBGS	Construction Meeting

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Vacuum box testing repairs on geomembrane.
- Vacuum existing leachate collection lines.
- Clean sediment out of lined section of perimeter ditch.
- Continue geocomposite installation. Approx. 2.45 acres installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 2 of Phase 3.
- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Install geocomposite over lined area of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Observed vacuum box testing of repairs. See associated spreadsheets.
- Observed leachate transport line cleaning.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**

4 Gordon Contracting



Photo 1 – Integrity installing geocomposite at top of Phase 3. Photo taken looking west.



Photo 2 – Integrity sewing geocomposite seams.



Photo 3 – Integrity repairing geomembrane.



Photo 4 – Gordon cleaning perimeter ditch. Photo taken looking east.



Photo 5 – Integrity placing geocomposite in perimeter ditch. Photo taken looking south.



Photo 6 – Liner perimeter ditch cleaned of sediment. Photo taken looking south.



Photo 7 – Existing structures and leachate transport lines getting cleaned.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday June 30, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Partly Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	63-78 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 94%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Integrity Lining Systems	1	19	Liner company

VISITOR

Time	Name	Representing	Remarks
0600-1130	Trevor Michaud	SME	Liner Oversight and Stormwater Inspection

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Make repairs and perform vacuum box testing on geomembrane around CB-2C.
- Finalize geocomposite installation.
- Finalize gas vent boots.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 2 of Phase 3.
- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Remove and install new culvert into Sediment Pond #1 at SW corner of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- Observed repairs and vacuum box testing of repairs. See associated spreadsheets.
- Verified gas vent boots were installed per the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity finalizing gas vent boots.



Photo 2 – Integrity making repairs to geomembrane liner.



Photo 3 – Integrity installing structure boot for MH-#3.



Photo 4 – Integrity vacuum box testing repairs.



Photo 5 – Integrity placing geocomposite over lined section of perimeter ditch. Photo taken looking south.

SME
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SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday July 6, 2023

PROJECT: Dolby Phase 3 Cover Upgrade
CLIENT: Maine Department of Administrative and Financial Services
CONTRACTOR: Gordon Contracting
PROJECT MANAGER: Nicholas Thompson
PROJECT LOCATION: East Millinocket, Maine

WEATHER: Sunny
TEMP: 62-90 degrees F
WIND: 5 mph
HUMIDITY: Low, 51%
PRECIPITATION: 0"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	Nick Schmeidlehner (Foreman), 2 truck drivers, 2 laborers, 4 operators
Integrity Lining Systems	1	19	Liner Company

VISITOR

Time	Name	Representing	Remarks
0600-1930	Trevor Michaud	SME	Construction and liner oversight
0630-1830	Ben Monohon	SME	Construction oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Fix existing intermediate underdrain berms.
- Continue installing geomembrane
- Continue installing intermediate underdrain berms. Approx. 280 LF installed.
- Excavate perimeter ditch in SW corner to grade.
- Excavate SW corner downspout.
- Install SW corner culvert.
- Remove existing SW corner culvert.
- Excavate anchor trench.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 2 and 3 of Phase 3.
- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Begin stripping existing topsoil in Area 3 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- See associated spreadsheets for geomembrane installation.
- Verified existing gas collection sand depth.
- Verified perimeter ditch and culvert elevations.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon repairing intermediate underdrain berms. Photo taken looking north.



Photo 2 – Gordon excavating perimeter ditch to grade. Photo taken looking south.



Photo 3 – Gordon excavating anchor trench. Photo taken looking south.



Photo 4 – Gordon shaping SW corner downspout. Photo taken looking southwest.



Photo 5 – Gordon removing existing culvert in SW corner. Photo taken looking south.



Photo 6 – Integrity installing geomembrane at SW corner. Photo taken looking east.



Photo 7 – Gordon excavating roadway to install SW corner culvert. Photo taken looking south.



Photo 8 – Gordon backfilling over culvert. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday July 7, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	67-89 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 92%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	Nick Schmeidlehner (Foreman), 2 truck drivers, 2 laborers, 4 operators
Integrity Lining Systems	1	19	Liner Company

VISITOR

Time	Name	Representing	Remarks
0545-1710	Trevor Michaud	SME	Liner oversight
0625-1300	Ben Monohon	SME	Construction oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Continue installing intermediate underdrain berms.
- Finalize SW corner culvert.
- Continue liner installation.
- Continue perimeter ditch excavation.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Begin stripping existing topsoil in Area 3 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
- See associated spreadsheets for geomembrane installation.
- Verified existing gas collection sand depth.
- Verified perimeter ditch and culvert elevations.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity air testing geomembrane seams.



Photo 2 – Gordon excavating perimeter ditch to grade. Integrity place geomembrane. Photo taken looking southwest.



Photo 3 – Integrity welding pipe boot on SW corner culvert. Photo taken looking south.



Photo 4 – Gordon shaping around SW culvert inlet. Photo taken looking southeast.



Photo 5 – Integrity place geomembrane over SW corner downspout. Photo taken looking northeast.



Photo 6 – Integrity installing geomembrane at top of south slope downspout. Photo taken looking northeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday July 10, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	66-77 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	6 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 81%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	Nick Schmeidlehner (Foreman), 2 truck drivers, 2 laborers, 3 operators

VISITOR

Time	Name	Representing	Remarks
0610-1415	Trevor Michaud	SME	Construction Oversight and Stormwater Inspection

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Backfill and compact anchor trench along west slope of Phase 3. Approx. 900 LF backfilled.
- Remove trees/brush around Sediment Pond #1. Trees/brush at NW corner and west side of sediment pond removed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 2 and 3 of Phase 3.
- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Begin stripping existing topsoil in Area 3 of Phase 3.

QUALITY ASSURANCE

- Construction oversight

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon beginning to backfill anchor trench along west slope of Phase 3. Photo taken looking north.



Photo 2 – First lift of backfill compacted. Photo taken looking northwest.



Photo 3 – Second lift of backfill being added along west slope of Phase 3. Photo taken looking north.



Photo 4 – Second lift of backfill compacted. Photo taken looking northwest.



Photo 5 – Gordon removing trees/brush along Sediment Pond #1. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday July 12, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	60-83 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 90%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	6	Nick Schmeidlehner (Foreman), 2 truck drivers, 1 laborer, 3 operators

VISITOR

Time	Name	Representing	Remarks
0615-1910	Trevor Michaud	SME	Construction Oversight
0900-1130	-	Emery Lee	Hired truck delivering aggregate base material

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-(1) rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Haul existing topsoil stripped on 7/11/23 to the northern stockpile. Approx. 1.2 acres of topsoil stripped on the south slope of Phase 3 on 7/11/23.
- Begin stripping existing cover soil on the south slope of Phase 3 and place over geocomposite on the west slope of Phase 3. Approx. 0.6 acres stripped.
- Build access ramp for cover soil placement.
- Approx. 7,000 sf of geocomposite covered with cover soil on the west slope of Phase 3.
- Install underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Area of the south slope Gordon stripped existing topsoil. Photo taken looking west.



Photo 2 – Gordon hauling topsoil stripped at the south slope of Phase 3 to the northern stockpile. Photo taken looking east.



Photo 3 – Gordon building an access ramp in perimeter ditch at the west slope of Phase 3. Photo taken looking south.



Photo 4 – Gordon beginning to strip existing cover soil on the south slope of Phase 3. Photo taken looking north.



Photo 5 – Gordon placing cover soil over geocomposite on the west slope of Phase 3. Photo taken looking southeast.



Photo 6 – Verifying existing gas collection sand thickness.



Photo 7 – Gordon placing drainage sand over underdrain pipe. Photo taken looking southwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday July 13, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	60-83 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 90%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	6	Nick Schmeidlehner (Foreman), 2 truck drivers, 1 laborer, 3 operators

VISITOR

Time	Name	Representing	Remarks
0615-1910	Trevor Michaud	SME	Construction Oversight
0830-1130	Nick Thompson	SME	Construction Meeting
0900-1030	Drew Straehle	Gordon Contracting	Construction Meeting
1000-1100	Vera Maheu	MEDEP	Construction Meeting
1000-1100	Daniel Emerson	MEDEP	Construction Meeting
0930-1100	Wallace Giakas	MEBGS	Construction Meeting
0930-1100	William Longfellow	MEBGS	Construction Meeting

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil on the south slope of Phase 3 and place over geocomposite on the west slope of Phase 3. Approx. 0.4 acres stripped.
- Approx. 1 acre of geocomposite covered with cover soil on the west slope of Phase 3.
- Install underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon placing cover soil over geocomposite on the west slope of Phase 3. Photo taken looking southwest.



Photo 2 – Gordon continuing to strip existing cover soil on the south slope of Phase 3. Photo taken looking southeast.



Photo 3 – Gordon building access road over geocomposite on the west slope of Phase 3. Photo taken looking west.



Photo 4 – Verifying existing gas collection sand thickness.



Photo 5 – Gordon placing drainage sand over underdrain pipe. Photo taken looking southwest.



Photo 6 – Area of cover soil installed on the west slope of Phase 3. Photo taken looking southeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday July 14, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	66-83 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	6 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 65%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	7	Nick Schmeidlehner (Foreman), 2 truck drivers, 2 laborers, 3 operators

VISITOR

Time	Name	Representing	Remarks
0545-1330	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil on the south slope of Phase 3 and place over geocomposite on the west slope of Phase 3.
- Approx. 3,000 sf of geocomposite covered.
- Install underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Area of the south slope Gordon is stripping the existing cover soil. Photo taken looking south.



Photo 2 – Gordon placing cover soil over the geocomposite on the west slope of Phase 3. Photo taken looking southeast.



Photo 3 – Top portion of west slope of Phase 3 cover soil placement. Photo taken looking northwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday July 17, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	69-84 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	6 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 92%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		8	2 truck drivers, 2 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0930-1900	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil on the south slope of Phase 3 and place over geocomposite on the west slope of Phase 3.
- Approx. 17,000 sf of geocomposite covered.
- Approx. 10,000 sf of cover soil stripped.
- Install underdrain piping and drainage sand.
- Repaired existing gas collection sand layer at the southwest corner of Phase 3 from rain damage over the weekend.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Area of the south slope Gordon is stripping the existing cover soil. Photo taken looking northwest.



Photo 2 – Gordon placing cover soil over the geocomposite on the west slope of Phase 3. Photo taken looking east.



Photo 3 – Existing gas collection sand layer repaired on the south slope of Phase 3. Photo taken looking east.



Photo 4 – Gordon placing drainage sand over underdrain piping. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday July 18, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	69-83 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	2 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 91%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	**0**"

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	7	Nick Schmeidlehner (Foreman), 1 truck driver, 2 laborers, 4 operators
Integrity Lining Systems	2	13	2 foreman, 2 QA/QC, 11 laborers

VISITOR

Time	Name	Representing	Remarks
0615-1645	Trevor Michaud	SME	Construction Oversight
1200-1645	Nick Thompson	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil on the south slope of Phase 3 and place over geocomposite on the west slope of Phase 3.
- Approx. 1.1 acres of geocomposite covered.
- Install underdrain piping and drainage sand.
- Installed 500 LF of intermediate underdrain berms.
- Installed 20,000 sf of geocomposite.
- Integrity made repairs on liner and performed vacuum box testing.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

QUALITY ASSURANCE

Construction oversight
Verified existing gas collection sand depth. See associated spreadsheet.
Verified cover soil thickness. See associated spreadsheet.
Verified cover soil compaction. See associated spreadsheet.
Verified liner repairs. See associated spreadsheets.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity making repairs to geomembrane.



Photo 2 – Integrity vacuum box testing repairs. Photo taken looking northwest.



Photo 3 – Intermediate underdrain berms being installed on the south slope. Photo taken looking southeast.



Photo 4 – Integrity installing geocomposite. Photo taken looking west.



Photo 5 – Verifying existing gas collection sand thickness.



Photo 6 – Gordon continuing to strip existing cover soil. Photo taken looking southeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday July 19, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	64-82 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 75%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		7	2 truck drivers, 2 laborers, 3 operators
Integrity Lining Systems	2	10	2 foreman, 10 laborers

VISITOR

Time	Name	Representing	Remarks
0630-1900	Trevor Michaud	SME	Construction/Liner Oversight
0840-1900	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- 305 LF of anchor trench excavated.
- 310 LF of perimeter ditch excavated.
- 1.3 acres of geomembrane installed.
- 11,600 sf of geocomposite installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Continue excavating anchor trench for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.
-See spreadsheets for geomembrane QA/QC.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon excavating perimeter ditch at the south slope of Phase 3. Photo taken looking east.



Photo 2 – Removing rocks from perimeter ditch. Photo taken looking east.



Photo 3 – Finalizing intermediate underdrain berms. Photo taken looking southwest.



Photo 4 – Integrity installing geomembrane at the southwest corner of Phase 3. Photo taken looking northeast



Photo 5 – Area of geomembrane installed. Photo taken looking northeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday July 20, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	58-81 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	2 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 62%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	7	1 foreman (Nick Schmeidlehner), 2 truck drivers, 2 laborers, 3 operators
Integrity Lining Systems	2	13	2 foreman, 13 laborers

VISITOR

Time	Name	Representing	Remarks
0530-1900	Trevor Michaud	SME	Construction/Liner Oversight
0625-1830	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Air testing and repair work on geomembrane.
- Continue geocomposite installation. Approx. 1 acre installed.
- Install CB-1i and culvert.
- Continue placing cover soil over geocomposite. Approx. 0.57 acres installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.
-See spreadsheets for geomembrane QA/QC.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity performing air testing on geomembrane seams.



Photo 2 – Gordon excavating area for CB-1i. Photo taken looking northeast.



Photo 3 – Gordon setting structure CB-1i. Photo taken looking northeast.



Photo 4 – Gordon continuing strip existing cover soil at top of Phase 3. Photo taken looking northeast.



Photo 5 – CB-1i installed with pipe boot. Photo taken looking southeast.



Photo 6 – Gordon continuing to place cover soil over geocomposite. Photo taken looking northeast.



Photo 7 – Integrity continuing to install geocomposite. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday July 21, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	58-80 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	2 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 84%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	7	1 foreman (Nick Schmeidlehner), 2 truck drivers, 2 laborers, 3 operators
Integrity Lining Systems	2	11	2 foreman, 11 laborers

VISITOR

Time	Name	Representing	Remarks
0530-1700	Trevor Michaud	SME	Construction/Liner Oversight
0635-1530	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Air testing and repair work on geomembrane.
- Install geomembrane. Approx. 0.3 acres installed.
- Continue geocomposite installation. Approx. 0.25 acre installed.
- Install CB-1i and culvert boot.
- Continue placing cover soil over geocomposite. Approx. 0.57 acres installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Begin gas collection installation in Area 3 of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.
-See spreadsheets for geomembrane QA/QC.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity installing geomembrane over the south slope downspout. Photo taken looking north.



Photo 2 – Integrity vacuum box testing repair around CB-1i.



Photo 3 – Integrity continuing to install geocomposite. Photo taken looking north.



Photo 4 – Gordon continuing to place cover soil over geocomposite. Photo taken looking northwest.



Photo 5 – Gordon continuing to remove cover soil at top of Phase 3. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday July 24, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	59-85 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 88%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		8	2 truck drivers, 2 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0615-1800	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil on the south slope of Phase 3 and place over geocomposite on the west slope of Phase 3.
- Approx. 0.87 acres of geocomposite covered.
- Approx. 0.45 acres of existing cover soil stripped.
- Install underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin gas collection system installation for Area 3 of Phase 3.
- Begin intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon continuing to strip existing cover soil on top of Phase 3. Photo taken looking east.



Photo 2 – Gordon placing cover soil over the geocomposite on the west slope of Phase 3. Photo taken looking northeast.



Photo 3 – Gordon placing drainage sand over underdrain pipe. Photo taken looking north.



Photo 4 – Surface swale north of west slope downspout being installed. Photo taken looking southwest.



Photo 5 – Access ramp being removed, and aggregate base material used in perimeter ditch. Photo taken looking northwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday July 25, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	64-83 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 92%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.17"**

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		8	1 truck driver, 3 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0550-1700	Trevor Michaud	SME	Construction Oversight
0730-1530	-	Emery Lee	Hired truck driver

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil on the south slope of Phase 3 and place over geocomposite on the west slope of Phase 3.
- Approx. 20,000 sf of geocomposite covered.
- Approx. 21,600 sf of existing cover soil stripped.
- Approx. 370 LF of perimeter ditch completed.
- Install underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin intermediate underdrain berm installation for Area 3 of Phase 3.
- Begin gas collection system installation for Area 3 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon placing geotextile over aggregate base material in perimeter ditch. Photo taken looking north.



Photo 2 – Gordon placing riprap in perimeter ditch. Photo taken looking north.



Photo 3 – Top portion of Phase 3 cover soil being stripped. Photo taken looking northeast.



Photo 4 – Cover soil being placed over geocomposite south of west slope downspout. Photo taken looking east.

SME
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DAILY CONSTRUCTION REPORT

Date: Wednesday July 26, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Partly sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	62-82 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 54%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		9	2 truck drivers, 2 laborers, 5 operators

VISITOR

Time	Name	Representing	Remarks
0615-1730	Trevor Michaud	SME	Construction Oversight
0730-1600	-	Emery Lee	Hired truck

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil on the top of Phase 3 and place over geocomposite on the west slope of Phase 3.
- Approx. 0.85 acres of geocomposite covered.
- Approx. 26,600 sf of cover soil stripped.
- Added aggregate base material and geotextile to west slope downspout.
- Install underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon stripping existing cover soil on top of Phase 3. Photo taken looking southwest.



Photo 2 – Gordon backfilling underdrain piping with drainage sand. Photo taken looking south.



Photo 3 – Cover soil being placed over geocomposite on the west slope of Phase 3. Photo taken looking east.



Photo 4 – Gordon adding aggregate base to downspout. Photo taken looking southeast.



Photo 5 – Gordon adding geotextile to downspout. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday July 27, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy, rain in afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	67-76 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 83%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.63"**

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	Nick Schmeidlehner (Foreman), 1 truck driver, 3 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0545-1330	Trevor Michaud	SME	Construction Oversight
0900-1230	Nick Thompson	SME	Construction meeting
1000-1100	Daniel Emerson	MEDEP	Construction meeting

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil on the south slope of Phase 3 and place over geocomposite on the west slope of Phase 3.
- Approx. 0.8 acres of geocomposite covered.
- Approx. 0.4 acres of cover soil stripped.
- Install underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin intermediate underdrain berm installation for Area 3 of Phase 3.
- Begin gas collection installation in Area 3 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon adding riprap to the west slope downspout. Photo taken looking west.



Photo 2 – Gordon placing cover soil over the geocomposite on the west slope of Phase 3. Photo taken looking northeast.



Photo 3 – Gordon hauling cover soil from the south slope of Phase 3. Photo taken looking east.



Photo 4 – Gordon continuing to strip cover soil on the south slope of Phase 3. Photo taken looking north.



Photo 5 – Backfilling underdrain pipe with drainage sand. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday July 31, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Partly sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	54-70 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 65%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.48**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		9	1 truck drivers, 4 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0600-1630	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Continue stripping existing cover soil on the south slope of Phase 3 and place over geocomposite on the west slope of Phase 3.
- Installed 400 LF of gas collection piping and 2 gas vents.
- Approx. 5000 sf of cover soil installed.
- Approx. 16,000 sf of cover soil stripped.
- Install underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin construction of perimeter ditch in Area 3 of Phase 3.
- Begin intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue finalizing perimeter ditch along west slope of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon continuing to place cover soil over geocomposite. Photo taken looking south.



Photo 2 – Gordon continuing to strip cover soil and haul away from the south slope of Phase 3. Photo taken looking east.



Photo 3 – Verifying gas collection sand thickness.



Photo 4 – Gordon installing gas collection piping and gas vent along south slope of Phase 3. Photo taken looking west.



Photo 4 – Significant rain event during the afternoon caused erosion rills and sedimentation along the west slope of Phase 3. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday August 1, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	51-70 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	2 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 91%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	Nick Schmeidlehner (Foreman), 1 truck driver, 4 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0600-1700	Trevor Michaud	SME	Construction Oversight
0730-1630	-	Emery Lee	Hired truck delivering material
1030-1130	Paul Monroe	SME	Site visit
1030-1130	Nick Fraser	SME	Site visit

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continue finalizing perimeter ditch along west slope of Phase 3. Approx. 325 LF completed.
- Continue installing gas collection system in Area 3 of Phase 3. Approx. 480 LF of piping and 2 vents installed.
- Continue exposing Phase 1 tie-in. Approx. 150 LF exposed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin construction of perimeter ditch in Area 3 of Phase 3.
- Begin intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Continue stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue finalizing perimeter ditch along west slope of Phase 3.
- Continue exposing Phase 1 tie-in.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Area of the south slope Gordon is stripping the existing cover soil. Photo taken looking south.



Photo 2 – Gordon excavating trench for gas collection installation. Photo taken looking west.



Photo 3 – Gordon installing gas collection piping and vents. Photo taken looking west.



Photo 4 – Gordon adding aggregate base to perimeter ditch. Photo taken looking southwest.



Photo 5 – Gordon exposing Phase 1 tie-in. Photo taken looking north.



Photo 6 – Gordon adding aggregate base to perimeter ditch. Photo taken looking northwest.



Photo 7 – Gordon added geotextile to perimeter ditch. Photo taken looking south.



Photo 8 – Gordon smoothing gas collection sand surface on the south slope of Phase 3. Photo taken looking west.



Photo 9 – Gordon adding riprap perimeter ditch . Photo taken looking northwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday August 2, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	49-74 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 91%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	Nick Schmeidlehner (Foreman), 2 truck drivers, 4 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0610-1700	Trevor Michaud	SME	Construction Oversight
0730-1030	-	Emery Lee	Hired truck delivering material

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continue finalizing perimeter ditch along west slope of Phase 3. Approx. 100 LF completed.
- Begin installing intermediate underdrain berms on south slope of Phase 3. Approx. 140 LF completed.
- Continue exposing Phase 1 tie-in. Approx. 50 LF exposed.
- Approx. 455 LF of surface swale installed on the west slope of Phase 3.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin construction of perimeter ditch in Area 3 of Phase 3.
- Continue intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 3 of Phase 3.
- Finalizing stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue exposing Phase 1 tie-in.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon abandoning CB-#10.



Photo 2 – Gordon adding aggregate base to perimeter ditch. Photo taken looking north.



Photo 3 – Gordon installing intermediate underdrain berms on the south slope. Photo taken looking west.



Photo 4 – Gordon adding riprap to perimeter ditch. Photo taken looking north.



Photo 5 – Gordon installing surface swales on the west slope of Phase 3. Photo taken looking south.



Photo 6 – Gordon exposing Phase 1 tie-in. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday August 3, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	49-75 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 81%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	Nick Schmeidlehner (Foreman), 2 truck drivers, 4 laborers, 4 operators
Integrity Lining Systems	1		Charlie Parks onsite to make repairs

VISITOR

Time	Name	Representing	Remarks
0610-1700	Trevor Michaud	SME	Construction Oversight
1000-1200	Nick Thompson	SME	Site Inspection
1000-1200	Ben Pierce	SME	Site Inspection

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Continue exposing Phase 1 tie-in. Approx. 20 LF exposed.
- Repair west slope.
- Continue stripping existing cover soil.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin construction of perimeter ditch in Area 3 of Phase 3.
- Continue intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 3 of Phase 3.
- Finalizing stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue exposing Phase 1 tie-in.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon exposing Phase 1 tie-in. Photo taken looking east.



Photo 2 – Gordon continuing to strip existing cover soil. Photo taken looking north.



Photo 3 – Verifying existing gas collection sand thickness.



Photo 4 – Gordon repairing west slope. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday August 7, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	56-77 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 91%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	11	Nick Schmeidlehner (Foreman), 2 truck drivers, 5 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0610-1700	Trevor Michaud	SME	Construction Oversight
1345	-	Emery Lee	Material delivery

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Applied mulch to west slope. Approx. 3.5 acres of mulch applied.
- Repair west slope.
- Begin removing sediment from perimeter ditch due to significant rain event over the weekend.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin construction of perimeter ditch in Area 3 of Phase 3.
- Continue intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 3 of Phase 3.
- Finalizing stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue exposing Phase 1 tie-in.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon repairing the west slope. Photo taken looking southwest.



Photo 2 – Gordon cleaning sediment out of perimeter ditch. Photo taken looking southwest.



Photo 3 – Gordon applied mulch to the west slope. Photo taken looking northwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday August 8, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Rain
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	59-66 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 91%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**3.5**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	11	Nick Schmeidlehner (Foreman), 2 truck drivers, 5 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0610-1700	Trevor Michaud	SME	Construction Oversight
1345	-	Emery Lee	Material delivery

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Stormwater management

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin construction of perimeter ditch in Area 3 of Phase 3.
- Continue intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 3 of Phase 3.
- Finalizing stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue exposing Phase 1 tie-in.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday August 9, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	61-71 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	9 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 72%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	Nick Schmeidlehner (Foreman), 1 truck driver, 5 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0600-1730	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Clean up from significant rain event.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin construction of perimeter ditch in Area 3 of Phase 3.
- Continue intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 3 of Phase 3.
- Finalizing stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue exposing Phase 1 tie-in.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon cleaning sediment out of liner section of perimeter ditch. Photo taken looking west.



Photo 2 – Gordon repairing south slope of Phase 3. Photo taken looking southeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday August 10, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	57-79 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 89%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	Nick Schmeidlehner (Foreman), 1 truck driver, 4 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0545-1700	Trevor Michaud	SME	Construction Oversight
1000-1100	Vera Maheu	MEDEP	Construction meeting
1000-1100	Daniel Emerson	MEDEP	Construction meeting
1000-1100	Wallace Giakas	MEBGS	Construction meeting
0900-1115	Nick Thompson	SME	Construction meeting

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Repair the south slope of Phase 3.
- Cleaned sediment out of lined section of perimeter ditch.
- Approx. 360 LF of perimeter ditch excavated.
- Approx. 420 LF of intermediate underdrain berms installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue construction of perimeter ditch in Area 3 of Phase 3.
- Continue intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 3 of Phase 3.
- Finalizing stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue exposing Phase 1 tie-in.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**

4 Gordon Contracting



Photo 1 – Gordon cleaning sediment out of liner section of perimeter ditch. Photo taken looking west.



Photo 2 – Gordon repairing south slope of Phase 3. Photo taken looking east.



Photo 3 – Gordon installing intermediate underdrain berms on the south slope. Photo taken looking west.



Photo 4 – Gordon excavating perimeter ditch on south slope to grade. Photo taken looking west.



Photo 5 – Overview of south slope at end of end. Photo taken looking northeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday August 11, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Rain in morning, sunny in afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	58-75 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	11 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 63%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**1.38**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		8	1 truck driver, 4 laborers, 3 operators

VISITOR

Time	Name	Representing	Remarks
0445-1100	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Stormwater management
- Site clean up

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue construction of perimeter ditch in Area 3 of Phase 3.
- Continue intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 3 of Phase 3.
- Finalizing stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue exposing Phase 1 tie-in.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday August 14, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	58-76 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 90%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	Nick Schmeidlehner (foreman), 2 truck driver, 4 laborers, 4 operators

VISITOR

Time	Name	Representing	Remarks
0645-1700	Trevor Michaud	SME	Construction Oversight
0845-1115	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Installed finger drain.
- Repaired south slope.
- Installed intermediate underdrain berms on the south slope. Approx. 1,079 LF installed.
- Continued stripping existing cover soil. Approx. 19,500 sf stripped.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue construction of perimeter ditch in Area 3 of Phase 3.
- Continue intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 3 of Phase 3.
- Finalizing stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue exposing Phase 1 tie-in.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon repairing the south slope after rain events from last week. Photo taken looking northeast.



Photo 2 – Gordon continuing to strip existing cover soil. Photo taken looking west.



Photo 3 – Gordon installing finger drain on the south slope. Photo taken looking north.



Photo 4 – Gordon installing intermediate underdrain berms on the south slope. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday August 15, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	57-75 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	1 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 93%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	11	Nick Schmeidlehner (foreman), 3 truck driver, 4 laborers, 4 operators
TGP Enterprises	1	1	Vacuum truck company

VISITOR

Time	Name	Representing	Remarks
0600-2030	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-vacuum truck
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Installed intermediate underdrain berms on the south slope. Approx. 740 LF installed.
- Clean sediment out of lined section of perimeter ditch.
- Repair south slope downspout.
- Finalize adding riprap to west slope perimeter ditch.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue construction of perimeter ditch in Area 3 of Phase 3.
- Continue intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 3 of Phase 3.
- Finalizing stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue exposing Phase 1 tie-in.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon cleaning sediment out of perimeter ditch. Photo taken looking west.



Photo 2 – Gordon cleaning sediment out of structure. Photo taken looking west.



Photo 3 – Gordon smoothing existing gas collection sand surface. Photo taken looking northeast.



Photo 4 – Gordon addiing riprap to section of west slope perimeter ditch. Photo taken looking southwest.



Photo 5 – Gordon repairing south slope downspout. Photo taken looking north.



Photo 6 – Gordon backfilling anchor trench. Photo taken looking northwest.



Photo 7 – Gordon installing intermediate underdrain berms on the south slope. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday August 16, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	57-73 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 82%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.05”**

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	11	Nick Schmeidlehner (foreman), 3 truck drivers, 4 laborers, 4 operators
TGP Enterprises	1	1	Vacuum truck company
Integrity Lining Systems	1	7	1 foreman, 1 QA/QC, 6 laborers

VISITOR

Time	Name	Representing	Remarks
0530-1830	Trevor Michaud	SME	Construction/Liner Oversight
0700-1640	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-vacuum truck
-rear dump triaxle

TODAY’S CONSTRUCTION ACTIVITIES

- Continue installing intermediate underdrain berms. Approx. 710 LF installed.
- Clean sediment out of lined section of perimeter ditch.
- Excavate anchor trench along liner limit for Phase 3.
- Finalized excavating south slope perimeter ditch.
- Continue installing geomembrane. Approx. 2 acres installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Finalize installation of gas collection system in Area 3 of Phase 3.
- Finalize exposing Phase 1 tie-in.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-See associated spreadsheets for liner QA/QC.
-Verified intermediate underdrain berms were constructed per the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon excavating anchor trench along Phase 3/4 tie-in. Photo taken looking east.



Photo 2 – Integrity continuing to install geomembrane. Photo taken looking southeast.



Photo 3 – Integrity cleaning geomembrane surface prior to seaming. Photo taken looking south.



Photo 4 – Gordon excavating south slope perimeter ditch to grade. Photo taken looking southeast.



Photo 5 – TGP Enterprises onsite to finalize removing sediment from SW corner. Photo taken looking southwest.



Photo 6 – Gordon installing intermediate underdrain berms. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday August 17, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	61-74 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 97%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	11	Nick Schmeidlehner (foreman), 3 truck drivers, 4 laborers, 4 operators
Integrity Lining Systems	1	7	1 foreman, 1 QA/QC, 6 laborers

VISITOR

Time	Name	Representing	Remarks
0610-2000	Trevor Michaud	SME	Construction/Liner Oversight
0630-2045	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-vacuum truck
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Finalized installing intermediate underdrain berms. Approx. 790 LF installed.
- Finalized excavating anchor trench along liner limit for Phase 3.
- Continue installing geomembrane. Approx. 3 acres installed.
- Finalized gas collection system installation. 640 LF and 6 gas vents installed.
- Finalized exposing Phase 1 tie-in.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue liner installation for Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-See associated spreadsheets for liner QA/QC.
-Verified intermediate underdrain berms were constructed per the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity cleaning the leading edge of geomembrane. Photo taken looking south.



Photo 2 – Integrity continuing to install geomembrane. Photo taken looking south.



Photo 3 – Area of completed geomembrane installation. Photo taken looking southwest.



Photo 4 – Area of completed geomembrane installation. Photo taken looking west.



Photo 5 – Gordon regrading area at top of Phase 3 near Phase 1 tie-in. Photo taken looking east.



Photo 6 – Gordon installing intermediate underdrain berms. Photo taken looking east.



Photo 7 – Gordon installing gas collection system. Photo taken looking west.



Photo 6 – Gordon regrading area at top of Phase 3 by Phase 1 tie-in. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday August 18, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy, rain in afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	64-73 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 92%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.6**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	11	Nick Schmeidlehner (foreman), 3 truck drivers, 4 laborers, 4 operators
Integrity Lining Systems	1	7	1 foreman, 1 QA/QC, 6 laborers

VISITOR

Time	Name	Representing	Remarks
0530-1530	Trevor Michaud	SME	Construction/Liner Oversight
0530-1445	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-vacuum truck
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Finalized excavating anchor trench along liner limit for Phase 3.
- Continue installing geomembrane. Approx. 1.75 acres installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue liner installation for Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Detail work on geomembrane.
- Begin installation of geocomposite on remaining area of Phase 3.
- Continue underdrain piping and drainage sand placement.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-See associated spreadsheets for liner QA/QC.
-Verified intermediate underdrain berms were constructed per the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon smoothing existing gas collection sand. Photo taken looking north.



Photo 2 – Gordon smoothing existing gas collection sand. Photo taken looking southwest.



Photo 3 – Integrity continuing to install geomembrane. Photo taken looking southeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Saturday August 19, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	60-73 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	1 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 93%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Integrity Lining Systems	1	7	1 foreman, 1 QA/QC, 6 laborers

VISITOR

Time	Name	Representing	Remarks
0630-1630	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Detail work on installed geomembrane.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Begin geocomposite installation.
- Continue backfilling over geocomposite.

QUALITY ASSURANCE

- Construction oversight
-Verified existing gas collection sand depth. See associated spreadsheet.
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity working on repairs.



Photo 2 – Integrity working on tie-in.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday August 21, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	59-75 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 92%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	12	1 foreman (Nick Schmeidlehner), 4 operators, 5 laborers, 3 truck drivers
Integrity Lining Systems	1	7	1 foreman, 1 QA/QC, 6 laborers

VISITOR

Time	Name	Representing	Remarks
0615-1830	Trevor Michaud	SME	Liner oversight
0720-1645	Ben Monohon	SME	Construction oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Finalized installation of geomembrane. Approx. 0.5 acres installed.
- Continue detail work on geomembrane.
- Repair west slope downspout.
- Add aggregate base and riprap to perimeter ditch. Approx. 130 LF completed.
- Excavate outlet of CB-1i to finalize installing culvert.
- Remove trees/brush around Sediment Pond #1.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Begin geocomposite installation.
- Continue placing cover soil over geocomposite.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.
-See associated spreadsheets for liner QA/QC

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity cleaning leading edge of liner. Photo taken looking east.



Photo 2 – Integrity cleaning geomembrane pior to seaming. Photo taken looking west.



Photo 3 – Geomembrane installation completed for Phase 3. Photo taken looking west.



Photo 4 – Integrity working on tie-in. Photo taken looking east.



Photo 5 – Gordon repairing west slope downspout. Photo taken looking north.



Photo 6 – Gordon adding aggregate base to perimeter ditch. Photo taken looking northwest.



Photo 7 – Gordon adding riprap to perimeter ditch. Photo taken looking northwest.



Photo 8 – Gordon excavating outlet to CB-1i. Photo taken looking southwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday August 22, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	50-70 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	11 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 45%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	11	1 foreman (Nick Schmeidlehner), 4 operators, 4 laborers, 3 truck drivers
Integrity Lining Systems	1	7	1 foreman, 1 QA/QC, 6 laborers

VISITOR

Time	Name	Representing	Remarks
0600-1800	Trevor Michaud	SME	Liner oversight
0630-1645	Ben Monohon	SME	Construction oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Add aggregate base and riprap to perimeter ditch. Approx. 130 LF completed.
- Finalize installing outlet and riprap ditch from CB-1i.
- Remove trees/brush around Sediment Pond #1.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Begin geocomposite installation.
- Continue placing cover soil over geocomposite.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.
-See associated spreadsheets for liner QA/QC

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity air testing seams. Photo taken looking north.



Photo 2 – Integrity working on Phase 1 tie-in. Photo taken looking west.



Photo 3 – Cap strip being installed to failed section of seam. Photo taken looking west.



Photo 4 – Gordon adding aggregate base to the perimeter ditch. Photo taken looking northwest.



Photo 5 – Gordon adding riprap to outlet of CB-1i. Photo taken looking south.



Photo 6 – Gordon adding riprap to outlet of CB-1i and adding haymulch. Photo taken looking southwest.



Photo 7 – Gordon adding riprap to perimeter ditch. Photo taken looking northwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday August 23, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	46-75 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	11 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 83%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 foreman (Nick Schmeidlehner), 4 operators, 3 laborers, 3 truck drivers
Integrity Lining Systems	1	7	1 foreman, 1 QA/QC, 6 laborers

VISITOR

Time	Name	Representing	Remarks
0530-1830	Trevor Michaud	SME	Liner oversight
0625-1750	Ben Monohon	SME	Construction oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Add riprap aprons to culvert outlets.
- Continue cover soil placement. Approx. 0.75 acres of cover soil placed.
- Install underdrain piping and drainage sand as cover soil placement progresses.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Begin geocomposite installation.
- Continue placing cover soil over geocomposite.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.
-See associated spreadsheets for liner QA/QC

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon installing riprap apron to SW corner culvert outlet. Photo taken looking southwest.



Photo 2 – Gordon installing riprap apron to CB-2C outlet. Photo taken looking south.



Photo 3 – Gordon continuing to place cover soil over geocomposite. Photo taken looking west.



Photo 4 – Gordon blending cover soil to edge of perimeter ditch. Photo taken looking north.



Photo 5 – Gordon adding haymulch to outlet of SW corner culvert. Photo taken looking southwest.



Photo 6 – Gordon adding drainage sand over underdrain piping. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday August 24, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	51-77 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	2 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 100%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 foreman (Nick Schmeidlehner), 4 operators, 3 laborers, 3 truck drivers
Integrity Lining Systems	1	7	1 foreman, 1 QA/QC, 6 laborers

VISITOR

Time	Name	Representing	Remarks
0610-1600	Trevor Michaud	SME	Liner oversight
0630-1520	Ben Monohon	SME	Construction oversight
1000-1130	Vera Maheu	MEDEP	Construction meeting
1000-1130	Daniel Emerson	MEDEP	Construction meeting

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Fix Phase 2 surface swale.
- Continue placing cover soil.
- Install underdrain piping and drainage sand as cover soil placement progresses.
- Apply hay mulch and seed to finalized areas.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Begin geocomposite installation.
- Continue placing cover soil over geocomposite.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.
-See associated spreadsheets for liner QA/QC

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon placing cover soil over geocomposite. Photo taken looking north.



Photo 2 – Gordon smoothing completed area of Phase 3. Photo taken looking northeast.



Photo 3 – Gordon fixing slope along Sediment Pond #1. Photo taken looking east.



Photo 4 – Gordon fixing Phase 2 surface swale. Photo taken looking west.



Photo 5 – Gordon adding haymulch to completed area of Phase 3. Photo taken looking north.



Photo 6 – Gordon installed ECM and haymulch to Phase 2 surface swale. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday August 28, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	50-75 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	6 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 75%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 foreman (Nick Schmeidlehner), 3 operators, 3 laborers, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0610-1800	Trevor Michaud	SME	Liner oversight
0930-1700	Ben Monohon	SME	Construction oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Fix Dolby II/III access road.
- Add topsoil, seed, hay mulch along perimeter ditch of Phase 2.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Begin geocomposite installation.
- Continue placing cover soil over geocomposite.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.
-See associated spreadsheets for liner QA/QC

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon fixing Dolby II/III access road. Photo taken looking north.



Photo 2 – Gordon adding topsoil along Dolby II/III access road. Photo taken looking north.



Photo 3 – Gordon applying hay mulch along edge of roadway. Photo taken looking south.



Photo 4 – Gordon fixing eroded areas on Phase 2. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday August 29, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy, scattered showers
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	59-76 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 94%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.05”**

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 foreman (Nick Schmeidlehner), 4 operators, 3 laborers, 2 truck drivers
Integrity Lining Systems	1	6	1 foreman, 6 laborers

VISITOR

Time	Name	Representing	Remarks
0520-1930	Trevor Michaud	SME	Liner oversight
0600-1600	Ben Monohon	SME	Construction oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY’S CONSTRUCTION ACTIVITIES

- Detail work on geomembrane.
- Install geocomposite. Approx. 0.75 acres installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Begin geocomposite installation.
- Continue placing cover soil over geocomposite.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.
-See associated spreadsheets for liner QA/QC

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity installing rain guards on gas vent boots.



Photo 2 – Integrity installing geocomposite. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday August 30, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy, scattered showers
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	60-68 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 96%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.5**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Integrity Lining Systems	1	6	1 foreman, 6 laborers

VISITOR

Time	Name	Representing	Remarks
0600-1230	Trevor Michaud	SME	Liner oversight
0630-1030	Ben Monohon	SME	Construction oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Install geocomposite. Approx. 0.65 acres installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Begin geocomposite installation.
- Continue placing cover soil over geocomposite.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.
-See associated spreadsheets for liner QA/QC

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity installing geocomposite. Photo taken looking northeast.



Photo 2 – Integrity installing geocomposite. Photo taken looking southwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday August 31, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	51-67 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	8 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 77%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 foreman (Nick Schmeidlehner), 3 operators, 3 laborers, 3 truck drivers
Integrity Lining Systems	1	5	1 foreman, 5 laborers

VISITOR

Time	Name	Representing	Remarks
0550-1700	Trevor Michaud	SME	Liner oversight
0630-1730	Ben Monohon	SME	Construction oversight
1100-1230	Paul Monroe	SME	Construction oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continued detail work on geomembrane.
- Installed header pipe.
- Continued placing cover soil.
- Continue installing underdrain piping and drainage sand as cover soil placement continues.
- Added aggregate base material to SW corner downspout and perimeter ditch.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Begin geocomposite installation.
- Continue placing cover soil over geocomposite.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.
-See associated spreadsheets for liner QA/QC

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon placing drainage sand over underdrain piping. Photo taken looking north.



Photo 2 – Gordon continuing to place cover soil. Photo taken looking west.



Photo 3 – Gordon installing header pipe. Photo taken looking east.



Photo 4 – Gordon adding aggregate base to SW corner downspout. Photo taken looking south.



Photo 5 – Gordon adding aggregate base to perimeter ditch. Photo taken looking southeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday September 1, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	63-87 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 98%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	Nick Schmeidlehner (foreman), 2 truck driver, 3 laborers, 4 operators
Integrity Lining Systems	1	5	1 foreman, 1 QA/QC, 4 laborers

VISITOR

Time	Name	Representing	Remarks
0635-1805	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continue repair work on geomembrane.
- Continue installing geocomposite. Approx. 1.85 acres installed.
- Finalized placing riprap in SW corner downspout and perimeter ditch.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Finalize installing geocomposite.
- Install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon placing riprap in SW corner downspout. Photo taken looking northeast.



Photo 2 – Integrity installing geocomposite at top of Phase 3. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday September 5, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	63-87 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 98%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	Nick Schmeidlehner (foreman), 2 truck driver, 3 laborers, 4 operators
Integrity Lining Systems	1	5	1 foreman, 1 QA/QC, 4 laborers

VISITOR

Time	Name	Representing	Remarks
0600-1845	Trevor Michaud	SME	Construction Oversight
1300-1645	-	Emery Lee	Hired truck

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continued backfilling over geocomposite. Approx. 0.2 acres placed.
- Installed underdrain piping and drainage sand.
- Installed geocomposite.
- Detail work on geocomposite.
- Built new access ramp.
- Finalized adding riprap to SW corner perimeter ditch.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Finalize installing geocomposite.
- Install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon backfilling over geocomposite. Photo taken looking northeast.



Photo 2 – Gordon aadding drainage sand over underdrain pipe. Photo taken looking southwest.



Photo 3 – Gordon adding new access ramp. Photo taken looking northwest.



Photo 4 – Gordon adding riprap to section of SW corner perimeter ditch. Photo taken looking southeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday September 6, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	61-84 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 100%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	Nick Schmeidlehner (foreman), 2 truck driver, 3 laborers, 4 operators
Integrity Lining Systems	1	5	1 foreman, 1 QA/QC, 4 laborers

VISITOR

Time	Name	Representing	Remarks
0600-1715	Trevor Michaud	SME	Construction Oversight
0700-1645	-	Emery Lee	Hired truck

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continued backfilling over geocomposite. Approx. 0.6 acres placed.
- Continued adding underdrain piping and drainage sand.
- Installed geocomposite. Approx. 1.3 acres installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Finalize installing geocomposite.
- Install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**

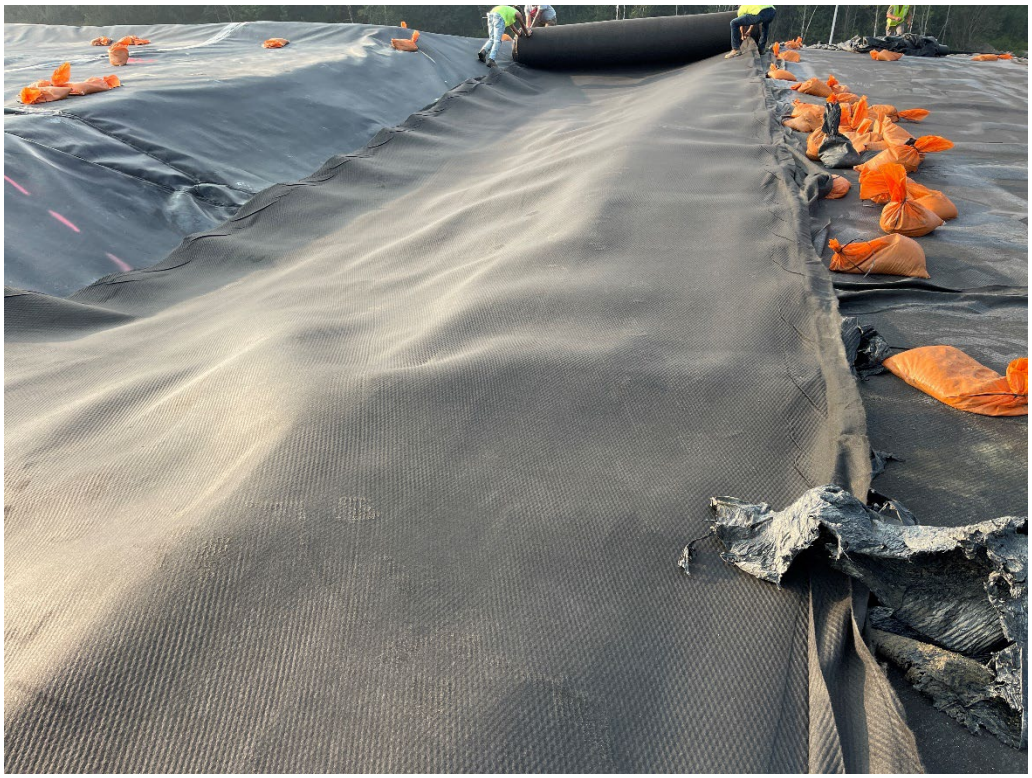

Photo 1 – Integrity deploying geocomposite. Photo taken looking south.



Photo 2 – Gordon backfilling over geocomposite. Photo taken looking northeast.



Photo 3 – Integrity adding zip-ties to geocomposite. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday September 7, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	61-86 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	2 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 92%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	Nick Schmeidlehner (foreman), 2 truck driver, 3 laborers, 4 operators
Integrity Lining Systems	1	6	1 foreman, 1 QA/QC, 5 laborers

VISITOR

Time	Name	Representing	Remarks
0600-1730	Trevor Michaud	SME	Construction Oversight
0930-1230	Nick Thompson	SME	Construction Meeting
1000-1100	Vera Maheu	MEDEP	Construction Meeting
1000-1100	Daniel Emerson	MEDEP	Construction Meeting
1000-1100	Wallace Giakas	MEBGS	Construction Meeting
0700-1630	-	Emery Lee	Hired truck

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Installing cover soil over geocomposite. Approx. 0.6 acres installed.
- Installed geocomposite. Approx. 1.3 acres installed.
- Continued placing undrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Finalize installing geocomposite.
- Install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon continuing to place cover soil on top of Phase 3. Photo taken looking west.



Photo 2 – Integrity cleaning liner surface prior to installing geocomposite. Photo taken looking west.



Photo 3 – Integrity installing geocomposite at the south slope. Photo taken looking west.



Photo 4 – Area of cover soil installed at top of Phase 3. Photo taken looking west.

SME
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DAILY CONSTRUCTION REPORT

Date: Friday September 8, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Rain in morning, sunny in afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	66-84 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 84%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**1.1**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	7	Nick Schmeidlehner (foreman), 1 truck driver, 3 laborers, 3 operators
Integrity Lining Systems	1	4	1 foreman, 4 laborers

VISITOR

Time	Name	Representing	Remarks
0600-1715	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-Genie lull

TODAY'S CONSTRUCTION ACTIVITIES

- Install geocomposite. Approx. 0.95 acres installed.
- Fix section of anchor trench.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Finalize installing geocomposite.
- Install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Saturday September 9, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	59-77 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	8 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 63%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Integrity Lining Systems	1	5	1 foreman, 5 laborers

VISITOR

Time	Name	Representing	Remarks
0630-1630	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-Genie lull

TODAY'S CONSTRUCTION ACTIVITIES

- Installed geocomposite. Approx. 47,000 sf installed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Integrity installing geocomposite. Photo taken looking south.



Photo 2 – Integrity cleaning liner around structure. Photo taken looking south.



Photo 3 – Geocomposite installed on the south slope of Phase 3. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday September 11, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy/showers
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	60-69 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	2 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 100%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.2**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 foreman (Nick Schmeidlehner), 4 operators, 3 laborers, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0610-1715	Trevor Michaud	SME	Construction Oversight
1230-1330	Paul Monroe	SME	Site check-up

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-Genie lull

TODAY'S CONSTRUCTION ACTIVITIES

- Trash pick-up.
- Clean sections of lined perimeter ditch for Integrity to cover with composite.
- Backfill anchor trench.
- Continue installing cover soil over geocomposite. Approx. 5,000 sf installed.
- Continue installing underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon working on backfilling anchor trench. Photo taken looking west.



Photo 2 – First section of perimeter ditch cleaned and ready for geocomposite. Photo taken looking southeast.



Photo 3 – Second section of liner getting cleaned prior to geocomposite installation. Photo taken looking east.



Photo 4 – Gordon continuing to install cover soil over geocomposite. Photo taken looking northeast.



Photo 5 – Underdrain piping and drainage sand being installed as cover soil installation continues. Photo taken looking southwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday September 12, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy/showers
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	61-66 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 98%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.85”**

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 foreman (Nick Schmeidlehner), 4 operators, 3 laborers, 2 truck drivers
Integrity Lining Systems	1	1	1 foreman, 1 laborer

VISITOR

Time	Name	Representing	Remarks
0555-1615	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-Genie lull

TODAY’S CONSTRUCTION ACTIVITIES

- Repair section of liner.
- Finalize geocomposite installation.
- Continue installing cover soil over geocomposite. Approx. 5,000 sf installed.
- Continue placing underdrain piping and drainage sand.
- Continue backfilling anchor trench.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Water pumped out from under liner and subgrade repaired. Photo taken looking east.



Photo 2 – Section of anchor trench excavated to proper depth. Photo taken looking north.



Photo 3 – Second section of liner has geocomposite installed over it. Photo taken looking east.



Photo 4 – Sandbags have been moved to be along egde of intermediate underdrain berms. Photo taken looking southwest.



Photo 5 – Gordon backfilling anchor trench. Photo taken looking east.



Photo 6 – Underdrain piping and drainage sand being installed as cover soil installation continues. Photo taken looking southwest.



Photo 7 – Repair being vacuum box tested.



Photo 8 – Second section of liner has geocomposite installed over it. Photo taken looking northeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday September 13, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy/showers in morning, sunny in afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	64-72 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 97%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.1**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	7	1 foreman (Nick Schmeidlehner), 3 operators, 3 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
0555-1415	Trevor Michaud	SME	Construction Oversight
0700-1400	-	Emery Lee	Hired truck
0900-1100	Brian Pierce	SME	Site check-up

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull
-Genie lull
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Finalized backfilling anchor trench.
- Added aggregate base and riprap to perimeter ditch. Approx. 150 LF completed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon continuing to backfill anchor trench along Phase 3/4 edge. Photo taken looking northeast.



Photo 2 – Gordon adding aggregate base to perimeter ditch along south slope. Photo taken looking south.



Photo 3 – Gordon adding riprap to perimeter ditch along south slope. Photo taken looking east.



Photo 4 – Gordon compacting anchor trench. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday September 14, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	54-71 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 96%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0.4**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 foreman (Nick Schmeidlehner), 4 operators, 3 laborers, 2 truck driver

VISITOR

Time	Name	Representing	Remarks
0550-1700	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Continue installation of cover soil over geocomposite. Approx. 1.3 acres installed.
- Continue installing underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon continuing to place cover soil over geocomposite. Photo taken looking north.



Photo 2 – Gordon adding underdrain piping as cover soil placement continues. Photo taken looking east.



Photo 3 – Gordon building a new access road to place cover soil. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday September 15, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	51-67 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 96%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		8	4 operators, 3 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
0555-1630	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Repair and retrack cover soil on the SW corner of Phase 3.
- Apply seed and mulch on the SW corner of Phase 3. Approx. 1.5 acres of mulch applied.
- Continue placing cover soil over geocomposite.
- Approx. 2.5 acre of cover soil at top of Phase 3 to grade.
- Continue installing underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon repairing cover soil surface at SW corner of Phase 3. Photo taken looking southwest.



Photo 2 – Gordon retracking SW corner of Phase 3. Photo taken looking northeast.



Photo 3 – Gordon applying seed prior to mulching. Photo taken looking southwest.



Photo 4 – Gordon continuing to build west slope surface swale. Photo taken looking south.



Photo 5 – Gordon placed mulch over SW corner of Phase 3. Photo taken looking south.



Photo 6 – Gordon placed mulch over SW corner of Phase 3. Photo taken looking northeast.



Photo 7 – Gordon placing cover soil over geocomposite. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday September 18, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	55-64 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	8 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 97%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 foreman (Nick Schmeidlehner), 4 operators, 2 laborers, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0610-1940	Trevor Michaud	SME	Construction Oversight
1600-1940	-	Integrity Lining Systems	Take remaining materials and equipment offsite.
1100-1200	-	Jordan Equipment	Fixing equipment

EQUIPMENT

-Volvo ECR 355 excavator
-(3) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-CAT TH62 lull

TODAY'S CONSTRUCTION ACTIVITIES

- Smooth cover soil at top of Phase 3.
- Apply seed and mulch on the SW corner and top area of Phase 3. Approx. 2.5 acres of mulch applied.
- Continue placing cover soil over geocomposite. Approx. 0.55 acres installed.
- Install remaining surface swale at west slope of Phase 3. 190 LF installed.
- Continue installing underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon placing cover soil at top of Phase 3. Photo taken looking east.



Photo 2 – Gordon adding surface swale along west slope of Phase 3. Photo taken looking northwest.



Photo 3 – Gordon placing drainage sand over underdrain piping.



Photo 4 – Gordon smoothing surface prior to adding hay mulch. Photo taken looking east.



Photo 5 – Hay mulch applied at top of Phase 3. Photo taken looking west.



Photo 6 – Hay mulch applied at west slope of Phase 3. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday September 20, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Partly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	53-68 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 92%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 foreman (Nick Schmeidlehner), 4 operators, 3 laborers, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0600-1800	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue placing cover soil over geocomposite. Approx. 0.6 acres installed.
- Continue installing underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon beginning to place cover soil at SW corner of Phase 3 moving east. Photo taken looking southwest.



Photo 2 – Gordon continuing to place cover soil. Photo taken looking south.



Photo 3 – Gordon placing drainage sand over underdrain piping.



Photo 4 – Area of cover soil installed at end of day. Photo taken looking southwest.

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DAILY CONSTRUCTION REPORT

Date: Friday September 22, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	41-69 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	1 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 100%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	1 foreman (Nick Schmeidlehner), 3 operators, 3 laborers, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0540-1500	Trevor Michaud	SME	Construction Oversight
0700-1445	-	Emery Lee	Hired truck

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-water truck
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continue placing cover soil over geocomposite. Approx. 0.5 acres installed.
- Continue installing underdrain piping and drainage sand.
- Continue finalizing perimeter ditch. Approx. 100 LF completed.
- Remove current access ramp and relocate.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon beginning to place cover soil at top of Phase 3. Photo taken looking southeast.



Photo 2 – Gordon removing existing access ramp. Photo taken looking south.



Photo 3 – Gordon adding new access ramp. Photo taken looking south.



Photo 4 – Gordon placing aggregate base in perimeter ditch. Photo taken looking southwest.



Photo 5 – Gordon placing geotextile fabric in perimeter ditch. Photo taken looking southwest.



Photo 6 – Gordon placing riprap in perimeter ditch. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday September 25, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	45-64 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	8 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 88%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		7	3 operators, 2 laborers, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0605-1715	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue placing cover soil over geocomposite. Approx. 0.45 acres installed.
- Continue installing underdrain piping and drainage sand.
- Fixed Phase 2 surface swale.
- Install erosion control matting on surface swales.
- Seeded and placed hay mulch over finalized areas.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue placing cover soil over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon beginning to place cover soil at south slope of Phase 3. Photo taken looking east.



Photo 2 – Gordon fixing the Phase 2 surface swale. Photo taken looking west.



Photo 3 – Underdrain piping and drainage sand being installed as cover soil gets placed. Photo taken looking southwest.



Photo 4 – Area of cover soil placed on the south slope. Photo taken looking west.



Photo 5 – Phase 2 surface swale has been fixed. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday September 26, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	40-65 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 100%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		7	3 operators, 2 laborers, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0545-1715	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue placing cover soil over geocomposite. Approx. 0.33 acres installed.
- Continue installing underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue placing cover soil over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon continuing to place cover soil at south slope of Phase 3. Photo taken looking northeast.



Photo 2 – Gordon placing drainage sand over underdrain piping. Photo taken looking south.



Photo 3 – Gordon placing cover soil around south slope downspout. Photo taken looking east.



Photo 4 – Gordon blending leading edge of cover soil at downspout. Photo taken looking south.

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DAILY CONSTRUCTION REPORT

Date: Wednesday September 27, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	40-69 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 100%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		9	3 operators, 4 laborers, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0545-1745	Trevor Michaud	SME	Construction Oversight
0700-1200	-	Emery Lee	Hired truck

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Continue placing cover soil over geocomposite. Approx. 0.77 acres installed.
- Continue installing underdrain piping and drainage sand.
- Begin adding aggregate base and riprap to south slope downspout.
- Fix erosion along edge of west slope surface swale.
- Finalize heights of gas vents.
- Add rodent guards to underdrain outlets.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue placing cover soil over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon finalizing gas vent heights. Photo taken looking northwest.



Photo 2 – Gordon placing aggregate base material in the south slope downspout. Photo taken looking south.



Photo 3 – Gordon continuing to place cover soil on the south slope. Photo taken looking east.



Photo 4 – Gordon placing riprap to the south slope downspout. Photo taken looking south.



Photo 5 – Gordon adjusting the west slope surface swale. Photo taken looking northwest.



Photo 6 – Area of south slope completed with cover soil. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday September 28, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	41-72 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	2 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 99%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	1 foreman (Nick Schmeidlehner), 4 operators, 3 laborers, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0600-1830	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue placing cover soil over geocomposite. Approx. 0.6 acres installed.
- Continue installing underdrain piping and drainage sand.
- Continue adding aggregate base and riprap to south slope downspout.
- Fix erosion along edge of west slope surface swale.
- Add ECM to west slope surface swale.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue placing cover soil over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon continuing to add aggregate base material in the south slope downspout. Photo taken looking south.



Photo 2 – Gordon continuing to place cover soil on the south slope. Photo taken looking east.



Photo 3 – Gordon placing drainage sand over the underdrain piping. Photo taken looking east.



Photo 4 – Gordon continuing to fix the west slope surface swale. Photo taken looking north.



Photo 5 – Gordon placing erosion control matting on the west slope surface swale. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Friday September 29, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	42-69 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	1 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 98%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 foreman (Nick Schmeidlehner), 3 operators, 5 laborers, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0545-1400	Trevor Michaud	SME	Construction Oversight
0900-1330	Matt Muzzy	SME	Leachate pond cleaning
0700-1400	-	Emery Lee	Hired truck

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Finalized placing cover soil over geocomposite. Approx. 0.2 acres installed.
- Finalized installing underdrain piping and drainage sand.
- Continue adding aggregate base and riprap to south slope downspout.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.
-Construct soil diversion berm in perimeter ditch.

QUALITY ASSURANCE

- Construction oversight
-Verified cover soil thickness. See associated spreadsheet.
-Verified cover soil compaction. See associated spreadsheet.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon finalizing cover soil placement. Photo taken looking east.



Photo 2 – Gordon continuing to place riprap in the south slope downspout. Photo taken looking north.



Photo 3 – Gordon smoothing cover soil surface on the south slope. Photo taken looking northeast.



Photo 4 – Gordon building the surface swale between the south and southwest corner downspout. Photo taken looking east.



Photo 5 – Gordon tracking the south slope. Photo taken looking east.



Photo 6 – Gordon adding aggregate base material to the perimeter ditch. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Monday October 2, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	43-71 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 90%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	6	1 foreman (Nick Schmeidlehner), 2 operators, 3 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
0700-1700	Trevor Michaud	SME	Construction Oversight
0735-1230	-	Emery Lee	Hired truck

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Finalize construction of surface swales.
- Install soil diversion berm.
- Continue placing seed and hay mulch.
- Continue placing riprap in perimeter ditch.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue to install riprap in perimeter ditch.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Verified surface swales were constructed according to the approved plans.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon building the soil diversion berm. Photo taken looking west.



Photo 2 – Gordon continuing to aggregate base in the perimeter ditch. Photo taken looking east.



Photo 3 – Gordon continuing to add riprap in the perimeter ditch. Photo taken looking east.



Photo 4 – Gordon building the surface swale on the south slope. Photo taken looking west.



Photo 5 – Gordon tracking the south slope. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday October 3, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	50-78 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 84%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	6	1 foreman (Nick Schmeidlehner), 2 operators, 3 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
0600-1715	Trevor Michaud	SME	Construction Oversight
0920-1030	-	Integrity Lining Systems	Making repair on liner
1200-1330	Paul Monroe	SME	Check in on site

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator
-rear dump triaxle

TODAY'S CONSTRUCTION ACTIVITIES

- Fixing areas of cover soil that were washed out or damaged from construction activities.
- Continue placing seed and hay mulch.
- Hydroseeding
- Continue placing riprap in perimeter ditch.
- Make liner repair

ANTICIPATED CONSTRUCTION ACTIVITIES

- Build up existing roadway.
- Apply mulch and hydroseed.
- Finalize riprap in perimeter ditch.

QUALITY ASSURANCE

- Construction oversight
-Observed liner repair

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon finalizing adding aggregate base to perimeter ditch. Photo taken looking south.



Photo 2 – Gordon fixing Phase 1 surface swale from construction activities. Photo taken looking southwest.



Photo 3 – Gordon fixing cover soil from rain damage. Photo taken looking east.



Photo 4 – Integrity making repair on liner.



Photo 5 – Gordon applying hydroseed. Photo taken looking northeast.



Photo 6 – Gordon adding topsoil to edge of perimeter ditch. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Wednesday October 4, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	56-76 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 99%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	6	1 foreman (Nick Schmeidlehner), 2 operators, 3 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
0600-1715	Trevor Michaud	SME	Construction Oversight
1200-1230	-	A.A. Brochu	Equipment removal

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-Kubota U50-5 excavator
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue placing seed and hay mulch.
- Hydroseeding
- Finalized placing riprap in perimeter ditch.
- Add ECM to surface swales

ANTICIPATED CONSTRUCTION ACTIVITIES

- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Observed liner repair

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon finalizing adding riprap to perimeter ditch. Photo taken looking southeast.



Photo 2 – Gordon adding ECM to surface swales. Photo taken looking southwest.



Photo 3 – Gordon adding topsoil along edge of perimeter ditch. Photo taken looking north.



Photo 4 – Gordon applying haymulch. Photo taken looking southwest.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Thursday October 5 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	56-76 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 99%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	6	1 foreman (Nick Schmeidlehner), 2 operators, 3 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
0600-1830	Trevor Michaud	SME	Construction Oversight
0900-1330	Nick Thompson	SME	Construction meeting
1000-1100	Vera Maheu	MEDEP	Construction meeting
1000-1100	Daniel Emerson	MEDEP	Construction meeting
1000-1100	Sean Dougherty	MEDEP	Construction meeting

EQUIPMENT

-Volvo ECR 355 excavator
-(2) Bobcat T870 skid steer
-(2) Volvo A30G haul truck
-Komatsu D51 PX dozer
-Volvo ECR 145 Excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Continue placing seed and hay mulch.
- Hydroseeding
- Build up existing roadway

ANTICIPATED CONSTRUCTION ACTIVITIES

- Apply mulch and hydroseed.

QUALITY ASSURANCE

- Construction oversight
-Observed liner repair

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – Gordon building up existing roadway in front of the leachate pond. Photo taken looking southwest.



Photo 2 – Gordon applying haymulch to the south slope. Photo taken looking northwest.



Photo 3 – Gordon adding topsoil along edge of perimeter ditch. Photo taken looking west.



Photo 4 – Gordon applying hydroseed. Photo taken looking southeast.

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DAILY CONSTRUCTION REPORT

Date: Monday October 23, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Partly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	40-53 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 73%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
N/A			

VISITOR

Time	Name	Representing	Remarks
1200-1600	Trevor Michaud	SME	Stormwater Inspection Leachate Forcemain Pipeline Inspection

EQUIPMENT

-N/A

TODAY'S CONSTRUCTION ACTIVITIES

- N/A

ANTICIPATED CONSTRUCTION ACTIVITIES

- N/A

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. Riprap apron has been installed. Slope has been stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Slope has some erosion occurring. Riprap apron has been installed.
- Outlet protection at Sediment Pond #2 is in good condition.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 has been fixed by Gordon.
- Phase 2 has good grass growth.
- Outlet to CB-1i has been finalized with riprap and slope stabilized.
- Erosion occurring along edge of the west and south slope surface swales.
- All slopes have been stabilized with hay mulch and temporarily seeded.
-Some erosion rills forming in various locations of Phase 3.
-Some sediment accumulation at the end of west slope downspout.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – West slope of Phase 3 north of west slope downspout. Photo taken looking southeast.



Photo 2 – Phase 3 west slope downspout. Photo taken looking east.



Photo 3 – Perimeter ditch and CB-2c. Photo taken looking south.



Photo 4 – Riprap outlet for CB-2c. Photo taken looking south.



Photo 5 – Surface swale north of Phase 3 west slope downspout. Photo taken looking north.



Photo 6 – Surface swale south Phase 3 west slope downspout. Photo taken looking south.



Photo 7 – Northwest corner downspout of Phase 3. Photo taken looking northeast.



Photo 8 – Outlet protection for Sediment Pond #1. Photo taken looking south.



Photo 9 – Riprap outlet for southwest corner culvert. Photo taken looking southeast.



Photo 10 – Southwest corner of Phase 3 east of downspout. Photo taken looking northeast.



Photo 11 – Southwest corner surface swale east of downspout. Photo taken looking east.



Photo 12 – Top of Phase 3. Photo taken looking northeast.



Photo 13 – South slope surface swale east of south slope downspout. Photo taken looking east.



Photo 14 – South slope downspout and CB-1i. Photo taken looking north.



Photo 15 – Riprap ditch outlet for CB-1i. Photo taken looking southwest.



Photo 16 – South slope of Phase 3 east of south slope downspout. Photo taken looking northeast.

SEVEE & MAHER ENGINEERS, INC

DAILY CONSTRUCTION REPORT

Date: Tuesday October 31, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	40-53 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 73%
PROJECT LOCATION:	East Millinocket, Maine		
		PRECIPITATION:	**0**"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
N/A			

VISITOR

Time	Name	Representing	Remarks
0930-1230	Trevor Michaud	SME	Stormwater Inspection

EQUIPMENT

-N/A

TODAY'S CONSTRUCTION ACTIVITIES

- N/A

ANTICIPATED CONSTRUCTION ACTIVITIES

- N/A

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. Riprap apron has been installed. Slope has been stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Slope has some erosion occurring. Riprap apron has been installed.
- Outlet protection at Sediment Pond #2 is in good condition.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 has been fixed by Gordon.
- Phase 2 has good grass growth.
- Outlet to CB-1i has been finalized with riprap and slope stabilized.
- Erosion occurring along edge of the west and south slope surface swales.
- All slopes have been stabilized with hay mulch and temporarily seeded.
-Some erosion rills forming in various locations of Phase 3.
-Some sediment accumulation at the end of west slope downspout.

DISTRIBUTION:

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BY: **Trevor Michaud, E.I.** **TITLE:** **Field Engineer**



Photo 1 – West slope of Phase 3 north of west slope downspout. Photo taken looking southeast.



Photo 2 – Phase 3 west slope downspout. Photo taken looking east.



Photo 3 – Perimeter ditch and CB-2c. Photo taken looking south.



Photo 4 – Riprap outlet for CB-2c. Photo taken looking south.



Photo 5 – Surface swale north of Phase 3 west slope downspout. Photo taken looking north.



Photo 6 – Surface swale south Phase 3 west slope downspout. Photo taken looking northwest.



Photo 7 – Southwest corner downspout of Phase 3. Photo taken looking northeast.



Photo 8 – Outlet protection for Sediment Pond #1 and riprap outlet for southwest corner culvert. Photo taken looking south.



Photo 9 – Southwest corner of Phase 3 east of downspout. Photo taken looking east.



Photo 10 – Southwest corner surface swale east of downspout. Photo taken looking east.



Photo 11 – Top of Phase 3. Photo taken looking northeast.



Photo 12 – South slope surface swale east of south slope downspout. Photo taken looking west.



Photo 13 – South slope downspout. Photo taken looking south.



Photo 14 –CB-1i. Photo taken looking west.



Photo 15 – Riprap ditch outlet for CB-1i. Photo taken looking southeast.



Photo 16 – Outlet protection for Sediment Pond #2. Photo taken looking south.

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WEEKLY CONSTRUCTION SUMMARY
Report Period: July 31 through August 4, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 1
- Laborers: 4

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed. See associated report.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite. See associated spreadsheet.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 26 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QC.

(3) Summary of work progress:

- Abandoned CB-#10
- Installed 880 LF of gas collection pipe.
- Installed 4 gas vents.
- Completed 425 LF of perimeter ditch.
- Continued installation of underdrain pipe and drainage sand.
- Exposed 220 LF of Phase 1 tie-in.

- Completed 455 LF of surface swales on the west slope of Phase 3.

(4) Upcoming work items schedule for next week:

- Begin forming the perimeter ditch around Area 3 of Phase 3.
- Finalize gas collection installation in Area 3 of Phase 3.
- Finalize stripping existing cover soil on the remaining top area of Phase 3.
- Continue intermediate underdrain berm installation in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on Phase 3.
- Finalize exposing Phase 1 tie-in.

(5) Summary of significant problems encountered and how the problems were resolved:

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

DAILY FIELD REPORTS

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WEEKLY CONSTRUCTION SUMMARY
Report Period: August 7 through August 11, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 1
- Laborers: 5

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed. See associated report.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite. See associated spreadsheet.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 26 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QC.

(3) Summary of work progress:

- Mulched approx. 3.5 acres of the west slope of Phase 3.
- Site cleanup from rain events.

(4) Upcoming work items schedule for next week:

- Continue forming the perimeter ditch around Area 3 of Phase 3.
- Finalize gas collection installation in Area 3 of Phase 3.
- Finalize stripping existing cover soil on the remaining top area of Phase 3.

- Continue intermediate underdrain berm installation in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on Phase 3.
- Finalize exposing Phase 1 tie-in.
- Continue geomembrane installation.

(5) Summary of significant problems encountered and how the problems were resolved:

- Two significant rain events occurred during the week. One event was 3.5 inches of rain and the other was 1.4 inches of rain. Gordon is in the process of repairing the site back to pre rain event conditions.

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: August 14 through August 19, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 3
- Laborers: 4

Integrity Lining Systems

- Foreman: 1
- QA/QC: 1
- Laborers: 6

SME – Field Engineer: Trevor Michaud

SME – Field Engineer: Ben Monohon

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed. See associated report.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite. See associated spreadsheet.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 26 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QC.

(3) Summary of work progress:

- Removed sediment for lined section of perimeter ditch.

- Finalized stripping existing cover soil on Phase 3.
- Repaired south slope and south slope downspout.
- Finalized installation of intermediate underdrain berms.
- Finalized installation of gas collection system.
- Finalized exposing Phase 1 tie-in.
- Finalized excavation of perimeter ditch and anchor trench along south slope of Phase 3.
- Excavated anchor trench along top of Phase 3.
- Installed approximately 6.75 acres of geomembrane.

(4) Upcoming work items schedule for next week:

- Finalize installation of geomembrane.
- Continue detail work on geomembrane.
- Continue backfilling cover soil over geocomposite.
- Install riprap aprons and riprap ditch at outlets to stormwater culverts.

(5) Summary of significant problems encountered and how the problems were resolved:

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: August 21 through August 25, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 3
- Laborers: 5

Integrity Lining Systems

- Foreman: 1
- QA/QC: 1
- Laborers: 6

SME – Field Engineer: Trevor Michaud

SME – Field Engineer: Ben Monohon

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed. See associated report.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite. See associated spreadsheet.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 46 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QC.

(3) Summary of work progress:

- Finalized installation of geomembrane.

- Continued detail work on geomembrane.
- Continue backfilling cover soil over geocomposite.
- Install riprap aprons and riprap ditch at outlets to stormwater culverts.

(4) Upcoming work items schedule for next week:

- Finalize detail work on geomembrane.
- Continue geocomposite installation.
- Continue backfilling cover soil over geocomposite.

(5) Summary of significant problems encountered and how the problems were resolved:

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

DAILY FIELD REPORTS

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WEEKLY CONSTRUCTION SUMMARY
Report Period: July 3 through July 7, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 2
- Laborers: 2

Integrity Lining Systems

- Foreman: 1
- Laborers: 19

SME – Field Engineer: Trevor Michaud, Ben Monohon

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed. See associated report.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 104 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 22 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QA.

(3) Summary of work progress:

- Finalize existing structure abandonment for Area 2 of Phase 3.
- Finalize excavation of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.

- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Install approx. 1.7 acres of geomembrane.
- Install southwest corner culvert.
- Excavate southwest corner downspout.

(4) Upcoming work items schedule for next week:

- Continue forming the perimeter ditch around Area 3 of Phase 3.
- Continue stripping existing cover soil on the south slope of Phase 3.
- Begin intermediate underdrain berm installation in Area 3 of Phase 3.
- Install CB-1i and culvert.
- Excavate south slope downspout.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Begin gas collection system installation for Area 3 of Phase 3.

(5) Summary of significant problems encountered and how the problems were resolved:

- N/A

Attachments:

1: Daily Field Reports
2: Photos

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WEEKLY CONSTRUCTION SUMMARY
Report Period: July 10 through July 14, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 3
- Drivers: 2
- Laborers: 2

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 104 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness.
- Verified cover soil and topsoil thickness over geocomposite.
- Verified cover soil compaction with nuke density gauge.
- 22 destructive tests have been performed on geomembrane installed.
-

(3) Summary of work progress:

- Cleared trees and brush from the NW corner and west side of Sediment Pond #1
- Approximately 900 LF of anchor trench was backfilled.
- Approximately 1.5 acres of vegeatative cover soil was stripped on the south slope of Phase 3 and brought to the northern stockpile.
- Approximately 1.2 acres of cover soil and vegetative cover soil was placed over geocomposite on the west slope of Phase 3.

- Approximately 1 acre of cover soil on the south slope of Phase 3 has been stripped and placed on the west slope geocomposite.

(4) Upcoming work items schedule for next week:

- Continue constructing the perimeter ditch around Area 2 of Phase 3.
- Continue geomembrane installation in Area 2 of Phase 3.
- Continue stripping existing cover soil on the south slope of Phase 3.
- Continue intermediate underdrain berm installation in Area 2 of Phase 3.
- Excavate downspout on the south slope of Phase 3.
- Excavate anchor trench in Area 2 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

(5) Summary of significant problems encountered and how the problems were resolved:

- **N/A**

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: July 17 through July 21, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 3
- Drivers: 2
- Laborers: 2

Integrity Lining System

- Foreman: 2
- QA/QC: 2
- Laborers: 11

SME – Field Engineer: Trevor Michaud, Ben Monohon

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 175 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness.
- Verified cover soil and topsoil thickness over geocomposite.
- Verified cover soil compaction with nuke density gauge.
- 26 destructive tests have been performed on geomembrane installed.

(3) Summary of work progress:

- Excavated 360 LF of anchor trench at the south slope of Phase 3.
- Excavated 360 LF of perimeter ditch at the south slope of Phase 3.
- Approximately 1.4 acres of cover soil stripped on the south slope of Phase 3 and used to cover geocomposite on the west slope of Phase 3.

- Downspout on the south slope of Phase 3 was formed.
- Installed CB-1i and culvert.
- Installed 500 LF of intermediate underdrain berm.
- Covered approximately 2.3 acres of geocomposite on the west slope of Phase 3.
- Installed 1.6 acres of geomembrane.
- Installed 2 acres of geocomposite.

(4) Upcoming work items schedule for next week:

- Begin constructing the perimeter ditch around Area 3 of Phase 3.
- Begin gas collection installation in Area 3 of Phase 3.
- Continue stripping existing cover soil on the remaining top area of Phase 3.
- Begin intermediate underdrain berm installation in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

(5) Summary of significant problems encountered and how the problems were resolved:

- **N/A**

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: July 24 through July 28, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 2
- Laborers: 3

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 196 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness.
- Verified cover soil and topsoil thickness over geocomposite.
- Verified cover soil compaction with nuke density gauge.
- 26 destructive tests have been performed on geomembrane installed.

(3) Summary of work progress:

- Placed riprap in downspout on the west slope of Phase 3.
- Placed riprap in approximately 370 LF of perimeter ditch at the west side of Phase 3..
- Approximately 2 acres of cover soil stripped on the south slope of Phase 3 and used to cover geocomposite on the west slope of Phase 3.
- Covered 4 acres of geocomposite on the west slope and top of Phase 3.

(4) Upcoming work items schedule for next week:

- Begin constructing the perimeter ditch around Area 3 of Phase 3.
- Begin gas collection installation in Area 3 of Phase 3.

- Continue stripping existing cover soil on the remaining top area of Phase 3.
- Begin intermediate underdrain berm installation in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.

(5) Summary of significant problems encountered and how the problems were resolved:

- Damage to geomembrane discovered in two locations. Areas have been temporarily covered by Gordon until Integrity returns to the site to make the repairs.

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

DAILY FIELD REPORTS

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WEEKLY CONSTRUCTION SUMMARY
Report Period: May 29 through June 2, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 2
- Laborers: 3

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 71 test pits have been performed to date on the existing gas collection sand for the west slope to verify thickness.
- Verified intermediate underdrain berm installation followed the approved plans.
- Verified the existing structure abandonment followed the approved plans.
- Verified perimeter ditch installation followed the approved plans.

(3) Summary of work progress:

- Repaired the west slope gas collection sand surface after a significant rain event.
- Completed installation of intermediate underdrain berms in Area 1. Approximately 990 LF of berms installed.
- Rake attachment for skid steer is being used to remove any greater than 1-inch rocks from the existing gas collection sand.
- Abandoned existing structures CB-#4 and #6.
- Formed downspout into existing gas collection sand layer on the west slope of Phase 3.

- Approximately 1 acre of existing vegetative cover soil at the SW corner of Phase 3 has been stripped and stockpiled.
- Large rock (called out as ledge outcrop) at the SW corner of Phase 3 has been removed.
- Approximately 600 LF of perimeter ditch along the west slope of Phase 3 has been excavated to the proposed grades on the approved plans.
- Removed existing culvert going into Sediment Pond #2.
- Installed CB-2C to the grades on the approved plans.

(4) Upcoming work items schedule for next week:

- Complete abandonment of existing structures in Area 1 of Phase 3.
- Install culvert with riprap apron for CB-2C going to Sediment Pond #2.
- Construct the perimeter ditch around Area 1 of Phase 3.
- Repair section of intermediate underdrain berm.
- Begin liner installation.
- Begin stripping existing cover soil at the SW corner of Phase 3.

(5) Summary of significant problems encountered and how the problems were resolved:

- N/A

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

DAILY FIELD REPORTS

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WEEKLY CONSTRUCTION SUMMARY
Report Period: June 11 through June 16, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 5
- Drivers: 2
- Laborers: 2

Integrity Lining Systems

- 1 foreman
- 1 QA/QC
- 10 laborers

SME – Field Engineer: Trevor Michaud, Ben Monohon

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed..
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 94 test pits have been performed to date on the existing gas collection sand for the west slope to verify thickness.
- Verified intermediate underdrain berm installation followed the approved plans.
- Verified the existing structure abandonment followed the approved plans.
- Verified perimeter ditch installation followed the approved plans.
- Verified gas collection system installation followed the approved plans.

(3) Summary of work progress:

- Repaired the west slope gas collection sand surface after a significant rain event.
- Repaired intermediate underdrain berms after a significant rain event.

- Installed 5.75 acres of geomembrane liner.
- Rake attachment for skid steer is being used to remove any greater than 1-inch rocks from the existing gas collection sand.
- Approx. 1.2 acres of existing vegetative cover soil at the south of Phase 3 has been stripped. Remaining vegetative cover soil in Area 2 stripped during Phase 2 construction.
- Approx. 3 acres of existing cover soil has been stripped in Area 2 of Phase 3.
- Approx. 900 LF of anchor trench along the west slope of Phase 3 has been excavated.
- Installed approximately 1 acre of geocomposite.

(4) Upcoming work items schedule for next week:

- Begin abandonment of existing structures in Area 2 of Phase 3.
- Finalize stripping cover soil in Area 2 of Phase 3.
- Begin constructing the perimeter ditch around Area 2 of Phase 3.
- Begin geocomposite installation.
- Begin gas collection system installation in Area 2 of Phase 3.
- Begin intermediate underdrain berm installation in Area 2 of Phase 3.

(5) Summary of significant problems encountered and how the problems were resolved:

- N/A

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

DAILY FIELD REPORTS

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WEEKLY CONSTRUCTION SUMMARY
Report Period: June 19 through June 24, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 5
- Drivers: 2
- Laborers: 2

Integrity Lining Systems

- 1 foreman
- 1 QA/QC
- 10 laborers

SME – Field Engineer: Trevor Michaud, Ben Monohon

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 94 test pits have been performed to date on the existing gas collection sand for the west slope to verify thickness.
- Verified intermediate underdrain berm installation followed the approved plans.
- Verified the existing structure abandonment followed the approved plans.
- Verified perimeter ditch installation followed the approved plans.
- Verified gas collection system installation followed the approved plans.

(3) Summary of work progress:

- Repaired the west slope gas collection sand surface after a significant rain event.
- Repaired intermediate underdrain berms after a significant rain event.

- Repaired liner after a significant rain event.
- Installed 2.2 acres of geomembrane liner.
- Rake attachment for skid steer is being used to remove any greater than 1-inch rocks from the existing gas collection sand.
- Approximately 1.8 acres of existing cover soil has been stripped in Area 2 of Phase 3.
- Installed approximately 1.4 acres of geocomposite.
- Installed 780 LF of gas collection pipe and 4 gas collection vents.
- Abandoned existing structures CB-6A,7,8,9, and DMH D3-#1 and #2.
- Installed approximately 1300 LF of intermediate underdrain berms.

(4) Upcoming work items schedule for next week:

- Begin constructing the perimeter ditch around Area 2 of Phase 3.
- Continue geomembrane installation in Area 2 of Phase 3.
- Repair south slope of Area 2 of Phase 3 from significant rain events.
- Continue intermediate underdrain berm installation in Area 2 of Phase 3.

(5) Summary of significant problems encountered and how the problems were resolved:

- N/A

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: June 26 through June 30, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 2
- Laborers: 2

Integrity Lining Systems

- 1 foreman
- 2 QA/QC
- 19 laborers

SME – Field Engineer: Trevor Michaud, Ben Monohon

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 94 test pits have been performed to date on the existing gas collection sand for the west slope to verify thickness.
- Verified intermediate underdrain berm installation followed the approved plans.
- Verified the existing structure abandonment followed the approved plans.
- Verified perimeter ditch installation followed the approved plans.
- Verified gas collection system installation followed the approved plans.
- 19 destructive tests have been performed on geomembrane installed.

(3) Summary of work progress:

- Installed approximately 5.8 acres of geocomposite.

- Completd repairs and vacuum box testing of repairs of geomembrane installed to date.
- Cleaned existing structures CB-#23,24, 25, 17, and 5.

(4) Upcoming work items schedule for next week:

- Begin constructing the perimeter ditch around Area 2 of Phase 3.
- Continue geomembrane installation in Area 2 of Phase 3.
- Repair south slope of Area 2 of Phase 3 from significant rain events.
- Continue intermediate underdrain berm installation in Area 2 of Phase 3.

(5) Summary of significant problems encountered and how the problems were resolved:

- Water ponding encountered under the geomembrane adjacent CB-2C. Small holes were discovered in geomembrane. The water was removed and geomembrane repaired.

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

DAILY FIELD REPORTS

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WEEKLY CONSTRUCTION SUMMARY
Report Period: May 1 through May 5, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 2
- Laborer: 2

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Four (4) test pits performed on potential on-site borrow source. Samples collected for testing.
- Verified gas vents are built according to the approved detail.
- Weekly stormwater inspection performed. See attached report.

(3) Summary of work progress:

- Stripped existing 6-inch topsoil layer in Area 1 on Phase 3.
- Built gas vents and cored concrete tops for existing manhole abandonment.
- Installed erosion control measures around the site.
- Dug test pits in potential borrow source area.

(4) Upcoming work items schedule for next week:

- Begin stripping existing cover soil layer in Area 1 on Phase 3.
- Begin installing gas collection system in Area 1.

(5) Summary of significant problems encountered and how the problems were resolved:

- Waste located beneath the topsoil layer in a localized area near DMH-D3 #4. Gordon will use caution while stripping the cover soil layer, and the area will get covered with a 6-inch layer of gas collection

sand either imported or relocated from surrounding areas with greater than 6-inches of existing gas collection sand.

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: May 8 through May 12, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 5
- Drivers: 3
- Laborers: 2

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Six (6) test pits performed on potential on-site borrow source. Ten (10) test pits have been performed on potential cover soil stockpile.
- Borrow source sample taken from Emery Lee's pit of potential off site cover soil stockpile.
- Borrow source sample BSGS-01 taken for imported gas collection sand.
- Weekly stormwater inspection performed. See attached report.
- 59 test pits have been performed on the existing gas collection sand to verify thickness.

(3) Summary of work progress:

- Dug test pits in potential borrow source area.
- Exposed the Phase 1 tie-in in Area 1 of Phase 3. Approx. 370 LF exposed.
- Approx. 4.25 acres of cover soil from Area 1 have been stripped and hauled to the southern stockpile.
- Rake attachment for skid steer is being used to remove rocks greater than 1-inch from the existing gas collection sand.
- A section of the leachate collection pipe connecting DMH D3-#4 to CB#5 has been lowered to beneath the gas collection sand layer and repaired.

(4) Upcoming work items schedule for next week:

- Complete stripping existing cover soil layer in Area 1 of Phase 3.
- Begin installing gas collection system.
- Begin abandoning existing drainagestructures in Area 1 of Phase 3.

(5) Summary of significant problems encountered and how the problems were resolved:

- A leachate transport pipe was discovered connecting DMH D3-#5 and DMH D3-#4. Leachate was saturating the surrounding area. The pipe was exposed, and area allowed to dry. No further actions needed.

- A section of the leachate collection pipe connecting DMH D3-#4 to CB#5 was above the sand grade and showed signs of previous damage. The pipe has been lowered to beneath the gas collection sand layer and repaired. The pipe was visible full of sediment in this area.. SME, BGS, and MEDEP have been notified and currently are waiting for the next steps.

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: May 15 through May 19, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 5
- Drivers: 3
- Laborers: 2

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Borrow source sample BSGS-02 collected for imported gas collection sand.
- Weekly stormwater inspection performed. See attached report.
- 71 test pits have been performed on the existing gas collection sand to verify thickness.
- Verified gas collection installation followed the approved plans.
- Verified perimeter ditch installation followed the approved plans.

(3) Summary of work progress:

- Approx. 0.75 acres of cover soil from Area 1 have been stripped and hauled to the southern stockpile.
- Completed hauling cover soil stripped from Area 1 of Phase 3 to the southern stockpile.
- Rake attachment for skid steer is being used to remove rocks greater than 1-inch from the existing gas collection sand.
- A section of the leachate collection pipe connecting DMH D3-#4 to DMH D3-#2 has been repaired.
- Approx. 980 LF of gas collection pipe and 4 gas vents have been installed.
- Approx. 390 LF of perimeter ditch has been excavated to the grades shown on the approved plans.

(4) Upcoming work items schedule for next week:

- Begin installation of intermediate underdrain berms in Area 1 of Phase 3.
- Complete installation of gas collection system in Area 1 of Phase 3.
- Begin abandonment of existing structures in Area 1 of Phase 3.
- Construct downspout in Area 1 of Phase 3.
- Install CB-2C and culvert with riprap apron.
- Continue constructing the perimeter ditch around Area 1 of Phase 3.

(5) Summary of significant problems encountered and how the problems were resolved:

- A section of the leachate collection pipe connecting DMH D3-#4 to DMH D3-#2 was damaged while Gordon was searching for the existing sand layer. The pipe has been repaired.

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: May 22 through May 15, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 5
- Drivers: 3
- Laborers: 2

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Two stormwater inspections performed. See attached reports.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 71 test pits have been performed to date on the existing gas collection sand for the west slope to verify thickness.
- Verified intermediate underdrain berm installation followed the approved plans.
- Verified the existing structure abandonment followed the approved plans.

(3) Summary of work progress:

- Repaired the west slope gas collection sand surface after significant rain event.
- Begin installation of intermediate underdrain berms. Approx. 1440 LF of berms installed.
- Rake attachment for skid steer is being used to remove rocks greater than 1-inch from the existing gas collection sand.
- Repaired section of gas collection piping.
- Abandoned existing structures DMH D3-#4 and #5 and CB-#2.

(4) Upcoming work items schedule for next week:

- Continue installation of intermediate underdrain berms in Area 1 of Phase 3.
- Complete installation of gas collection system in Area 1 of Phase 3.
- Continue abandonment of existing structures in Area 1 of Phase 3.
- Construct downspout in Area 1 of Phase 3.
- Install CB-2C and culvert with riprap apron.
- Continue constructing the perimeter ditch around Area 1 of Phase 3.

(5) Summary of significant problems encountered and how the problems were resolved:

- A section of intermediate underdrain berm showed signs of ponding after the overnight rain event on 5/24/23. This section of berm will be adjusted to have the minimum slope of 2% as shown on the approved plans.

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: August 28 through September 1, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 3
- Laborers: 3

Integrity Lining Systems

- Foreman: 1
- QA/QC: 1
- Laborers: 5

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed. See associated report.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite. See associated spreadsheet.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 46 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QC.

(3) Summary of work progress:

- Continue backfilling cover soil over geocomposite.
- Continued installing geocomposite. Approx. 4.3 acres installed.

(4) Upcoming work items schedule for next week:

- Finalize detail work on geomembrane.
- Continue geocomposite installation.
- Continue backfilling cover soil over geocomposite.

(5) Summary of significant problems encountered and how the problems were resolved:

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: September 5 through September 9, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 3
- Laborers: 3

Integrity Lining Systems

- Foreman: 1
- QA/QC: 1
- Laborers: 5

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed. See associated report.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite. See associated spreadsheet.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 46 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QC.

(3) Summary of work progress:

- Continue backfilling cover soil over geocomposite. Approx. 1.2 acres installed.
- Continued installing geocomposite. Approx. 4.9 acres installed.

(4) Upcoming work items schedule for next week:

- Continue backfilling cover soil over geocomposite.
- Add riprap to perimeter ditch and south slope downspout.
- Mulch and seed cover soil.

(5) Summary of significant problems encountered and how the problems were resolved:

- On Friday September 8th, 2023, Gordon Contracting left the site early without notification to the liner crew or Site Inspector. This led to geocomposite installation not being finalized due to perimeter ditch needing to be cleaned out. Several attempts were made to get Gordon onsite, however, there was no response made my them.

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: September 11 through September 15, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 2
- Laborers: 3

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed. See associated report.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite. See associated spreadsheet.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 46 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QC.

(3) Summary of work progress:

- Continue placing cover soil over geocomposite. Approx. 1.3 acres installed.
- Finalized backfilling liner limit anchor trench.
- Applied mulch and seed over approx. 1.5 acres of cover soil.
- Added aggregate base and riprap to perimeter ditch. Approx. 150 LF completed.
- Continued building surface swale. Approx. 140 LF completed.
- Finalized geocomposite installation.

(4) Upcoming work items schedule for next week:

- Continue placing cover soil over geocomposite.
- Add riprap to perimeter ditch and south slope downspout.
- Mulch and seed cover soil.
- Install remaining surface swales.
- Build up existing roadway.
- General site cleanup.

(5) Summary of significant problems encountered and how the problems were resolved:

- Cover soil installation at top of Phase 3 has had to happen with dryer soil first from the cover soil stockpile and already placed material allowed to dry out prior to getting to final grade.

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

DAILY FIELD REPORTS

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WEEKLY CONSTRUCTION SUMMARY
Report Period: September 18 through September 22, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 2
- Laborers: 3

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed. See associated report.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite. See associated spreadsheet.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 46 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QC.

(3) Summary of work progress:

- Continue placing cover soil over geocomposite. Approx. 2 acres installed.
- Applied mulch and seed over approx. 2.5 acres of cover soil.
- Added aggregate base and riprap to perimeter ditch. Approx. 100 LF completed.
- Continued building surface swale. Approx. 190 LF completed.

(4) Upcoming work items schedule for next week:

- Continue placing cover soil over geocomposite.
- Add riprap to perimeter ditch and south slope downspout.
- Mulch and seed cover soil.
- Install remaining surface swales.
- Build up existing roadway.
- General site cleanup.

(5) Summary of significant problems encountered and how the problems were resolved:

- West slope surface swale had to be adjusted to achieve a slope between 2 and 4% as specified on the approved plans.

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: September 25 through September 29, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 4
- Drivers: 2
- Laborers: 3

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed. See associated report.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite. See associated spreadsheet.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 46 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QC.

(3) Summary of work progress:

- Finalized cover soil placement over geocomposite for Phase 3.
- Finalized gas vent heights.
- Added underdrain pipe outlet rodent guards.
- Continued building surface swale. Approx. 150 LF completed.
- Fixed existing surface swales from rain damage.

(4) Upcoming work items schedule for next week:

- Hydroseed.
- Add riprap to perimeter ditch.
- Mulch and seed cover soil and stockpile areas/ disturbed areas.
- Install remaining surface swales.
- Build up existing roadway.
- General site cleanup.
- Install soil diversion berm in perimeter ditch.

(5) Summary of significant problems encountered and how the problems were resolved:

- N/A

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

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WEEKLY CONSTRUCTION SUMMARY
Report Period: October 2 through October 5, 2023
Project: Dolby Phase 3 Cover Upgrade

Prepared by: Trevor Michaud, (CQA Dolby Phase 3 Cover Upgrade, 2023)

(1) Average Field Force:

Gordon Contracting – Superintendent: Nick Schmeidlehner

- Foreman: 0
- Operators: 2
- Drivers: 1
- Laborers: 3

SME – Field Engineer: Trevor Michaud

(2) Summary of QA/QC test results:

- Weekly stormwater inspection performed. See associated report.
- Gas Collection sand/Drainage sand borrow source testing samples BSGS-01 and BSGS-02 obtained.
- 208 test pits have been performed to date on the existing gas collection sand for Phase 3 to verify thickness. See associated spreadsheet.
- Verified cover soil and topsoil thickness over geocomposite. See associated spreadsheet.
- Verified cover soil compaction with nuke density gauge. See associated spreadsheet.
- 46 destructive tests have been performed on geomembrane installed.
- See associated spreadsheets for liner QA/QC.

(3) Summary of work progress:

- Installed soil diversion berm.
- Finalized placing hay mulch and hydroseed.
- Finalized perimeter ditch.
- Finalized building surface swales.
- Built up existing roadway in front of leachate pond.

(4) Upcoming work items schedule for next week:

- General site cleanup.
- Seed and mulch laydown area, any disturbed areas, and stockpile areas.

(5) Summary of significant problems encountered and how the problems were resolved:

- N/A

Attachments:

1: Daily Field Reports
2: Photos

ATTACHMENT 1

DAILY FIELD REPORTS

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ATTACHMENT 2

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ATTACHMENT 9

STORMWATER INSPECTION REPORTS

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STORMWATER INSPECTION REPORT

Date: Friday May 5, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	40-60 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	8 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 70%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	9	Nick Schmeidlehner (Foreman), (3) truck drivers, (2) laborers, (4) operators

VISITOR

Time	Name	Representing	Remarks
0620-1415	Trevor Michaud	SME	Construction Oversight Weekly Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-(1) rear dump triaxle
-Volvo A30G haul truck
-Bobcat T870 skid steer
-Volvo ECR 355 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Hauling stripped topsoil from Area 1 of Phase 3 to northern stockpile area.
- Coring concrete tops for gas vents for manhole abandonment

ANTICIPATED CONSTRUCTION ACTIVITIES

- Begin stripping cover soil in Area 1 of Phase 3.

QUALITY ASSURANCE

- Inlet to culvert crossing Sediment Pond #1 is stabilized. I asked Gordon to install staked haybales at the inlet until the culvert gets replaced during Area 2 preparation of Phase 3.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- Staked haybales have been installed around MH#3 and around the inlet to Sediment Pond #2.
- Outlet of culvert going to Sediment Pond #2 is free of sediment. Culvert getting replaced during construction.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment in pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition. Inlet to culvert getting replaced this year.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of the northern stockpile. Section that needed to be fixed has been.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Overwinter mulch present. Some grass growth on north slope and north-east corner. Rest of Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock was talked about with Gordon to be installed around the roadside ditch going to Sediment Pond #2.
- Silt fence has been installed around perimeter of the southern stockpile. Section that needed to be fixed has been.
- Staked hay bales have been installed at inlet to culvert going to Sediment Pond #1.

DISTRIBUTION:

1 SME **BY: Trevor Michaud, E.I.** **TITLE: Project Engineer**
2 MEBGS
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Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	Yes	Some of the silt fence needs to be repaired. Gordon is aware of the situation and will repair as soon as possible.
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	No	No	Part of Phase 3 construction, not yet installed
19	Phase 3 Downspout (2 of 3)	No	No	Part of Phase 3 construction, not yet installed
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	N/A
5	Are storm drain inlets properly protected?	Yes	No	N/A
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	N/A
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	No	N/A
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	N/A
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Culvert inlet to Sediment Pond #1. Gordon will be installing staked haybales until culvert gets replaced.



Photo 2 – Outlet protection to Sediment Pond #1. Photo taken looking south-east.



Photo 3 – Outlet to culvert leaving Sediment Pond #1. Photo taken looking north-east.



Photo 4 – Stacked haybales have been installed around the inlet to Sediment Pond #2. Photo taken looking east.



Photo 5 – Staked haybales have been installed around MH#3. Photo taken looking east.



Photo 6 – Outlet to culvert coming into Sediment Pond #2.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.



Photo 10 – North-west corner of Phase 1 perimeter ditch. Gordon has cleaned sediment out of the ditch line. Photo taken looking north.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking south.



Photo 12 – Outlet of culvert leaving Sediment Pond #3. Photo taken looking south.



Photo 13 – Phase 1/2 downspout. Photo taken looking south.



Photo 14 – Erosion rills on the north slope of Phase 2. Photo taken looking south.



Photo 15 – Perimeter of northern stockpile has silt fence installed. Photo taken looking east.



Photo 16 – Surface swale on the north slope of Phase 2. Photo taken looking east.



Photo 17 – Erosion of access road between Dolby II and III. Sediment going into the Phase 2 perimeter ditch. Photo taken looking east.



Photo 18 – Overwinter mulch along access road. Photo taken looking south.



Photo 19 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking west.



Photo 20 – Southern stockpile with silt fence installed around perimeter. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Friday May 12, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Partly Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	42-72 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	1 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 74%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	Nick Schmeidlehner (Foreman), (3) truck drivers, (2) laborers, (5) operators

VISITOR

Time	Name	Representing	Remarks
0630-1330	Trevor Michaud	SME	Construction Oversight Weekly Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-CAT D5K dozer
-(1) rear dump triaxle
-Volvo A30G haul truck
-Bobcat T870 skid steer
-Volvo ECR 355 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Hauling stripped cover soil from Area 1 of Phase 3 to southern stockpile area.
- Continue stripping existing cover soil from Area 1 of Phase 3.
- Repaired culvert going from DMH D3-#4 to CB#5.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize stripping cover soil in Area 1 of Phase 3.
- Begin installation of gas collection system.

QUALITY ASSURANCE

- Inlet to culvert crossing Sediment Pond #1 is stabilized. Gordon installed staked haybales at the inlet until the culvert gets replaced during Area 2 preparation of Phase 3.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- Staked haybales have been installed around MH#3 and around the inlet to Sediment Pond #2.
- Outlet of culvert going to Sediment Pond #2 is free of sediment. Culvert getting replaced during construction.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment in pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition. Inlet to culvert getting replaced this year.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of the northern stockpile. Section that needed to be fixed has been.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Overwinter mulch present. Some grass growth on north slope and north-east corner. Rest of Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock was talked about with Gordon to be installed around the roadside ditch going to Sediment Pond #2.
- Silt fence has been installed around perimeter of the southern stockpile. Section that needed to be fixed has been.
- Staked hay bales have been installed at inlet to culvert going to Sediment Pond #1.

SEVEE & MAHER ENGINEERS, INC.
STORMWATER INSPECTION REPORT
MAY 12, 2023

DISTRIBUTION: **PAGE 1 OF 13 PAGES**

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BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	Yes	Some of the silt fence needs to be repaired. Gordon is aware of the situation and will repair as soon as possible.
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	No	No	Part of Phase 3 construction, not yet installed
19	Phase 3 Downspout (2 of 3)	No	No	Part of Phase 3 construction, not yet installed
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	N/A
5	Are storm drain inlets properly protected?	Yes	No	N/A
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	N/A
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	No	N/A
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	N/A
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Culvert inlet to Sediment Pond #1. Gordon installed staked haybales until culvert gets replaced.



Photo 2 – Outlet protection to Sediment Pond #1. Photo taken looking east.



Photo 3 – Outlet to culvert leaving Sediment Pond #1. Photo taken looking north-east.



Photo 4 – Stacked haybales have been installed around the inlet to Sediment Pond #2. Photo taken looking east.



Photo 5 – Staked filter sock have been installed around leachate pond. Photo taken looking northeast.



Photo 6 – Outlet to culvert coming into Sediment Pond #2.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking southeast.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.



Photo 10 – North-west corner of Phase 1 perimeter ditch. Gordon has cleaned sediment out of the ditch line. Photo taken looking north.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking south.



Photo 12 – Outlet of culvert leaving Sediment Pond #3. Photo taken looking south.



Photo 13 – Phase 1/2 downspout. Photo taken looking south.



Photo 14 – Erosion rills on the north slope of Phase 2. Photo taken looking south.



Photo 15 – Perimeter of northern stockpile has silt fence installed. Photo taken looking east.



Photo 16 – Surface swale on the north slope of Phase 2. Photo taken looking east.



Photo 17 – Erosion of access road between Dolby II and III. Sediment going into the Phase 2 perimeter ditch. Photo taken looking east.



Photo 18 – Overwinter mulch along access road. Photo taken looking south.



Photo 19 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking west.



Photo 20 – Southern stockpile with silt fence installed around perimeter. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Friday May 19, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	32-69 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	6 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 93%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	Nick Schmeidlehner (Foreman), (3) truck drivers, (2) laborers, (5) operators

VISITOR

Time	Name	Representing	Remarks
0620-1300	Trevor Michaud	SME	Construction Oversight Weekly Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-(1) rear dump triaxle
-(2) Volvo A30G haul truck
-Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Hauling stripped cover soil from Area 1 of Phase 3 to southern stockpile area.
- Perimeter ditch installation.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue perimeter ditch installation.
- Continue installation of gas collection system.
- Begin installation of intermediate underdrain berms.

QUALITY ASSURANCE

- Inlet to culvert crossing Sediment Pond #1 is stabilized. Gordon installed staked haybales at the inlet until the culvert gets replaced during Area 2 preparation of Phase 3.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- Staked haybales have been installed around MH#3 and around the inlet to Sediment Pond #2.
- Outlet of culvert going to Sediment Pond #2 is free of sediment. Culvert getting replaced during construction.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment in pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition. Inlet to culvert getting replaced this year.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of the northern stockpile. Section that needed to be fixed has been.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Overwinter mulch present. Some grass growth on north slope and north-east corner. Rest of Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Silt fence has been installed around perimeter of the southern stockpile. Section that needed to be fixed has been.
- Staked hay bales have been installed at inlet to culvert going to Sediment Pond #1.

DISTRIBUTION: **PAGE 1 OF 13 PAGES**

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4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	Yes	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	No	No	Part of Phase 3 construction, not yet installed
19	Phase 3 Downspout (2 of 3)	No	No	Part of Phase 3 construction, not yet installed
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	All stormwater structures have staked haybales installed around them.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	No	Dumpster for construction waste is present.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Culvert inlet to Sediment Pond #1. Gordon installed staked haybales until culvert gets replaced.



Photo 2 – Outlet protection to Sediment Pond #1. Photo taken looking east.



Photo 3 – Outlet to culvert leaving Sediment Pond #1. Photo taken looking north-east.



Photo 4 – Stacked haybales have been installed around the inlet to Sediment Pond #2. Photo taken looking east.



Photo 5 – Staked filter sock have been installed around leachate pond. Photo taken looking north.



Photo 6 – Outlet to culvert coming into Sediment Pond #2.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking southeast.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.



Photo 10 – North-west corner of Phase 1 perimeter ditch. Gordon has cleaned sediment out of the ditch line. Photo taken looking east.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking south.



Photo 12 – Outlet of culvert leaving Sediment Pond #3. Photo taken looking south.



Photo 13 – Phase 1/2 downspout. Photo taken looking south.



Photo 14 – Erosion rills on the north slope of Phase 2. Photo taken looking southeast.



Photo 15 – Perimeter of northern stockpile has silt fence installed. Photo taken looking north.



Photo 16 – Surface swale on the north slope of Phase 2. Photo taken looking east.



Photo 17 – Erosion of access road between Dolby II and III. Sediment going into the Phase 2 perimeter ditch. Photo taken looking south.



Photo 18 – Overwinter mulch along access road. Photo taken looking south.



Photo 19 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking west.



Photo 20 – Southern stockpile with silt fence installed around perimeter. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Thursday May 25, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	42-53 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	11 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 78%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	5	Nick Schmeidlehner (Foreman), (0) truck drivers, (3) laborers, (2) operators

VISITOR

Time	Name	Representing	Remarks
0620-1000	Trevor Michaud	SME	Construction Oversight Stormwater Inspection after rain event

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-(1) rear dump triaxle
-(2) Volvo A30G haul truck
-(2) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Pump stormwater from perimeter ditch into the leachate transport system to the leachate pond.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize repairing the gas collection sand surface.
- Continue existing structure abandonment.
- Continue construction of perimeter ditch.
- Install CB-2C and culvert.
- Shape downspout into the gas collection sand surface.
- Continue installation of intermediate underdrain berms.

QUALITY ASSURANCE

- Inlet to culvert crossing Sediment Pond #1 is stabilized. Gordon installed staked haybales at the inlet until the culvert gets replaced during Area 2 preparation of Phase 3.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- Staked haybales have been installed around MH#3 and around the inlet to Sediment Pond #2.
- Outlet of culvert going to Sediment Pond #2 contains sediment from rain events. Culvert getting replaced during construction.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment in pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition. Inlet to culvert getting replaced this year.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of the northern stockpile.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Overwinter mulch present. Some grass growth on north slope and north-east corner. Rest of Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Silt fence has been installed around perimeter of the southern stockpile.
- Staked hay bales have been installed at inlet to culvert going to Sediment Pond #1.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Some ponding occurring on top of Phase 2.

DISTRIBUTION:

1 SME

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

2 MEBGS
3 MEDEP
4 Gordon Contracting

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	Yes	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	No	No	Part of Phase 3 construction, not yet installed
19	Phase 3 Downspout (2 of 3)	No	No	Part of Phase 3 construction, not yet installed
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	All stormwater structures have staked haybales installed around them.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	No	Dumpster for construction waste is present.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Erosion rills and stormwater in perimeter ditch on west slope of Phase 3. Photo taken looking west.



Photo 2 – Outlet protection to Sediment Pond #1. Photo taken looking east.



Photo 3 – Outlet to culvert leaving Sediment Pond #1. Photo taken looking north-east.

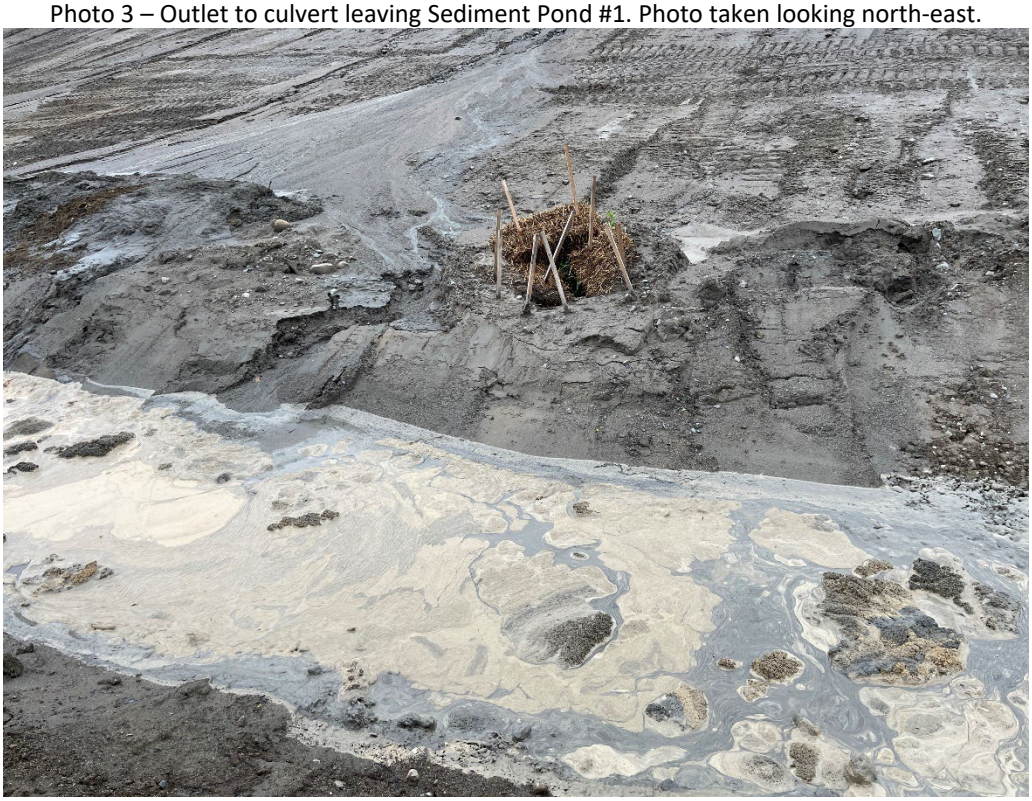

Photo 4 – Stacked haybales have been installed around the inlet to Sediment Pond #2. Photo taken looking east.



Photo 5 – Staked filter sock have been installed around leachate pond. Photo taken looking north.



Photo 6 – Outlet to culvert coming into Sediment Pond #2. Sediment present.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking southeast.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.



Photo 10 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking north.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking south.



Photo 12 – Outlet of culvert leaving Sediment Pond #3. Photo taken looking south.



Photo 13 – Phase 1/2 downspout. Photo taken looking south.



Photo 14 – Erosion rills on the north slope of Phase 2. Photo taken looking southeast.



Photo 15 – Surface swale on the north slope of Phase 2. Photo taken looking east.



Photo 16 – Roadway surface eroding into Phase 2 perimeter ditch. Photo taken looking south.



Photo 17 – Grass growth over Phase 2. Photo taken looking west.



Photo 18 – Overwinter mulch along access road. Photo taken looking south.



Photo 19 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking west.

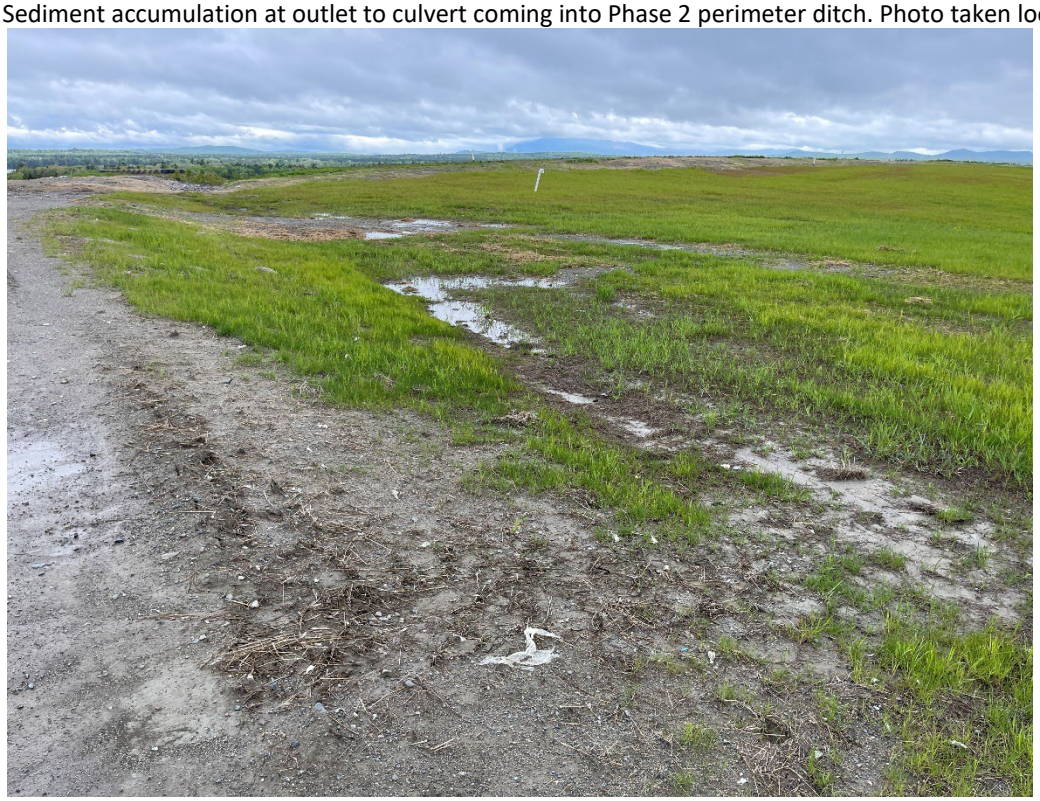

Photo 20 – Ponding occurring on top of Phase 2. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Friday June 2, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny/ rain in afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	50-80 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 52%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	Nick Schmeidlehner (Foreman), (1) truck driver, (3) laborers, (4) operators
Integrity Lining Systems	1	4	Liner Company

VISITOR

Time	Name	Representing	Remarks
0620-1530	Trevor Michaud	SME	Construction Oversight

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-(2) Volvo A30G haul truck
-(2)Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Finalized installation of the downspout on the west slope of Phase 3.
- Installed CB-2C.
- Removed existing culvert going to Sediment Pond #2.
- Removed existing large rock from the SW corner of Phase 3.
- Finalized stripping topsoil in SW corner of Phase 3. Approx. 0.75 acres stripped.
- Liner company filling sandbags.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 1 of Phase 3.
- Finalize construction of perimeter ditch for Area 1 of Phase 3.
- Finalize installation of culvert from CB-2C to Sediment Pond #2.
- Fix section of intermediate underdrain berm.
- Begin stripping existing cover soil in SW corner of Phase 3.
- Begin liner installation in Area 1 of Phase 3.
- Finalize re
- Continue
- Continue
- Install CB-
- Shape dov
- Begin inst

QUALITY ASSURANCE

- Inlet to culvert crossing Sediment Pond #1 is stabilized. Gordon installed staked haybales at the inlet until the culvert gets replaced during Area 2 preparation of Phase 3.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- Staked haybales have been installed around MH#3 and around the inlet to Sediment Pond #2.
- Outlet of culvert going to Sediment Pond #2 contains sediment. Culvert getting replaced during construction.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment in pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition. Inlet to culvert getting replaced this year.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of the northern stockpile. Section that needed to be fixed has been.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Overwinter mulch present. Some grass growth on north slope and north-east corner. Rest of Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Silt fence has been installed around perimeter of the southern stockpile.
- Staked hay bales have been installed at inlet to culvert going to Sediment Pond #1.

DISTRIBUTION:
1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	Yes	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	No	No	Part of Phase 3 construction, not yet installed
19	Phase 3 Downspout (2 of 3)	No	No	Part of Phase 3 construction, not yet installed
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	All stormwater structures have staked haybales installed around them.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	No	Dumpster for construction waste is present.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Sediment accumulation in perimeter ditch on west slope of Phase 3. Photo taken looking south.



Photo 2 – Outlet protection to Sediment Pond #1. Photo taken looking east.



Photo 3 – Outlet to culvert leaving Sediment Pond #1. Photo taken looking north-east.



Photo 4 – Stacked haybales have been installed around the inlet to Sediment Pond #2. Photo taken looking east.



Photo 5 – Staked filter sock have been installed around leachate pond. Photo taken looking north.



Photo 6 – Outlet to culvert coming into Sediment Pond #2.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking southeast.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.



Photo 10 – North-west corner of Phase 1 perimeter ditch. Sediment accumulation is present. Photo taken looking north.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking south.



Photo 12 – Outlet of culvert leaving Sediment Pond #3. Photo taken looking south.



Photo 13 – Phase 1/2 downspout. Photo taken looking south.



Photo 14 – Erosion rills on the north slope of Phase 2. Photo taken looking southeast.



Photo 15 – Perimeter of northern stockpile has silt fence installed. Photo taken looking north.



Photo 16 – Surface swale on the north slope of Phase 2. Photo taken looking east.



Photo 17 – Grass growth over Phase 2. Photo taken looking south.



Photo 18 – Overwinter mulch along access road. Photo taken looking north



Photo 19 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking west.



Photo 20 – Southern stockpile with silt fence installed around perimeter. Photo taken looking east.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Wednesday June 7, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy/ scattered showers
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	47-55 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 76%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0.1”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	5	Nick Schmeidlehner (Foreman), (0) truck drivers, (3) laborers, (2) operators
Integrity Lining Systems	1	7	Liner company

VISITOR

Time	Name	Representing	Remarks
0745-1530	Trevor Michaud	SME	Construction Oversight Stormwater Inspection after rain event
1230-1430	Adam Qualey	-	Onsite to fix outlet culvert to Sediment Pond #3

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D39 PX dozer
-(1) CAT TH82 lull
-(2) Volvo A30G haul truck
-(3) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Finalize backfilling 18-inch culvert going from CB-2C to Sediment Pond #2.
- Liner company making pipe boots for gas vents.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 1 of Phase 3.
- Finalize construction of perimeter ditch for Area 1 of Phase 3.
- Excavate anchor trench for Area 1 of Phase 3.
- Fix section of intermediate underdrain berm.
- Begin stripping existing cover soil in SW corner of Phase 3.
- Begin liner installation in Area 1 of Phase 3.

QUALITY ASSURANCE

- Inlet to culvert crossing Sediment Pond #1 contains sediment and needs to be stabilized until the culvert is replaced.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. Temporary soil dams have been built to prevent leachate from going into Sediment Pond #2 until liner has been installed.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Sediment observed in Sediment Pond #2 due to construction activities.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment in pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition. Inlet to culvert getting replaced this year.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of the northern stockpile.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Overwinter mulch present. Grass growth on north slope and north-east corner has continued. Rest of Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Silt fence has been installed around perimeter of the southern stockpile.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Some ponding occurring on top of Phase 2.

SEVEE & MAHER ENGINEERS, INC.
STORMWATER INSPECTION REPORT
JUNE 6, 2023

DISTRIBUTION:
1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	No	No	Part of Phase 3 construction, not yet installed
19	Phase 3 Downspout (2 of 3)	No	No	Part of Phase 3 construction, not yet installed
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded. Good grass growth is observed over much of Phase 2.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	Yes	Temporary soil berms have been installed around CB-2C. Inlet to culvert going to Sediment Pond #1 needs to have protection installed.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	No	Dumpster for construction waste is present.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking west. Gordon will stabilize as soon as possible.



Photo 2 – Outlet protection to Sediment Pond #1. Photo taken looking east.



Photo 3 – Outlet to culvert leaving Sediment Pond #1. Photo taken looking north-east.



Photo 4 – Soil berms installed around CB-2C to contain impacted stormwater going to Sediment Pond #2. Photo taken looking north.



Photo 5 – Some sediment at outlet to culvert going into Sediment Pond #1. Photo taken looking east.



Photo 6 – Outlet to culvert coming into Sediment Pond #2. Sediment present due to construction. Photo taken looking south.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking southeast.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.



Photo 10 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking southeast.



Photo 12 – Outlet of culvert leaving Sediment Pond #3. Photo taken looking south.



Photo 13 – Phase 1/2 downspout. Photo taken looking south.



Photo 14 – Erosion rills on the north slope of Phase 2. Photo taken looking south.



Photo 15 – Surface swale on the north slope of Phase 2. Photo taken looking east.



Photo 16 – Roadway surface eroding into Phase 2 perimeter ditch. Photo taken looking northwest.



Photo 17 – Grass growth over Phase 2. Photo taken looking north.



Photo 18 – Overwinter mulch along access road. Photo taken looking north.



Photo 19 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking northwest.



Photo 20 – Ponding occurring on top of Phase 2. Photo taken looking west.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Sunday June 18, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	49-57 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	9 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 80%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Integrity Lining Systems	1		Liner company

VISITOR

Time	Name	Representing	Remarks
1630-1900	Trevor Michaud	SME	Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(3) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- N/A

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize geomembrane repairs and vacuum box testing for the liner already installed.
- Finalize installation of intermediate underdrain berms for Area 2 of Phase 3.
- Finalize installation of gas collection system in Area 2 of Phase 3.

QUALITY ASSURANCE

- Inlet to culvert going into Sediment Pond #1 has staked haybales. Outlet contains sediment and needs to be stabilized until the culvert is replaced.
- Sediment observed at outlet to culvert going into Sediment Pond #1. Sediment should be removed prior to next rain event.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. Significant water and sediment beneath geomembrane liner.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Unstable soil present and riprap apron not yet installed.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment in pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of the northern stockpile.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Grass growth on north slope and north-east corner has continued. Rest of Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Silt fence has been installed around perimeter of the southern stockpile.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Some ponding occurring on top of Phase 2.
- Significant washouts in gas collection sand throughout Phase 3. Some sediment accumulation on recently installed geomembrane and geocomposite.

DISTRIBUTION:
1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	No	No	Part of Phase 3 construction, not yet installed
19	Phase 3 Downspout (2 of 3)	No	No	Part of Phase 3 construction, not yet installed
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded. Good grass growth is observed over much of Phase 2. Outlet culvert to Sediment Pond #2 needs to be stabilized.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	Yes	Inlet to culvert going to Sediment Pond #1 has staked haybale installed. Outlet has sediment accumulation.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present. Trash pick-up around site needs to be performed.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking east. Staked haybales have been installed.



Photo 2 – Outlet protection to Sediment Pond #1. Photo taken looking southeast.



Photo 3 – Outlet to culvert going into Sediment Pond #1. Photo taken looking southeast. Sediment observed at outlet.



Photo 4 – Significant water and soil beneath geomembrane liner at CB-2C. Photo taken looking west.



Photo 5 – Unstable soil around outlet to culvert going into Sediment Pond #2. Photo taken looking southwest.



Photo 6 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 7 – Sediment accumulation on recently installed geocomposite. Photo taken looking northwest.



Photo 8 – SW corner of Phase 3. Significant erosion rills present on slope. Photo taken looking northeast.

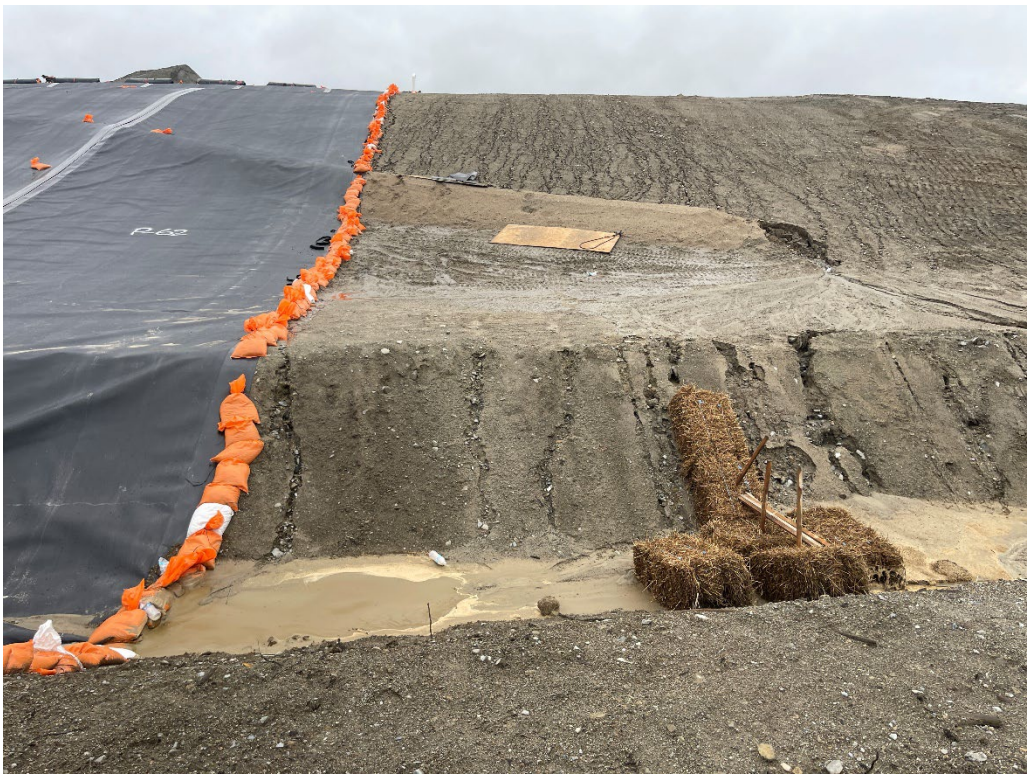

Photo 9 – Leading edge of geomembrane installed. Ditch line needs sediment removed. Photo taken looking east.



Photo 10 – Outlet protection for Sediment Pond #3. Photo taken looking west.

SME
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ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Saturday June 24, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	60-64 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	0 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 95%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Integrity Lining Systems	1	6	Liner company

VISITOR

Time	Name	Representing	Remarks
0700-1430	Trevor Michaud	SME	Liner Oversight Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(3) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Air testing seams
- Extrusion welding Phase 1 tie-in and along the west slope of Phase 3 between first and second deployments

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize geomembrane repairs and vacuum box testing for the liner already installed.
- Finalize installation of intermediate underdrain berms for Area 2 of Phase 3.
- Finalize installation of gas collection system in Area 2 of Phase 3.

QUALITY ASSURANCE

- Inlet to culvert crossing Sediment Pond #1 has staked haybales. Outlet contains sediment and needs to be stabilized until the culvert is replaced.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Unstable soil present and riprap apron not yet installed.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment in pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of the northern stockpile.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Grass growth on north slope and north-east corner has continued. Rest of Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Silt fence has been installed around perimeter of the southern stockpile.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Some ponding occurring on top of Phase 2.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	No	No	Part of Phase 3 construction, not yet installed
19	Phase 3 Downspout (2 of 3)	No	No	Part of Phase 3 construction, not yet installed
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded. Good grass growth is observed over much of Phase 2. Outlet culvert to Sediment Pond #2 needs to be stabilized.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	Yes	Inlet to culvert going to Sediment Pond #1 has staked haybale installed. Outlet has sediment accumulation.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	No	Dumpster for construction waste is present.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking west. Staked haybales have been installed.



Photo 2 – Outlet protection to Sediment Pond #1. Photo taken looking southeast.



Photo 3 – Outlet to culvert going into Sediment Pond #1. Photo taken looking southeast. Sediment observed at outlet.



Photo 4 – No sediment going to Sediment Pond #2 from CB-2C. Photo taken looking northeast.



Photo 5 – Unstable soil around outlet to culvert going into Sediment Pond #2. Photo taken looking northwest.



Photo 6 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 7 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 8 – Outlet to culvert coming into Sediment Pond #3.



Photo 9 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking northeast.



Photo 10 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 11 – Phase 1/2 downspout. Photo taken looking south.



Photo 12 – Erosion rills on the north slope of Phase 2. Photo taken looking southeast.



Photo 13 – Surface swale on the north slope of Phase 2. Photo taken looking east.



Photo 14 – Roadway surface eroding into Phase 2 perimeter ditch. Photo taken looking south.



Photo 15 – Grass growth over Phase 2. Photo taken looking north.



Photo 16 – Overwinter mulch along slope of access road with some grass growth. Photo taken looking north.



Photo 17 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking southwest.



Photo 18 – Ponding occurring on top of Phase 2. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Friday June 30, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Partly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	63-78 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 94%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Integrity Lining Systems	1	20	Liner company

VISITOR

Time	Name	Representing	Remarks
0600-1130	Trevor Michaud	SME	Liner Oversight Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(3) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Make repairs and perform vacuum box testing on geomembrane around CB-2C.
- Finalize geocomposite installation.
- Finalize gas vent boots.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 2 of Phase 3.
- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Remove and install new culvert into Sediment Pond #1 at SW corner of Phase 3.

QUALITY ASSURANCE

- Inlet to culvert crossing Sediment Pond #1 has staked haybales. Outlet contains sediment and needs to be stabilized until the culvert is replaced.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Unstable soil present and riprap apron not yet installed.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment in pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of the northern stockpile.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Grass growth on north slope and north-east corner has continued. Rest of Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Silt fence has been installed around perimeter of the southern stockpile.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Some ponding occurring on top of Phase 2.

DISTRIBUTION:

1 SME **BY: Trevor Michaud, E.I.** **TITLE: Project Engineer**
2 MEBGS
3 MEDEP
4 Gordon Contracting

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	No	No	Part of Phase 3 construction, not yet installed
19	Phase 3 Downspout (2 of 3)	No	No	Part of Phase 3 construction, not yet installed
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded. Good grass growth is observed over much of Phase 2. Outlet culvert to Sediment Pond #2 needs to be stabilized.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	Yes	Inlet to culvert going to Sediment Pond #1 has staked haybale installed. Outlet has sediment accumulation.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	No	Dumpster for construction waste is present.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking north. Staked haybales have been installed.



Photo 2 – Outlet protection to Sediment Pond #1. Photo taken looking southeast.



Photo 3 – Outlet to culvert going into Sediment Pond #1. Photo taken looking southeast. Sediment observed at outlet.



Photo 4 – No sediment going to Sediment Pond #2 from CB-2C. Photo taken looking southwest.



Photo 5 – Unstable soil around outlet to culvert going into Sediment Pond #2. Photo taken looking south.



Photo 6 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 7 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 8 – Outlet to culvert coming into Sediment Pond #3.



Photo 9 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 10 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 11 – Phase 1/2 downspout. Photo taken looking south.



Photo 12 – Erosion rills on the north slope of Phase 2. Photo taken looking south.



Photo 13 – Surface swale on the north slope of Phase 2. Photo taken looking east.



Photo 14 – Roadway surface eroding into Phase 2 perimeter ditch. Photo taken looking south.



Photo 15 – Grass growth over Phase 2. Photo taken looking northwest.



Photo 16 – Overwinter mulch along slope of access road with some grass growth. Photo taken looking north.



Photo 17 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking southwest.



Photo 18 – Ponding occurring on top of Phase 2. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Monday July 10, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	63-78 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 94%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	Nick Schmeidlehner (Foreman), 3 operators, 2 laborers, 2 truck drivers

VISITOR

Time	Name	Representing	Remarks
0610-1415	Trevor Michaud	SME	Construction Oversight Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(3) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Backfill and compact anchor trench along west slope of Phase 3. Approx. 900 LF backfilled.
- Remove trees/brush around Sediment Pond #1. Trees/brush at NW corner and west side of sediment pond removed.

ANTICIPATED CONSTRUCTION ACTIVITIES

- - Finalize existing structure abandonment for Area 2 and 3 of Phase 3.
- Finalize construction of perimeter ditch for Area 2 of Phase 3.
- Excavate anchor trench for Area 2 of Phase 3.
- Finalize intermediate underdrain berm installation for Area 2 of Phase 3.
- Continue liner installation for Area 2 of Phase 3.
- Begin stripping existing topsoil in Area 3 of Phase 3.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. No sediment observed at inlet or outlet of pipe. Riprap apron not yet installed.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Unstable soil present and riprap apron not yet installed.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment in pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of the northern stockpile.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Grass growth on north slope and north-east corner has continued. Rest of Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Silt fence has been installed around perimeter of the southern stockpile.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Some ponding occurring on top of Phase 2.

DISTRIBUTION:

1 SME **BY: Trevor Michaud, E.I.** **TITLE: Project Engineer**
2 MEBGS
3 MEDEP
4 Gordon Contracting

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	Yes	No	Part of Phase 3 construction, no riprap installed yet
19	Phase 3 Downspout (2 of 3)	Yes	No	Part of Phase 3 construction, no riprap installed yet
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded. Good grass growth is observed over much of Phase 2. Outlet culvert into Sediment Pond #2 needs to be stabilized. Outlet culvert into Sediment Pond #1 at SW corner of Phase 3 needs to be stabilized.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	Yes	Inlet to culvert going to Sediment Pond #1 has staked haybale installed. Outlet has sediment accumulation.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present. Trash pickup is required from liner company.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast.



Photo 2 – Outlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking south. Unstable soil present and no riprap apron installed yet.



Photo 3 – Stormwater diversion to prevent stormwater getting under liner excavated at Sediment Pond #1. Photo taken looking southeast. Staked haybales installed to prevent sediment going into the pond.



Photo 4 – Outlet protection for Sediment Pond #1. Photo taken looking southeast. No sediment observed leaving the pond.



Photo 5 – No sediment going to Sediment Pond #2 from CB-2C. Photo taken looking north.



Photo 6 – Unstable soil around outlet to culvert going into Sediment Pond #2. Photo taken looking south.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.



Photo 10 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 12 – Phase 1/2 downspout. Photo taken looking south.



Photo 13 – Erosion rills on the north slope of Phase 2. Photo taken looking south.



Photo 14 – Surface swale on the north slope of Phase 2. Photo taken looking east.



Photo 15 – Roadway surface eroding into Phase 2 perimeter ditch. Photo taken looking south.



Photo 16 – Grass growth over NE corner of Phase 2. Photo taken looking southwest.



Photo 17 – Grass growth over the north slope of Phase 2. Photo taken looking east.



Photo 18 – Grass growth over SE corner of Phase 2. Photo taken looking northwest.



Photo 19 – Overwinter mulch along slope of access road with some grass growth. Photo taken looking north.



Photo 20 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking northwest.



Photo 21 – Ponding occurring on top of Phase 2. Photo taken looking northwest.



Photo 22 – Existing roadway has ponding occurring. Roadway needs to be regraded. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Friday July 21, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	58-80 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 84%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	Nick Schmeidlehner (Foreman), 3 operators, 2 laborers, 2 truck drivers
Integrity Lining Systems	2	11	2 foreman, 2 QA/QC, 9 laborers

VISITOR

Time	Name	Representing	Remarks
0530-1700	Trevor Michaud	SME	Liner Oversight Stormwater Inspection
0630-1500	Ben Monohon	SME	Construction Oversight

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(3) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Installed 0.3 acres of geomembrane.
- Installed approx. 16,000 sf of geocomposite.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment for Area 3 of Phase 3.
- Begin construction of perimeter ditch for Area 3 of Phase 3.
- Continue stripping existing cover soil and topsoil in Area 3 of Phase 3.
- Continue placing cover soil on the west slope of Phase 3.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. No sediment observed at inlet or outlet of pipe. Riprap apron not yet installed. Slope not yet stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Unstable soil present and riprap apron not yet installed.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming into pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Access road between Dolby II and III needs to be regraded to allow for positive drainage.

DISTRIBUTION:
1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	Yes	No	Part of Phase 3 construction, no riprap installed yet
19	Phase 3 Downspout (2 of 3)	Yes	No	Part of Phase 3 construction, no riprap installed yet
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded. Good grass growth is observed over much of Phase 2. Outlet culvert into Sediment Pond #2 needs to be stabilized. Outlet culvert into Sediment Pond #1 at SW corner of Phase 3 needs to be stabilized.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	Temporary stormwater diversions have been installed along south slope of Phase 3 to prevent sediment from going into structures/culverts.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present. Trash pickup is required from liner company.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast.



Photo 2 – Outlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking south. Unstable soil present and no riprap apron installed yet.



Photo 3 – Stormwater diversion to prevent stormwater getting under liner excavated at leading edge of liner. Photo taken looking southwest. Staked haybales installed to prevent sediment going into the woods.



Photo 4 – Outlet protection for Sediment Pond #1. Photo taken looking southwest. No sediment observed leaving the pond.



Photo 5 – No sediment going to Sediment Pond #2 from CB-2C. Photo taken looking north.



Photo 6 – Unstable soil around outlet to culvert going into Sediment Pond #2. Photo taken looking west.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.



Photo 10 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 12 – Phase 1/2 downspout. Photo taken looking south.



Photo 13 – Erosion rills on the north slope of Phase 2. Photo taken looking south.



Photo 14 – Roadway surface eroding into Phase 2 perimeter ditch. Photo taken looking south.



Photo 15 – Grass growth over NE corner of Phase 2. Photo taken looking southwest.



Photo 16 – Grass growth over the north slope of Phase 2. Photo taken looking west.



Photo 17 – Grass growth over SE corner of Phase 2. Photo taken looking northwest.



Photo 18 – Grass growth along slope of access road between Dolby II and III. Photo taken looking north.



Photo 19 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking northwest.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Friday July 28, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	63-85 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 86%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	8	Nick Schmeidlehner (Foreman), 4 operators, 3 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
0550-0830	Trevor Michaud	SME	Construction Oversight Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(2) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- N/A

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment in Area 3 of Phase 3.
- Begin construction of perimeter ditch in Area 3 of Phase 3.
- Install aggregate base and riprap material within lined sections of perimeter ditch.
- Continue placing cover soil over geocomposite.
-Begin liner installation in Area 3 of Phase 3.
- Continue stripping existing cover soil and topsoil in Area 3 of Phase 3.
- Begin gas collection installation in Area 3 of Phase 3.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. No sediment observed at inlet or outlet of pipe. Riprap apron not yet installed. Slope not yet stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Unstable soil present and riprap apron not yet installed.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming into pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Access road between Dolby II and III needs to be regraded to allow for positive drainage.

DISTRIBUTION:

1 SME **BY: Trevor Michaud, E.I.** **TITLE: Project Engineer**
2 MEBGS
3 MEDEP
4 Gordon Contracting

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	No	No	Part of Phase 3 construction, not yet installed
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	No	No	Part of Phase 3 construction, not yet installed
15	Phase 3 Surface Swale (2 of 4)	No	No	Part of Phase 3 construction, not yet installed
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	Yes	No	Part of Phase 3 construction, no riprap installed yet
19	Phase 3 Downspout (2 of 3)	Yes	No	Part of Phase 3 construction, no riprap installed yet
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, not yet installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded. Good grass growth is observed over much of Phase 2. Outlet culvert into Sediment Pond #2 needs to be stabilized. Outlet culvert into Sediment Pond #1 at SW corner of Phase 3 needs to be stabilized.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	Temporary stormwater diversions have been installed along south slope of Phase 3 to prevent sediment from going into structures/culverts.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present. Trash pickup is required from liner company.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking east.



Photo 2 – Outlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking east. Unstable soil present and no riprap apron installed yet.



Photo 3 – Stormwater diversion to prevent stormwater getting under liner excavated at leading edge of liner. Photo taken looking south. Staked haybales installed to prevent sediment going into the woods.



Photo 4 – Outlet protection for Sediment Pond #1. Photo taken looking southeast. No sediment observed leaving the pond.



Photo 5 – No sediment going to Sediment Pond #2 from CB-2C. Photo taken looking north.

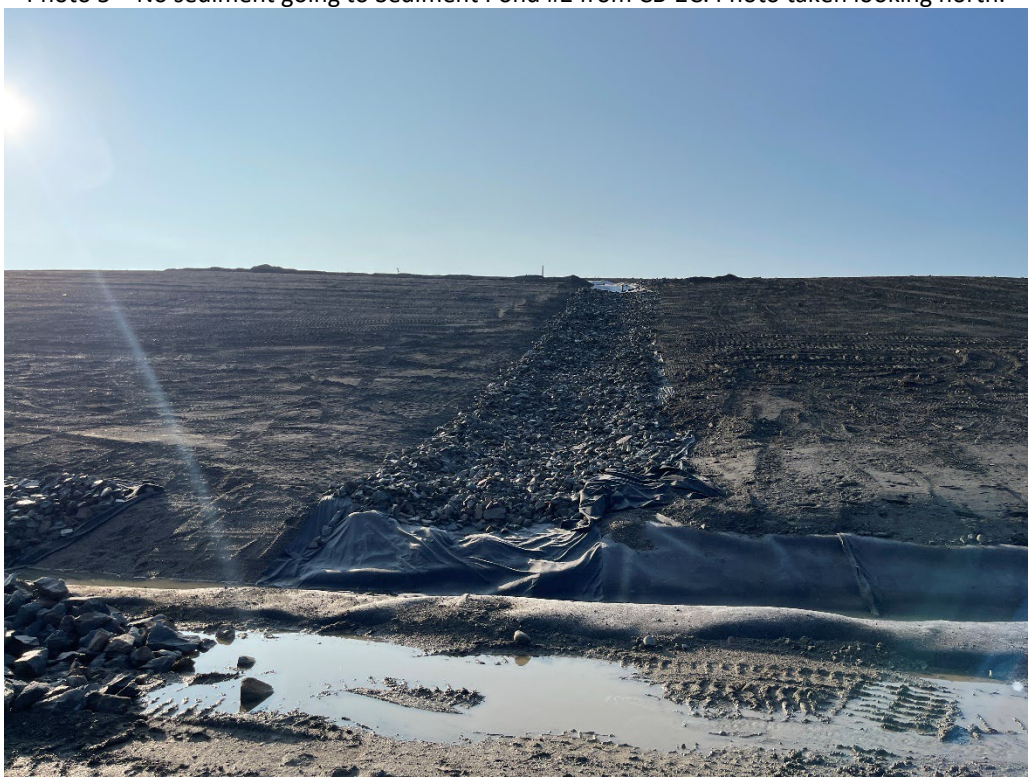

Photo 6 – West slope of Phase 3 downspout has riprap installed. Photo taken looking east.



Photo 7 – Unstable cover soil on west slope of Phase 3 with erosion rills present. Photo taken looking east.



Photo 8 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 9 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 10 – Outlet to culvert coming into Sediment Pond #3.



Photo 11 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 12 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 13 – Phase 1/2 downspout. Photo taken looking south.



Photo 14 – Erosion rills on the north slope of Phase 2. Photo taken looking southeast.



Photo 15 – Uncompleted surface swale on the west slope of Phase 3. Photo taken looking southwest.



Photo 16 – Eroded surface swale on the north slope of Phase 2. Photo taken looking west.



Photo 17 – Grass growth over NE corner of Phase 2. Photo taken looking west.



Photo 18 – Grass growth over the north slope of Phase 2. Photo taken looking east.



Photo 19 – Grass growth over SE corner of Phase 2. Photo taken looking southwest.



Photo 20 – Overwinter mulch along slope of access road with some grass growth. Photo taken looking northwest.



Photo 21 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking northwest.



Photo 22 – Existing roadway has ponding occurring. Roadway needs to be regraded. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Friday August 4, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Rain
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	60-69 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	9 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 89%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0.5”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting			N/A

VISITOR

Time	Name	Representing	Remarks
0700-0800	Trevor Michaud	SME	Construction Oversight Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(2) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- N/A

ANTICIPATED CONSTRUCTION ACTIVITIES

- Finalize existing structure abandonment in Area 3 of Phase 3.
- Begin construction of perimeter ditch in Area 3 of Phase 3.
- Install aggregate base and riprap material within lined sections of perimeter ditch.
- Continue placing cover soil over geocomposite.
-Begin liner installation in Area 3 of Phase 3.
- Continue stripping existing cover soil and topsoil in Area 3 of Phase 3.
- Continue gas collection installation in Area 3 of Phase 3.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. No sediment observed at inlet or outlet of pipe. Riprap apron not yet installed. Slope not yet stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Unstable soil present and riprap apron not yet installed.
- Outlet protection at Sediment Pond #2 is in good condition. No sediment leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming into pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Access road between Dolby II and III needs to be regraded to allow for positive drainage.

DISTRIBUTION:

1 SME **BY: Trevor Michaud, E.I.** **TITLE: Project Engineer**
2 MEBGS
3 MEDEP
4 Gordon Contracting

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	Yes	No	Riprap swale is being installed as construction continues.
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	Yes	Yes	Surface swale needs erosion control matting.
15	Phase 3 Surface Swale (2 of 4)	Yes	Yes	Surface swale needs erosion control matting.
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	Yes	No	Riprap has been installed.
19	Phase 3 Downspout (2 of 3)	Yes	No	Part of Phase 3 construction, no riprap installed yet
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, no riprap installed yet

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded. Good grass growth is observed over much of Phase 2. Outlet culvert into Sediment Pond #2 needs to be stabilized. Outlet culvert into Sediment Pond #1 at SW corner of Phase 3 needs to be stabilized. West slope of Phase 3 needs to be stabilized.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	Temporary stormwater diversions have been installed along south slope of Phase 3 to prevent sediment from going into structures/culverts.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present. Trash pickup is required from liner company.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Outlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast. Unstable soil present and no riprap apron installed yet.



Photo 2 – Outlet protection for Sediment Pond #1. Photo taken looking south. No sediment observed leaving the pond.



Photo 3 – Perimeter ditch around CB-2C has had riprap installed. Photo taken looking south.



Photo 4 – Surface swale north of west slope downspout on Phase 3 installed. No ECM installed. Photo taken looking north.



Photo 5 – Surface swale south of west slope downspout on Phase 3 installed. No ECM installed. Photo taken looking south.



Photo 6 – West slope of Phase 3 downspout has riprap installed. Photo taken looking east.



Photo 7 – Unstable cover soil on west slope of Phase 3 with erosion rills present. Photo taken looking northeast.



Photo 8 – Unstable slope around outlet of culver into Sediment Pond #2. Photo taken looking east.



Photo 9 Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 10 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 11 – Outlet to culvert coming into Sediment Pond #3.



Photo 12 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 13 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 14 – Phase 1/2 downspout. Photo taken looking south.



Photo 15 – Grass growth over NE corner of Phase 2. Photo taken looking west.



Photo 16 – Grass growth over the north slope of Phase 2. Photo taken looking southwest.



Photo 17 – Grass growth over SE corner of Phase 2. Photo taken looking southwest.



Photo 18 – Grass growth along slope of access road. Photo taken looking northwest.



Photo 19 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking northwest.



Photo 20 – Existing roadway has ponding occurring. Roadway needs to be regraded. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Friday August 11, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Rain in morning, sunny in afternoon
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	58-75 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	11 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 63%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	1.38"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		8	3 operators, 4 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
0445-1100	Trevor Michaud	SME	Construction Oversight Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(2) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY'S CONSTRUCTION ACTIVITIES

- Stormwater Management

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue construction of perimeter ditch in Area 3 of Phase 3.
- Continue intermediate underdrain berm installation for Area 3 of Phase 3.
- Continue liner installation for Area 3 of Phase 3.
- Finalizing stripping existing cover soil in Area 3 of Phase 3.
- Continue placing cover soil over geocomposite on the west slope of Phase 3.
- Continue installation of gas collection system in Area 3 of Phase 3.
- Continue exposing Phase 1 tie-in.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. Sediment observed at inlet and outlet of pipe. Riprap apron not yet installed. Slope not yet stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Unstable soil present and riprap apron not yet installed.
- Outlet protection at Sediment Pond #2 is in good condition. Turbid stormwater leaving the pond.
- Inlet to culvert going to Sediment Pond #3 is in good condition. Turbid stormwater coming into pipe.
- Outlet to culvert going to Sediment Pond #3 is in good condition. Turbid stormwater coming out of pipe.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Access road between Dolby II and III needs to be regraded to allow for positive drainage.

DISTRIBUTION:

1 SME

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

2 MEBGS
3 MEDEP
4 Gordon Contracting

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	Yes	No	Riprap swale is being installed as construction continues.
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed.
15	Phase 3 Surface Swale (2 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed.
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	Yes	No	Riprap has been installed.
19	Phase 3 Downspout (2 of 3)	Yes	No	Part of Phase 3 construction, no riprap installed yet
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, no riprap installed yet

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded. Good grass growth is observed over much of Phase 2. Outlet culvert into Sediment Pond #2 needs to be stabilized. Outlet culvert into Sediment Pond #1 at SW corner of Phase 3 needs to be stabilized. West slope of Phase 3 needs to be stabilized.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	Temporary stormwater diversions have been installed along south slope of Phase 3 to prevent sediment from going into structures/culverts.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present. Trash pickup is required from liner company.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Outlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast. Unstable soil present and no riprap apron installed yet.



Photo 2 – Outlet protection for Sediment Pond #1. Photo taken looking south. No sediment observed leaving the pond.



Photo 3 – Perimeter ditch around CB-2C has had riprap installed. Sediment accumulation present. Photo taken looking south.



Photo 4 – Surface swale north of west slope downspout on Phase 3 installed. No ECM installed. Photo taken looking north.



Photo 5 – Surface swale south of west slope downspout on Phase 3 installed. No ECM installed. Photo taken looking south.



Photo 6 – West slope of Phase 3 downspout has riprap installed. Sediment accumulation at end of downspout. Photo taken looking east.



Photo 7 – Unstable cover soil on west slope of Phase 3 with erosion rills present. Photo taken looking northeast.



Photo 8 – Unstable slope around outlet of culver into Sediment Pond #2. Photo taken looking west.



Photo 9 Outlet protection for Sediment Pond #2. Turbid stormwater leaving pond. Photo taken looking south.



Photo 10 – Inlet to culvert going into Sediment Pond #3. Turbid stormwater present. Photo taken looking north.



Photo 11 – Outlet to culvert coming into Sediment Pond #3. Turbid stormwater present.



Photo 12 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 13 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 14 – Phase 1/2 downspout. Photo taken looking south.



Photo 15 – Grass growth over NE corner of Phase 2. Photo taken looking south.



Photo 16 – Grass growth over the north slope of Phase 2. Photo taken looking west.



Photo 17 – Grass growth over SE corner of Phase 2. Photo taken looking southwest.



Photo 18 – Grass growth along slope of access road. Photo taken looking northwest.



Photo 19 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking northwest.



Photo 20 – Existing roadway has ponding and erosion occurring. Roadway needs to be regraded. Photo taken looking north.



Photo 21 – Significant erosion of south slope of Phase 3 after rain event. Photo taken looking west.



Photo 22 – Turbid water and sediment going into Sediment Pond #1. Photo taken looking southwest.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Saturday August 19, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	60-73 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 82%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Integrity Lining Systems	1	7	1 foreman, 1 QA/QC, 6 laborers

VISITOR

Time	Name	Representing	Remarks
0630-1630	Trevor Michaud	SME	Liner Oversight Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(3) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Liner detail work

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane.
- Begin geocomposite installation.
- Continue backfilling over geocomposite.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. Sediment observed at outlet of pipe. Riprap apron not yet installed. Slope not yet stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch.
- West slope Phase 3 downspout has been finalized. Erosion present on slope around downspout. Sediment accumulation at bottom of downspout.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Unstable soil present and riprap apron not yet installed.
- Outlet protection at Sediment Pond #2 is in good condition.
- Inlet to culvert going to Sediment Pond #3 is in good condition.
- Outlet to culvert going to Sediment Pond #3 is in good condition.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2. Will be getting fixed as quickly as possible.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 needs to get fixed. Gordon Contracting is aware of the problem and will get fixed as soon as possible.
- Phase 2 has good grass growth.
- Some washouts along roadway putting sediment in perimeter ditch of Phase 2. Gordon is aware of the problem and will fix as soon as possible.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Access road between Dolby II and III needs to be regraded to allow for positive drainage.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP’s

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed
9	Riprap Apron into Sediment Pond #1	No	No	Part of Phase 3 construction, not yet installed.
10	Riprap Apron into Sediment Pond #2	No	No	Part of Phase 3 construction, not yet installed
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	Yes	No	Riprap swale is being installed as construction continues.
13	Phase 2 Surface Swale	Yes	Yes	Surface swale eroded and not stabilized. Gordon is aware of the situation and will fix as soon as possible.
14	Phase 3 Surface Swale (1 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed.
15	Phase 3 Surface Swale (2 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed.
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	Yes	Yes	Riprap has been installed. Sediment accumulation present at bottom.
19	Phase 3 Downspout (2 of 3)	Yes	No	Part of Phase 3 construction, no riprap installed yet
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, no riprap installed yet

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Phase 2 surface swale has been eroded. Surface swale needs to be fixed, and erosion control matting installed and seeded. Good grass growth is observed over much of Phase 2. Outlet culvert into Sediment Pond #2 needs to be stabilized. Outlet culvert into Sediment Pond #1 at SW corner of Phase 3 needs to be stabilized. West slope of Phase 3 needs to be stabilized.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	Temporary stormwater diversions have been installed along south slope of Phase 3 to prevent sediment from going into structures/culverts.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present. Trash pickup is required from liner company.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Outlet to culvert going to Sediment Pond #2 at west slope of Phase 3. Photo taken looking west. Unstable soil present and no riprap apron installed yet.



Photo 2 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast.



Photo 3 – Outlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast. Unstable soil present and no riprap apron installed yet.



Photo 4 – CB-1i located at bottom of the south slope downspout. Litter present around structure. Photo taken looking north.



Photo 5 – Outlet protection for Sediment Pond #1. Photo taken looking south. No sediment observed leaving the pond.



Photo 6 – Perimeter ditch around CB-2C has had riprap installed. Sediment accumulation present. Photo taken looking north.



Photo 7 – West slope of Phase 3 downspout has riprap installed. Sediment accumulation at end of downspout and erosion present on the slope. Photo taken looking east.



Photo 7 – Unstable cover soil on west slope of Phase 3 with erosion rills present and sediment in perimeter ditch. Photo taken looking east.



Photo 8 – Outlet protection for Sediment Pond #2. No sediment leaving the pond. Photo taken looking south.



Photo 9 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 10 – Outlet to culvert coming into Sediment Pond #3. Photo taken looking west.



Photo 11 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 12 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 13 – Phase 1/2 downspout. Photo taken looking south.



Photo 14 – Grass growth over NE corner of Phase 2. Photo taken looking south.



Photo 15 – Grass growth over the north slope of Phase 2. Photo taken looking west.



Photo 16 – Grass growth over SE corner of Phase 2. Photo taken looking southwest.



Photo 17 – Grass growth along slope of access road. Photo taken looking northwest.



Photo 18 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking northwest.



Photo 19 – Existing roadway has ponding and erosion occurring. Roadway needs to be regraded. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Monday September 4, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	60-73 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	5 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Moderate, 82%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks

VISITOR

Time	Name	Representing	Remarks
1630-1730	Trevor Michaud	SME	Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(3) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

-

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue detail work on geomembrane. - Begin geocomposite installation. - Continue backfilling over geocomposite.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. Riprap apron has been installed. Slope has been stabilized. Trash observed. - Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond. - Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond. - CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch. - Outlet of culvert going to Sediment Pond #2 has been replaced. Slope has been stabilized. Riprap apron has been installed. - Outlet protection at Sediment Pond #2 is in good condition. - Inlet to culvert going to Sediment Pond #3 is in good condition. - Outlet to culvert going to Sediment Pond #3 is in good condition. - Outlet protection for Sediment Pond #3 is in good condition. - Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe. - Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2. - Erosion rills on the north slope and north-east corner of Phase 2 have been fixed by Gordon. - Stone check dams along Phase 2 north slope are in good condition. - Silt fence has been installed along the perimeter of all stockpiles. - Surface swale along north slope of Phase 2 has been fixed by Gordon. - Phase 2 has good grass growth. - Gordon has fixed existing roadway between Dolby II and III. - Soil filter sock installed around the roadside ditch going to Leachate Pond. - Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible. - Sediment observed at bottom of west slope downspout of Phase 3. - Outlet to CB-1i has been finalized with riprap and slope stabilized.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Has been installed. No actions needed.
9	Riprap Apron into Sediment Pond #1	No	No	Has been installed. No actions needed.
10	Riprap Apron into Sediment Pond #2	No	No	Has been installed. No actions needed.
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	Yes	No	Riprap swale is being installed as construction continues.
13	Phase 2 Surface Swale	Yes	No	Gordon has fixed surface swale. Grass growth beginning.
14	Phase 3 Surface Swale (1 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed.
15	Phase 3 Surface Swale (2 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed.
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	Yes	Yes	Riprap has been installed. Sediment accumulation at bottom of downspout.
19	Phase 3 Downspout (2 of 3)	Yes	No	Riprap has been installed.
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, no riprap installed yet

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	West slope of Phase 3 needs to be stabilized once area has been finalized.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	Temporary stormwater diversions have been installed along south slope of Phase 3 to prevent sediment from going into structures/culverts.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present. Trash pickup is required from liner company.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast. Unstable soil present and riprap installed in perimeter ditch.



Photo 2 – Outlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast. Slope has been stabilized and riprap apron installed. Trash present in pond.



Photo 3 – Outlet protection for Sediment Pond #1. Photo taken looking south. No sediment observed leaving the pond.



Photo 4 – Perimeter ditch around CB-2C has had riprap installed. Photo taken looking southeast.



Photo 5 – West slope of Phase 3 downspout has riprap installed. Sediment accumulation at end of downspout. Photo taken looking east.



Photo 6 – Unstable cover soil on west slope of Phase 3. Gordon will apply hay mulch once area is finalized. Photo taken looking northeast.



Photo 7 – Outlet protection for Sediment Pond #2.. Photo taken looking south.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.



Photo 10 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 12 – Phase 1/2 downspout. Photo taken looking south.



Photo 13 – Grass growth over NE corner of Phase 2. Photo taken looking south.



Photo 14 – Grass growth over the north slope of Phase 2. Photo taken looking west.



Photo 15 – Grass growth over SE corner of Phase 2. Photo taken looking southwest.



Photo 16 – Grass growth along slope of access road and east slope of Phase 2. Photo taken looking northwest.



Photo 17 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking northwest.



Photo 18 – Gordon has fixed the north slope of Phase 2 and reseeded and mulched. Photo taken looking south.



Photo 19 – Gordon has fixed the north slope surface swale of Phase 2 and reseeded and mulched and added ECM. Photo taken looking east.



Photo 20 – Gordon has finalized the SW corner downspout of Phase 3. Photo taken looking northeast.



Photo 21 – West slope of Phase 3 surface swale. No ECM installed yet. Photo taken looking southwest.



Photo 22 – West slope of Phase 3 surface swale. No ECM installed yet. Photo taken looking north.



Photo 23 – Outlet to CB-1i installed with riprap. Slopes have been stabilized. Photo taken looking east.



Photo 24 – Outlet to CB-2c installed with riprap. Slopes have been stabilized. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Saturday September 9, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly Sunny
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	59-77 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	8 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 63%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Integrity Lining Systems	1	5	1 foreman, 5 laborers

VISITOR

Time	Name	Representing	Remarks
0630-1630	Trevor Michaud	SME	Liner Oversight Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(3) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator
-Genie lull

TODAY’S CONSTRUCTION ACTIVITIES

- Installing geocomposite.

ANTICIPATED CONSTRUCTION ACTIVITIES

- - Continue backfilling over geocomposite.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. Riprap apron has been installed. Slope has been stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Slope has been stabilized. Riprap apron has been installed.
- Outlet protection at Sediment Pond #2 is in good condition.
- Inlet to culvert going to Sediment Pond #3 is in good condition.
- Outlet to culvert going to Sediment Pond #3 is in good condition.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2 have been fixed by Gordon.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 has been fixed by Gordon.
- Phase 2 has good grass growth.
- Gordon has fixed existing roadway between Dolby II and III.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Sediment observed at bottom of west slope downspout of Phase 3.
- Outlet to CB-1i has been finalized with riprap and slope stabilized.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Has been installed. No actions needed.
9	Riprap Apron into Sediment Pond #1	No	No	Has been installed. No actions needed.
10	Riprap Apron into Sediment Pond #2	No	No	Has been installed. No actions needed.
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	Yes	No	Riprap swale is being installed as construction continues.
13	Phase 2 Surface Swale	Yes	No	Gordon has fixed surface swale. Grass growth beginning.
14	Phase 3 Surface Swale (1 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed.
15	Phase 3 Surface Swale (2 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed.
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	Yes	Yes	Riprap has been installed. Sediment accumulation at bottom of downspout.
19	Phase 3 Downspout (2 of 3)	Yes	No	Riprap has been installed.
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, no riprap installed yet

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	West slope of Phase 3 needs to be stabilized once area has been finalized.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	Temporary stormwater diversions have been installed along south slope of Phase 3 to prevent sediment from going into structures/culverts.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present. Trash pickup is required from liner company.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 2 – Outlet to culvert coming into Sediment Pond #3.



Photo 3 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 4 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 5 – Grass growth over NE corner of Phase 2. Photo taken looking west.



Photo 6 – Grass growth over the north slope of Phase 2. Photo taken looking west.



Photo 7 – Grass growth over SE corner of Phase 2. Photo taken looking northwest.



Photo 8 – Grass growth along slope of access road and east slope of Phase 2. Photo taken looking north.



Photo 9 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking northwest.



Photo 10 – Gordon has fixed the north slope of Phase 2 and reseeded and mulched. Photo taken looking south.



Photo 11 – Gordon has fixed the north slope surface swale of Phase 2 and reseeded and mulched and added ECM. Photo taken looking east.



Photo 12 – West slope of Phase 3 surface swale. No ECM installed yet. Erosion occurring. Photo taken looking southwest.



Photo 13 – West slope of Phase 3 surface swale. No ECM installed yet. Erosion occurring. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Friday September 15, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	51-67 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	4 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 96%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting		8	4 operators, 3 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
0555-1630	Trevor Michaud	SME	Construction Oversight Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(1) CAT TH62 lull
-(2) Volvo A30G haul truck
-(3) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Repair and retrack cover soil on the SW corner of Phase 3.
- Apply seed and mulch on the SW corner of Phase 3. Approx. 1.5 acres of mulch applied.
- Continue placing cover soil over geocomposite.
- Approx. 2.5 acre of cover soil at top of Phase 3 to grade.
- Continue installing underdrain piping and drainage sand.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. Riprap apron has been installed. Slope has been stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Slope has been stabilized. Riprap apron has been installed.
- Outlet protection at Sediment Pond #2 is in good condition.
- Inlet to culvert going to Sediment Pond #3 is in good condition.
- Outlet to culvert going to Sediment Pond #3 is in good condition.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2 have been fixed by Gordon.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 has been fixed by Gordon. Some erosion beginning to occur again.
- Phase 2 has good grass growth.
- Gordon has fixed existing roadway between Dolby II and III.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Sediment observed at bottom of west slope downspout of Phase 3.
- Outlet to CB-1i has been finalized with riprap and slope stabilized.

DISTRIBUTION:
1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Has been installed. No actions needed.
9	Riprap Apron into Sediment Pond #1	No	No	Has been installed. No actions needed.
10	Riprap Apron into Sediment Pond #2	No	No	Has been installed. No actions needed.
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	Yes	No	Riprap swale is being installed as construction continues.
13	Phase 2 Surface Swale	Yes	Yes	Gordon has fixed surface swale. Grass growth beginning. Some erosion beginning to occur again.
14	Phase 3 Surface Swale (1 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed.
15	Phase 3 Surface Swale (2 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed.
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	Yes	Yes	Riprap has been installed. Sediment accumulation at bottom of downspout.
19	Phase 3 Downspout (2 of 3)	Yes	No	Riprap has been installed.
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, no riprap installed yet

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	No	N/A
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	Temporary stormwater diversions have been installed along south slope of Phase 3 to prevent sediment from going into structures/culverts.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking east. Hay mulch present and riprap installed in perimeter ditch.



Photo 2 – Outlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast. Slope has been stabilized and riprap apron installed.



Photo 3 – Outlet protection for Sediment Pond #1. Photo taken looking south. No sediment observed leaving the pond.



Photo 4 – Perimeter ditch around CB-2C has had riprap installed. Photo taken looking east.



Photo 5 – West slope of Phase 3 downspout has riprap installed. Sediment accumulation at end of downspout. Photo taken looking east.



Photo 6 – Hay mulch over cover soil on west slope of Phase 3. Photo taken looking west.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.



Photo 10 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 12 – Phase 1/2 downspout. Photo taken looking south.



Photo 13 – Grass growth over NE corner of Phase 2. Photo taken looking south.



Photo 14 – Grass growth over the north slope of Phase 2. Photo taken looking west.



Photo 15 – Grass growth over SE corner of Phase 2. Photo taken looking northwest.



Photo 16 – Grass growth along slope of access road and east slope of Phase 2. Photo taken looking northwest.



Photo 17 – Sediment accumulation at outlet to culvert coming into Phase 2 perimeter ditch. Photo taken looking northwest.



Photo 18 – Gordon has fixed the north slope of Phase 2 and reseeded and mulched. Photo taken looking south.



Photo 19 – Gordon has fixed the north slope surface swale of Phase 2 and reseeded and mulched and added ECM. Photo taken looking east.



Photo 20 – Gordon has finalized the SW corner downspout of Phase 3. Photo taken looking northeast.



Photo 21 – West slope of Phase 3 surface swale. No ECM installed yet. Some erosion occurring. Photo taken looking south.



Photo 22 – West slope of Phase 3 surface swale. No ECM installed yet. Some erosion occurring. Photo taken looking north.



Photo 23 – Outlet to CB-1i installed with riprap. Slopes have been stabilized. Photo taken looking east.



Photo 24 – Outlet to CB-2c installed with riprap apron. Slopes have been stabilized. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Tuesday September 19, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Rain
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	55-64 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	8 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 97%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	1.1"

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	6	1 foreman (Nick Schmeidlehner), 3 operators, 2 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
0630-1030	Trevor Michaud	SME	Construction Oversight Stormwater Inspection

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(2) Volvo A30G haul truck
-(2) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY'S CONSTRUCTION ACTIVITIES

- N/A

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue backfilling over geocomposite.
- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. Riprap apron has been installed. Slope has been stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Slope has been stabilized. Riprap apron has been installed.
- Outlet protection at Sediment Pond #2 is in good condition.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2 have been fixed by Gordon.
- Erosion rills present on the west slope of Phase 3.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 has been fixed by Gordon. Some erosion continuing to occur.
- Phase 2 has good grass growth.
- Gordon has fixed existing roadway between Dolby II and III.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Sediment observed at bottom of west slope downspout of Phase 3.
- Outlet to CB-1i has been finalized with riprap and slope stabilized.
- West slope Phase 3 surfaces swales need erosion control matting. Erosion and sedimentation occurring.

DISTRIBUTION:

1 SME

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

2 MEBGS
3 MEDEP
4 Gordon Contracting

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Has been installed. No actions needed.
9	Riprap Apron into Sediment Pond #1	No	No	Has been installed. No actions needed.
10	Riprap Apron into Sediment Pond #2	No	No	Has been installed. No actions needed.
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	Yes	No	Riprap swale is being installed as construction continues.
13	Phase 2 Surface Swale	Yes	Yes	Gordon has fixed surface swale. Grass growth beginning. Some erosion beginning to occur again.
14	Phase 3 Surface Swale (1 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed. Repair as needed.
15	Phase 3 Surface Swale (2 of 4)	Yes	Yes	Surface swale needs erosion control matting and sediment accumulation removed. Repair as needed.
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	Yes	Yes	Riprap has been installed. Sediment accumulation at bottom of downspout.
19	Phase 3 Downspout (2 of 3)	Yes	No	Riprap has been installed.
20	Phase 3 Downspout (3 of 3)	No	No	Part of Phase 3 construction, no riprap installed yet.

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	No	N/A
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	Temporary stormwater diversions have been installed along south slope of Phase 3 to prevent sediment from going into structures/culverts.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking east. Hay mulch present and riprap installed in perimeter ditch.



Photo 2 – Outlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast. Slope has been stabilized and riprap apron installed.



Photo 3 – Outlet protection for Sediment Pond #1. Photo taken looking south. No sediment observed leaving the pond.



Photo 4 – Perimeter ditch around CB-2C has had riprap installed. Photo taken looking east.



Photo 5 – West slope of Phase 3 downspout has riprap installed. Sediment accumulation at end of downspout. Photo taken looking east.



Photo 6 – Hay mulch over cover soil on west slope of Phase 3. Photo taken looking east.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.

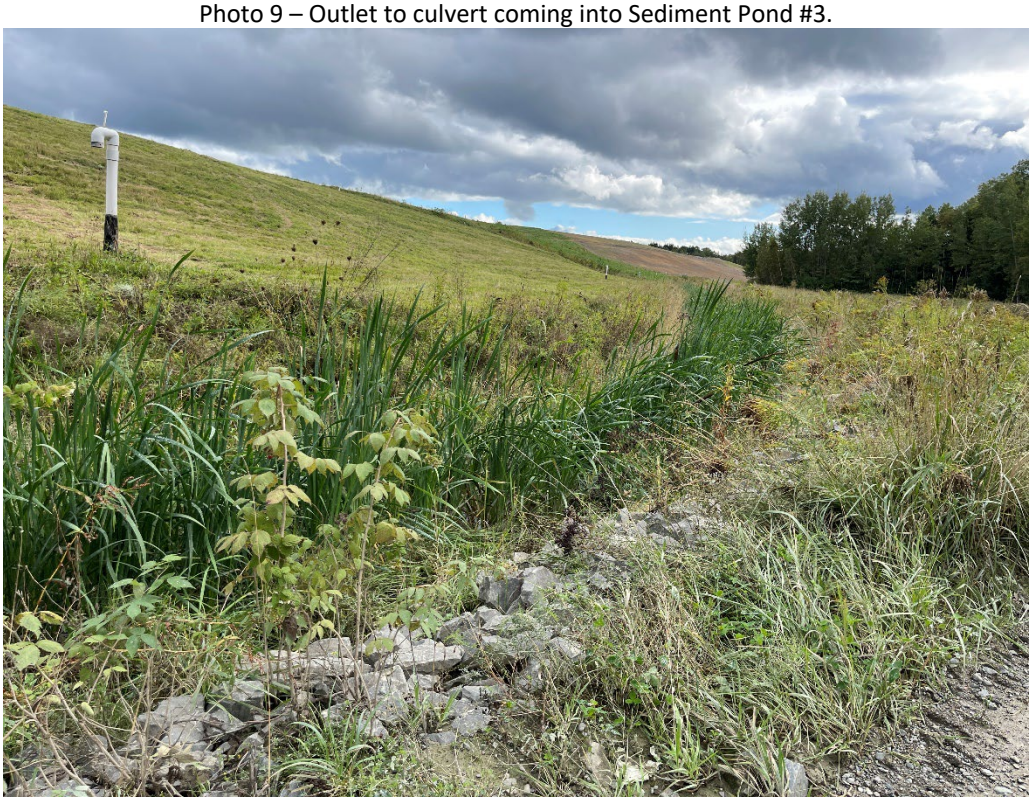

Photo 10 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 12 – Phase 1/2 downspout. Photo taken looking south.



Photo 13 – Grass growth over NE corner of Phase 2. Photo taken looking south.



Photo 14 – Grass growth over the north slope of Phase 2. Photo taken looking southwest.



Photo 15 – Grass growth over SE corner of Phase 2. Photo taken looking northwest.



Photo 16 – Gordon has fixed the north slope of Phase 2 and reseeded and mulched. Photo taken looking south.



Photo 17 – Gordon has fixed the north slope surface swale of Phase 2 and reseeded and mulched and added ECM. Erosion beginning to occur again. Photo taken looking east.



Photo 18 – West slope of Phase 3 surface swale. No ECM installed yet. Erosion occurring. Photo taken looking north.



Photo 19 – West slope of Phase 3 surface swale. No ECM installed yet. Some erosion occurring. Photo taken looking north.



Photo 20 – Outlet to CB-1i installed with riprap. Slopes have been stabilized. Photo taken looking east.



Photo 21 – Outlet to CB-2c installed with riprap apron. Slopes have been stabilized. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Friday September 29, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Mostly Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	42-69 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	1 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 98%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	10	1 foreman (Nick Schmeidlehner), 3 operators, 5 laborers, 2 truck driver

VISITOR

Time	Name	Representing	Remarks
0545-1400	Trevor Michaud	SME	Construction Oversight Stormwater Inspection
0700-1400	-	Emery Lee	Hired truck

EQUIPMENT

-water truck
-Komatsu D61 PX dozer
-Komatsu D71 PX dozer
-Komatsu D51 PX dozer
-(2) Volvo A30G haul truck
-(2) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator
-rear dump triaxle

TODAY’S CONSTRUCTION ACTIVITIES

- Finalized placing cover soil over geocomposite. Approx. 0.2 acres installed.
- Finalized installing underdrain piping and drainage sand.
- Continue adding aggregate base and riprap to south slope downspout.

ANTICIPATED CONSTRUCTION ACTIVITIES

- Continue to install riprap in perimeter ditch and south slope downspout.
- Install remaining surface swales.
- Build up existing roadway.
- Apply mulch and hydroseed.
-Construct soil diversion berm in perimeter ditch.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. Riprap apron has been installed. Slope has been stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Slope has been stabilized. Riprap apron has been installed.
- Outlet protection at Sediment Pond #2 is in good condition.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2 have been fixed by Gordon.
- Erosion rills present on the west slope of Phase 3.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 has been fixed by Gordon.
- Phase 2 has good grass growth.
- Gordon has fixed existing roadway between Dolby II and III.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Outlet to CB-1i has been finalized with riprap and slope stabilized.
- West slope Phase 3 surfaces swales have been fixed and erosion control matting has been installed.
- Southwest corner has been stabilized with hay mulch and seeded.

DISTRIBUTION:
1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Has been installed. No actions needed.
9	Riprap Apron into Sediment Pond #1	No	No	Has been installed. No actions needed.
10	Riprap Apron into Sediment Pond #2	No	No	Has been installed. No actions needed.
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	Yes	No	Riprap swale is being installed as construction continues.
13	Phase 2 Surface Swale	Yes	Yes	Gordon has fixed surface swale. Grass growth beginning.
14	Phase 3 Surface Swale (1 of 4)	Yes	No	Surface swale installed. Erosion control matting installed.
15	Phase 3 Surface Swale (2 of 4)	Yes	No	Surface swale installed. Erosion control matting installed.
16	Phase 3 Surface Swale (3 of 4)	No	No	Part of Phase 3 construction, not yet installed
17	Phase 3 Surface Swale (4 of 4)	No	No	Part of Phase 3 construction, not yet installed
18	Phase 3 Downspout (1 of 3)	Yes	Yes	Riprap has been installed.
19	Phase 3 Downspout (2 of 3)	Yes	No	Riprap has been installed.
20	Phase 3 Downspout (3 of 3)	Yes	No	Riprap has been installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	No	N/A
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	All storm drain inlets are properly stabilized with riprap per the approved plans.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	No	Dumpster for construction waste is present.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking west. Hay mulch present and riprap installed in perimeter ditch.



Photo 2 – Outlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast. Slope has been stabilized and riprap apron installed.



Photo 3 – Outlet protection for Sediment Pond #1. Photo taken looking south. No sediment observed leaving the pond.



Photo 4 – Perimeter ditch around CB-2C has had riprap installed. Photo taken looking east.



Photo 5 – West slope of Phase 3 downspout has riprap installed. Sediment accumulation at end of downspout. Photo taken looking east.



Photo 6 – Hay mulch over cover soil on west slope of Phase 3. Photo taken looking east.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.

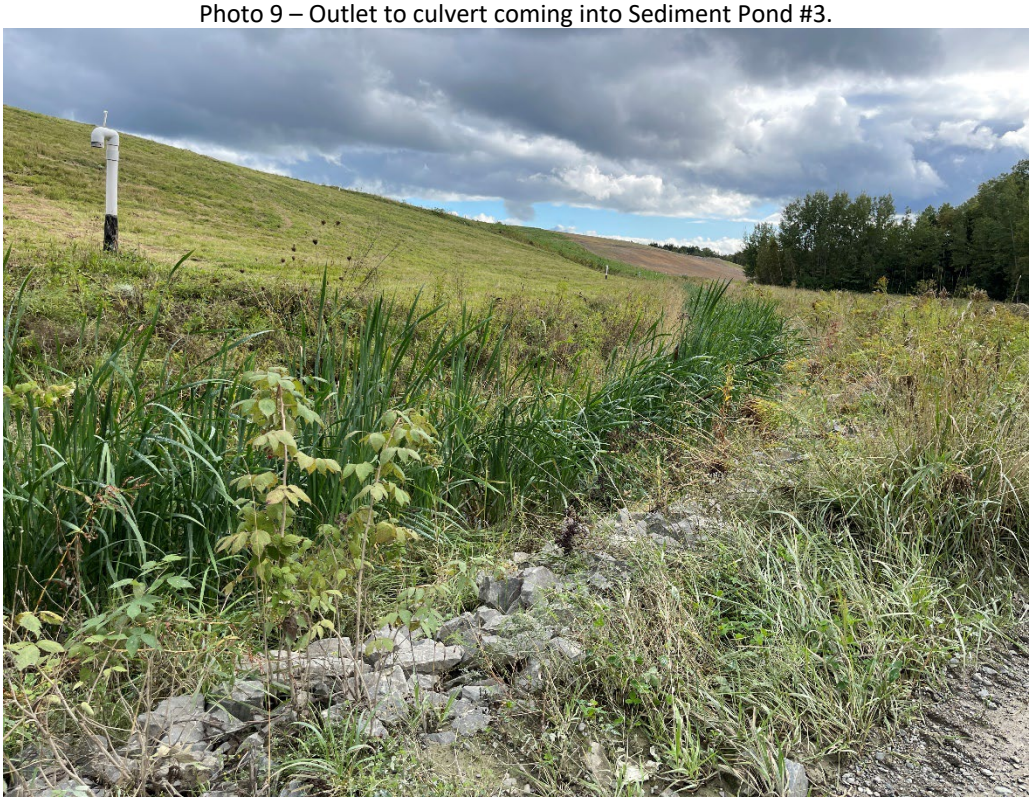

Photo 10 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 12 – Phase 1/2 downspout. Photo taken looking south.



Photo 13 – Grass growth over NE corner of Phase 2. Photo taken looking south.



Photo 14 – Grass growth over the north slope of Phase 2. Photo taken looking southwest.



Photo 15 – Grass growth over SE corner of Phase 2. Photo taken looking northwest.



Photo 16 – Gordon has fixed the north slope of Phase 2 and reseeded and mulched. Photo taken looking south.



Photo 17 – Gordon has fixed the north slope surface swale of Phase 2 and reseeded and mulched and added ECM. Photo taken looking east.



Photo 18 – West slope of Phase 3 surface swale. No ECM installed yet. Erosion occurring. Photo taken looking north.



Photo 19 – Outlet to CB-1i installed with riprap. Slopes have been stabilized. Photo taken looking east.



Photo 20 – Outlet to CB-2c installed with riprap apron. Slopes have been stabilized. Photo taken looking south.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Thursday October 5, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	56-76 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	3 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	High, 99%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	6	1 foreman (Nick Schmeidlehner), 2 operators, 3 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
0600-1830	Trevor Michaud	SME	Construction Oversight
0900-1330	Nick Thompson	SME	Construction meeting
1000-1100	Vera Maheu	MEDEP	Construction meeting
1000-1100	Daniel Emerson	MEDEP	Construction meeting
1000-1100	Sean Dougherty	MEDEP	Construction meeting

EQUIPMENT

-Komatsu D51 PX dozer
-(2) Volvo A30G haul truck
-(2) Bobcat T870 skid steer
-Volvo ECR 355 excavator
-Volvo ECR 145 excavator
-Kubota U50-5 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- Continue placing seed and hay mulch.
- Hydroseeding
- Build up existing roadway

ANTICIPATED CONSTRUCTION ACTIVITIES

- Apply mulch and hydroseed.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. Riprap apron has been installed. Slope has been stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Slope has been stabilized. Riprap apron has been installed.
- Outlet protection at Sediment Pond #2 is in good condition.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Sediment in Phase 1/2 in downspout. Downspout will get cleaned when Gordon goes to fix Phase 2.
- Erosion rills on the north slope and north-east corner of Phase 2 have been fixed by Gordon.
- Erosion rills present on the west slope of Phase 3.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 has been fixed by Gordon.
- Phase 2 has good grass growth.
- Gordon has fixed existing roadway between Dolby II and III.
- Soil filter sock installed around the roadside ditch going to Leachate Pond.
- Culvert going into Phase 2 perimeter ditch is placing sediment into the perimeter ditch. Ditch will get cleaned as soon as possible.
- Outlet to CB-1i has been finalized with riprap and slope stabilized.
- West slope Phase 3 surfaces swales have been fixed and erosion control matting has been installed.
- Southwest corner and south slope has been stabilized with hay mulch and seeded.

DISTRIBUTION:

1 SME

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

2 MEBGS
3 MEDEP
4 Gordon Contracting

Site Specific BMP's

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Has been installed. No actions needed.
9	Riprap Apron into Sediment Pond #1	No	No	Has been installed. No actions needed.
10	Riprap Apron into Sediment Pond #2	No	No	Has been installed. No actions needed.
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	Yes	No	Riprap swale is being installed as construction continues.
13	Phase 2 Surface Swale	Yes	Yes	Gordon has fixed surface swale.
14	Phase 3 Surface Swale (1 of 4)	Yes	No	Surface swale installed. Erosion control matting installed.
15	Phase 3 Surface Swale (2 of 4)	Yes	No	Surface swale installed. Erosion control matting installed.
16	Phase 3 Surface Swale (3 of 4)	No	No	Surface swale installed. Erosion control matting installed.
17	Phase 3 Surface Swale (4 of 4)	No	No	Surface swale installed. Erosion control matting installed.
18	Phase 3 Downspout (1 of 3)	Yes	Yes	Riprap has been installed.
19	Phase 3 Downspout (2 of 3)	Yes	No	Riprap has been installed.
20	Phase 3 Downspout (3 of 3)	Yes	No	Riprap has been installed

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	No	N/A
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	All storm drain inlets are properly stabilized with riprap per the approved plans.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	No	Dumpster for construction waste is present.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Inlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking west. Hay mulch present and riprap installed in perimeter ditch.



Photo 2 – Outlet to culvert going to Sediment Pond #1 at SW corner of Phase 3. Photo taken looking southeast. Slope has been stabilized and riprap apron installed.



Photo 3 – Outlet protection for Sediment Pond #1. Photo taken looking south. No sediment observed leaving the pond.



Photo 4 – Perimeter ditch around CB-2C has had riprap installed. Photo taken looking east.



Photo 5 – West slope of Phase 3 downspout has riprap installed. Sediment accumulation at end of downspout. Photo taken looking east.



Photo 6 – Hay mulch over cover soil on west slope of Phase 3. Photo taken looking east.



Photo 7 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 8 – Inlet to culvert going into Sediment Pond #3. Photo taken looking north.



Photo 9 – Outlet to culvert coming into Sediment Pond #3.

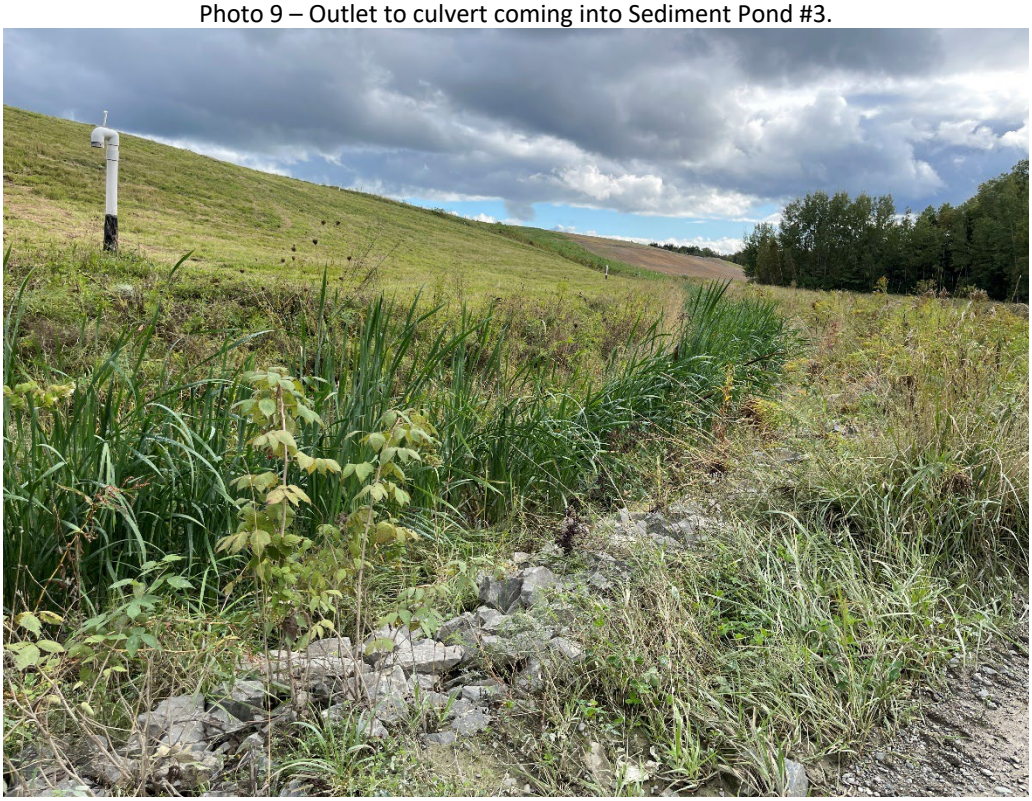

Photo 10 – North-west corner of Phase 1 perimeter ditch. Ditch line needs sediment removed. Photo taken looking south.



Photo 11 – Outlet protection for Sediment Pond #3. Photo taken looking west.



Photo 12 – Phase 1/2 downspout. Photo taken looking south.



Photo 13 – Grass growth over NE corner of Phase 2. Photo taken looking south.



Photo 14 – Grass growth over the north slope of Phase 2. Photo taken looking southwest.



Photo 15 – Grass growth over SE corner of Phase 2. Photo taken looking northwest.



Photo 16 – Gordon has fixed the north slope of Phase 2 and reseeded and mulched. Photo taken looking south.



Photo 17 – Gordon has fixed the north slope surface swale of Phase 2 and reseeded and mulched and added ECM. Photo taken looking east.



Photo 18 – West slope of Phase 3 surface swale. No ECM installed yet. Erosion occurring. Photo taken looking north.



Photo 19 – Outlet to CB-1i installed with riprap. Slopes have been stabilized. Photo taken looking east.



Photo 20 – Outlet to CB-2c installed with riprap apron. Slopes have been stabilized. Photo taken looking south.



Photo 21 – Erosion control matting installed over surface swales. Photo taken looking southwest.



Photo 22 – South slope stabilized with hay mulch and seeded. Photo taken looking north.

SEVEE & MAHER ENGINEERS, INC

STORMWATER INSPECTION REPORT

Date: Tuesday October 10, 2023

PROJECT:	Dolby Phase 3 Cover Upgrade	**WEATHER:**	Partly Cloudy
CLIENT:	Maine Department of Administrative and Financial Services	**TEMP:**	40-58 degrees F
CONTRACTOR:	Gordon Contracting	**WIND:**	7 mph
PROJECT MANAGER:	Nicholas Thompson	**HUMIDITY:**	Low, 60%
PROJECT LOCATION:	East Millinocket, Maine	**PRECIPITATION:**	0”

FIELD FORCE

Name of Contractor	Supervisor	Non-Supervisor	Remarks
Gordon Contracting	1	5	1 foreman (Nick Schmeidlehner), 1 operator, 3 laborers, 1 truck driver

VISITOR

Time	Name	Representing	Remarks
1215-1445	Trevor Michaud	SME	Stormwater Inspection

EQUIPMENT

-Komatsu D51 PX dozer
-(1) Bobcat T870 skid steer
-Volvo ECR 145 excavator

TODAY’S CONSTRUCTION ACTIVITIES

- General site cleanup

ANTICIPATED CONSTRUCTION ACTIVITIES

- Fix rain damage on Phase 3 that occurred on 10/7 and 10/8/23.

QUALITY ASSURANCE

- New culvert to Sediment Pond #1 has been installed at SW corner of Phase 3. Riprap apron has been installed. Slope has been stabilized.
- Outlet protection at Sediment Pond #1 is in good condition. No sediment leaving the pond.
- Outlet to culvert leaving Sediment Pond #1 is in good condition. No observable sediment leaving pond.
- CB-2C has been installed. No sediment observed around the structure. Riprap has been installed in the perimeter ditch.
- Outlet of culvert going to Sediment Pond #2 has been replaced. Slope has some erosion occurring. Riprap apron has been installed.
- Outlet protection at Sediment Pond #2 is in good condition.
- Inlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet to culvert going to Sediment Pond #3 is in good condition. No sediment observed.
- Outlet protection for Sediment Pond #3 is in good condition.
- Outlet to culvert leaving Sediment Pond #3 is in good condition. No sediment coming out of pipe.
- Stone check dams along Phase 2 north slope are in good condition.
- Silt fence has been installed along the perimeter of all stockpiles.
- Surface swale along north slope of Phase 2 has been fixed by Gordon.
- Phase 2 has good grass growth.
- Gordon has fixed existing roadway between Dolby II and III.
- Outlet to CB-1i has been finalized with riprap and slope stabilized.
- Erosion occurring along edge of the west and south slope surface swales.
- All slopes have been stabilized with hay mulch and seeded.
- Localized areas of unstable soil on Phase 3. Gordon is aware of the issue and will resolve as quickly as possible.

DISTRIBUTION:

1 SME
2 MEBGS
3 MEDEP
4 Gordon Contracting

BY: **Trevor Michaud, E.I.** **TITLE:** **Project Engineer**

Site Specific BMP’s

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Sediment Pond #1 Outlet Protection	Yes	No	Outlet protection is in good condition
2	Sediment Pond #2 Outlet Protection	Yes	No	Outlet protection is in good condition
3	Sediment Pond #3 Outlet Protection	Yes	No	Outlet protection is in good condition
4	Stone Check Dams along Phase 2 North	Yes	No	Stone check dams are in good condition
5	Silt Fence around Northern Stockpile	Yes	No	Silt fence is in good condition
6	Silt Fence around Southern Stockpile	Yes	No	Silt fence is in good condition
7	Silt Fence around Sand Stockpile	Yes	No	Silt fence is in good condition
8	Riprap Swale into Sediment Pond #1	No	No	Has been installed. No actions needed.
9	Riprap Apron into Sediment Pond #1	No	No	Has been installed. No actions needed.
10	Riprap Apron into Sediment Pond #2	No	No	Has been installed. No actions needed.
11	Phase 2 Riprap Swale	Yes	Yes	Riprap swale has been installed. Some areas have sediment build-up occurring.
12	Phase 3 Riprap Swale	Yes	No	Riprap swale has been installed. No actions needed.
13	Phase 2 Surface Swale	Yes	No	Gordon has fixed surface swale. Grass is beginning to grow.
14	Phase 3 Surface Swale (1 of 4)	Yes	Yes	End of surface swale needs to be repaired.
15	Phase 3 Surface Swale (2 of 4)	Yes	Yes	Some erosion along edge of swale. Smooth area and re-apply mulch.
16	Phase 3 Surface Swale (3 of 4)	Yes	No	Surface swale between the southwest corner and south slope downspout is in good condition.
17	Phase 3 Surface Swale (4 of 4)	Yes	Yes	Erosion along edge of swale. Smooth area and re-apply mulch.
18	Phase 3 Downspout (1 of 3)	Yes	No	Riprap has been installed.
19	Phase 3 Downspout (2 of 3)	Yes	No	Riprap has been installed.
20	Phase 3 Downspout (3 of 3)	Yes	No	Riprap has been installed.

Overall Site Issues:

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes	Yes	Remaining stockpiles need to be mulched for overwinter protection. Areas of the Phase 3 slope that are bare ground need to have hay mulch applied.
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes	No	All stockpiles have silt fence installed. All sediment ponds have outlet protections.
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	Yes	No	Gordon has fixed any existing issues with the erosion control installed.
4	Are discharge points and receiving waters free of any sediment deposits?	Yes	No	No observable sediment accumulation at any of the outlets.
5	Are storm drain inlets properly protected?	Yes	No	All storm drain inlets are properly stabilized with riprap per the approved plans.
6	Is the construction exit preventing sediment from being tracked into the street?	Yes	No	The construction entrance is paved.
7	Is trash/litter from work areas collected and placed in covered dumpsters?	Yes	Yes	Dumpster for construction waste is present.
8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	Yes	No	No fuel spills or other deleterious material present onsite.
9	Are materials that are potential stormwater contaminants stored inside or under cover?	Yes	No	N/A
10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	Yes	No	N/A



Photo 1 – Perimeter ditch around CB-2C has had riprap installed. Photo taken looking east.



Photo 2 – West slope of Phase 3 downspout has riprap installed. Sediment accumulation at end of downspout. Photo taken looking east.



Photo 3 – Hay mulch over cover soil on west slope of Phase 3. Photo taken looking south.



Photo 4 – Erosion occurring on slope around outlet to CB-2c. Photo taken looking west.



Photo 5 – Outlet protection for Sediment Pond #2. Photo taken looking south.



Photo 6 – Erosion occurring at edge of west slope surface swale. Photo taken looking west.



Photo 7 – Erosion occurring along edge of surface swale at west slope. Photo taken looking north.



Photo 8 – Erosion occurring along edge of surface swale at west slope. Photo taken looking south.



Photo 9 – Unstable soil at edge of west slope downspout. Photo taken looking north.



Photo 10 – Stabilized west slope above surface swales. Photo taken looking southeast.



Photo 11 – Grass growth over west slope below surface swales. Photo taken looking south.



Photo 12 – Stabilized surface swale going into SW corner downspout. Photo taken looking south.



Photo 13 – Riprap transition and SW corner downspout. Photo taken looking south.



Photo 14 – Stabilized slope above surface swale on the SW corner. Photo taken looking east.



Photo 15 – Stabilized slope below surface swale on the SW corner. Photo taken looking west.



Photo 16 – Riprap around CB-1i. Photo taken looking south.



Photo 17 – South slope perimeter ditch. Photo taken looking west.



Photo 18 – Stabilized slope below surface swale on the south slope. Photo taken looking east.



Photo 19 – Existing roadside ditch. Photo taken looking east.



Photo 20 – Outlet to CB-1i installed with riprap. Slopes have been stabilized. Photo taken looking west.



Photo 21 – SW corner downspout. Photo taken looking north.



Photo 22 – Riprap apron and outlet protection for Sediment Pond 1. Photo taken looking south.



Photo 23 – Stabilized west slope. Photo taken looking north.



Photo 24 – Hay mulch applied over the south slope. Photo taken looking northeast.



Photo 25 – Southern stockpile area. Photo taken looking east.



Photo 26 – Phase 2 surface swale. Photo taken looking east.



Photo 27 – Erosion occurring along edge of south slope surface swale. Photo taken looking west.



Photo 28 – Top area of Phase 3 has been mulched and seeded. Photo taken looking west.



Photo 29 – Northern stockpile with no hay mulch. Photo taken looking north.

ATTACHMENT 10

CONTRACT SPECIFICATIONS

SME
SEVEE & MAHER
ENGINEERS

CONSTRUCTION SPECIFICATIONS
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE

Prepared for

STATE OF MAINE
BUREAU OF GENERAL SERVICES
BGS PROJECT 3345

June 2017
(Revised December 2021)

SME
Sevee & Maher Engineers, Inc.

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

4 Blanchard Road, PO Box 85A, Cumberland Center, ME 04021 • Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

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DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

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SPECIFICATIONS

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DIVISION I - GENERAL REQUIREMENTS

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SECTION 01010

SUMMARY OF WORK

1.01 WORK COVERED BY CONTRACT DOCUMENTS: These Contract Documents define the requirements of the Dolby Landfill Cover Upgrade – Phases 2 and 3 Project located in East Millinocket, Maine:

Work shall include furnishing all materials, labor, supervision, and performing all operations required to complete the work shown on the Drawings and as described in the specifications contained herein, and as evidently necessary to complete the work. The work shall include construction of landfill cover upgrade for Phase 2 (Northeast corner of Dolby III Landfill) and for Phase 3 (Southwest corner of Dolby III Landfill). This work is planned to be accomplished in two consecutive construction seasons but may be performed all within the first construction season if the contractor chooses to staff the project with multiple crews. A schedule must be provided with the bid outlining which option is chosen.

Work associated with Phase 2 cover upgrade shall include, but not be limited to:

- Construction of necessary erosion control mechanisms shown on the Contract Drawings and as required by MEDEP Best Management Practices and Maine Construction General Permit;
- Modify outlet of existing Sediment Pond #3 and provide additional erosion control measures (i.e., outlet protection), as necessary;
- Removal of existing piezometers and modification to existing catch basins and manholes within the limit of work;
- Perform test pitting as needed and as indicated on the Contract Drawings;
- Perform survey of existing catch basins as indicated on the Contract Drawings;
- Stripping and stockpiling existing cover materials for future use;
- Containment and collection of any impacted surface water resulting from regrading of waste materials;
- Regrading and repositioning of existing waste and cover materials to achieve proper base grades, including providing necessary labor and equipment for odor control;
- Pressure-jet clean leachate transport lines and catch basins within project area on south and east ends of Dolby III, including piping between CB #32, 33, 34, 35, 18, 19, 20, 21, and 22;
- Placement of final cover materials (soils, geosynthetics, and piping) as shown on the Contract Drawings;
- Seeding, fertilizing, and mulching the exterior of the final cover, stockpiles, pipe trenches, and all areas disturbed during construction in accordance with specifications contained herein and MEDEP Best Management Practices; and
- Provide as-built survey of Phases 2 construction.

Work associated with Phase 3 of the project shall include, but not be limited to:

- Construction of necessary erosion control mechanisms shown on the Contract Drawings and as required by MEDEP Best Management Practices and Maine Construction General Permit;
- Maintain and replace (as necessary) outlet protection at existing sediment ponds;
- Modify outlet of existing Sediment Ponds #1 and #2 and provide additional erosion control measures (i.e., outlet protection), as necessary;

- Removal of existing piezometers and modification to existing manholes within the limit of work;
- Stripping and stockpiling existing cover materials for future use;
- Containment and collection of any impacted surface water resulting from regrading of waste materials;
- Regrading and repositioning of existing waste and cover materials to achieve proper base grades, including providing necessary labor and equipment for odor control;
- Modifications to existing access road between leachate pond and Dolby III Landfill;
- Pressure-jet clean leachate transport lines and catch basins within project area on south and east ends of Dolby III, including piping between CB #2, 3, 4, 5, 6, 6A, 7, 8, 9, 10, 13, 17, 25, 24, and 23;
- Placement of final cover materials (soils, geosynthetics, and piping) as shown on the Contract Drawings;
- Seeding, fertilizing, and mulching the exterior of the final cover, perimeter berm, stockpiles, pipe trenches, and all areas disturbed during construction in accordance with specifications contained herein and MEDEP Best Management Practices; and
- Provide as-built survey of Phase 3 construction.

1.02 SCHEDULE OF WORK: The Contractor shall be required to submit a written document detailing the work sequence and schedule planned for the construction of the Project. As part of the Schedule of Work, the Contractor shall provide a leachate management plan and emergency stormwater management measures that will be implemented, as necessary, during the duration of the project. The schedule shall be submitted with the bid form at the bid due date. The schedule of work shall be in accordance with the Contract Documents. The schedule of work will be reviewed and approved by the Engineer and Owner as a condition of award. The schedule of work shall be in accordance with the Contract Documents and shall be as follows:

Phase 2:

- Mobilize on or after May 1, 2022
- Start construction on or after May 8, 2022;
- Substantial completion on or before September 1, 2022; and
- Final completion September 15, 2022.

Phase 3:

- Mobilize on or after May 1, 2023;
- Start construction on or after May 8, 2023;
- Substantial completion on or before September 1, 2023; and
- Final completion September 15, 2023.

The Contractor shall provide labor and equipment rate sheets for additional work. Add/Deduct work associated with the contract will be subject negotiation of fair and reasonable rates for contract costs.

A. The sequence of work for Phase 2 will be as follows:
    - Mobilization;
    - Install erosion control measures as shown on Contract Drawings;

- Install Sediment Pond #3 outlet protection and repair/replace Sediment Pond #3 outlet protection (as necessary);
- Prepare laydown areas and stockpile areas;
- Pressure-jet clean leachate transport lines designated to be cleaned;
- Perform test pitting as indicated on the Contract Drawings and report results to the Engineer;
- Survey catch basins as indicated on the Contract Drawings and report to Engineer;
- Grub and remove existing cover from the limits of work and stockpile cover materials for reuse (note removal of existing cover shall be done in 5-acre increments to limit exposure of the site to the elements or proper steps taken to contain leachate in the area if more than 5 acres is exposed);
- Establish proposed base grades as shown on the Contract Drawings;
- Remove existing piezometers and modify existing manholes and catch basins as shown on the Contract Drawings;
- Place gas collection sand and pipe as shown on the Contract Drawings;
- Install 40-mil HDPE liner;
- Install drainage geocomposite and cover drainage pipe;
- Place cover soil;
- Place topsoil;
- Seed, fertilize, lime, and mulch disturbed areas as soon as possible to minimize erosion and sedimentation;
- Perform as-built survey of site; and
- Demobilize.

B. The sequence of work for Phase 3 will be as follows:

- Mobilization;
- Install erosion control measures as shown on Contract Drawings;
- Repair/replace Sediment Ponds #1 and #2 outlet protection;
- Prepare laydown areas and stockpile areas;
- Grub and remove existing cover from the limits of work and stockpile cover materials for reuse (note removal of existing cover shall be done in 5-acre increments to limit exposure of the site to the elements or proper steps taken to contain leachate in the area if more than 5 acres is exposed);
- Establish proposed base grades as shown on the Contract Drawings;
- Remove existing piezometers and modify existing manholes as shown on the Contract Drawings;
- Place gas collection sand and pipe as shown on the Contract Drawings;
- Install 40-mil HDPE liner;
- Install drainage geocomposite and cover drainage pipe;
- Place cover soil;
- Place topsoil;

- Seed, fertilize, lime, and mulch disturbed areas as soon as possible to minimize erosion and sedimentation;
- Perform as-built survey of site; and
- Demobilize.

1.03 CONTRACTOR USE OF PREMISES:

A. It will be the responsibility of the Contractor to coordinate with the Owner with regard to use of premises, including haul routes and vehicular access. All details must be established prior to the preconstruction conference and shall be presented to the Engineer at or before the preconstruction conference.

B. The Contractor shall coordinate with the Owner's Representative prior to excavation or grading of in-place of landfill waste to assure proper odor control measures are in-place.

C. The Contractor and its subcontractors shall abide by all safety requirements associated with working at an active solid waste landfill facility (i.e., risk of worker exposure to landfill gases, leachate, solid waste) including the following:

- Comply with all Occupational Safety and Health Administration (OSHA) Regulations.
- Comply with all State of Maine Department of Labor safety requirements, including safety training, use of hardhat, safety glasses, and fluorescent safety vest at all times.
- Follow confined space entry rules established by OSHA for the site, including, but not limited to, manholes, catch basins, pump stations, test pits, trenches, etc.
- All equipment used on-site shall be equipped with back-up warning lights and alarms.

1.04 PROTECTION OF PROJECT WHILE UNDER CONSTRUCTION:

A. The Contractor will be responsible for providing complete protection of the Contract limits of the Project during construction from any acts of nature or man, such as, but not limited to, floods, earth slides, and slope failures. Damage to the Project caused by such acts will not be sufficient cause to increase Contract costs to the Owner.

B. The Contractor shall take every precaution to assure that no siltation of stormwater drainage courses occur when working in those areas.

1.05 COMPLIANCE WITH ENVIRONMENTAL PERMITS:

A. The Contractor shall comply fully with conditions of the site's MEDEP Solid Waste Order and abide by the Contractor requirements of the Maine Construction General Permit provisions related to stormwater management and sedimentation control.

END OF SECTION

SECTION 01012

HEALTH AND SAFETY

PART 1 - GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE: All Division 2 work specified in this Contract apply to the work specified under this Contract.

1.02 DESCRIPTION: This work shall consist of the preparation and submittal of a Health and Safety Plan, prior to the commencement of construction.

PART 2 - EXECUTION

2.01 HEALTH AND SAFETY PLAN (HASP) REQUIREMENTS:

A. The HASP shall conform to guidance contained in "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities" NIOSH/OSHA/USCG/EPA, October 1985 and 29 CFR 1910 (FR March 6, 1989).

B. The HASP will include, but not be limited to, the following:

1. Identification of potential hazards;
2. Identification of a site Health and Safety Officer;
3. Identification of the support zone, decontamination zone, and exclusion zone at the site;
4. Air monitoring activities;
5. Medical surveillance records;
6. Personnel protective equipment requirements; and,
7. Emergency and contingency planning.

PART 3 - WORK PROCEDURES:

A. All work involving excavation below grade or otherwise involving a risk of worker exposure to landfill gases, leachate, or solid waste shall be performed in accordance with applicable Occupational Safety and Health Administration (OSHA) regulations, U.S.EPA Health and Safety Regulations, and the Contractor's site Health and Safety Plan.

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

1.01 RELATED DOCUMENTS: Drawings, General Conditions of the Contract including General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this Section.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

A. The Contractor shall furnish all labor, materials, tools, equipment, and supervision necessary for complete installation of the Work covered by the Contract Documents. This Work shall include all site work, drainage structures, and pipe installations, alterations and adjustments, site restoration, and general construction as necessary to complete the work.

B. Miscellaneous work items necessary to satisfactorily complete the project; and, for which no separate payment item is included in the Contract item, shall not be measured and paid for separately, but shall be considered as incidental to the Contract bid item.

C. The Contractor shall acquaint himself with all work associated with each payment item and shall have no claim for his unfamiliarity with the requirement of various items.

1.03 BASIS OF MEASUREMENT AND PAYMENT

Item – Dolby Landfill Cover Upgrade – Phases 2 and 3

Payment for the construction of the Dolby Landfill Cover Upgrade – Phases 2 and 3 Project as shown on the Contract Drawings, and miscellaneous work items described below shall include all equipment, labor, tools, and materials necessary for successful completion of the work. The work includes, but is not limited to, the installation of erosion control measures as required, placement of final cover system, seeding, fertilizing, mulching, installation of HDPE pipes, modifications to existing access road, managing stormwater to prevent off-site sedimentation issues and managing impacted surface water/ leachate during construction. Payment shall be made on the basis of the percentage complete of the Contract lump sum price.

1.04 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

The following section describes the method of measurement and payment for work which may be necessary in addition to the work associated with the construction of the base bid item described herein and shown on the Contract Drawings. If additional work in required, it shall be subject to negotiation of fair and reasonable rates for contract costs. The additional work items shall only be undertaken upon written approval of the Owner or the Owner's Representative, and do not include any work items associated with or undertaken as a result of the construction of the base bid item.

A. Grubbing: Measurement of additional clearing and grubbing will be the actual additional acreage grubbed as measured by horizontal dimensions determined by a field survey. Payment for the accepted quantities of additional grubbing will be at the unit price per acre.

B. Test Pit Excavation: Measurement of additional test pit excavation will be based on a unit price per test pit, including excavation to a 10 – foot depth and backfill.

C. Common Excavation: Measurement of additional quantities of common excavation will be by the number of cubic yards measured in its original position by cross-sectioning the area prior to and after excavation of the material. Volumes will be computed by the average end area method or by other methods generally recognized as conforming to good engineering practice. Payment for the accepted quantities of additional common excavation will be at the unit price per cubic yard, including removal from the site and disposal, if necessary.

D. Common Borrow Material: Measurement of additional common borrow material to be used in the construction of the filled area will be the number of cubic yards, in-place, based upon the length, width, and depth of the filled area. Payment for the accepted quantities of common borrow material will be at the unit price per cubic yard.

E. Excavation of Unsuitable Material: Measurement of additional excavation of unsuitable material will be by the number of cubic yards measured in its original position by cross-sectioning the area prior to and after excavation of the unsuitable material. Volumes will be computed by the average end area method or by other methods generally recognized as conforming to good engineering practice. Payment for the accepted quantities of additional excavation of unsuitable material will be at the unit price per cubic yard, including removal from the site and disposal, if necessary.

F. Cover Soil (Till): Measurement of additional cover soil to be used will be by the number of cubic yards, in-place, based upon the length, width, and designed depth of the cover material. Payment for the accepted quantities of additional cover material will be at the unit price per cubic yard.

G. Granular Material (Aggregate Base and Subbase, Gravel, Drainage Sand, Drainage Stone, and Filter Stone): Measurement of additional granular material to be used will be by the number of cubic yards, in-place, based upon the length, width, and depth of the granular material. Payment for the accepted quantities of additional granular material will be at the unit price per cubic yard.

H. Seeding: Measurement of the quantity of additional seeding will be based on field survey upon establishment of a satisfactory vegetative cover. Additional seeding does not include seeding of areas disturbed as a result of the construction of the base bid item. Seeding includes soil preparation, fertilizer, lime, seed, and mulch. Payment for accepted quantities of additional seeding will be based upon the price per unit (1,000 sq. ft.).

I. Topsoil: If additional topsoil from off-site sources is required, the quantity shall be based on field measurement in-place area at the designed thickness. Payment for the accepted quantities of additional topsoil will be at the unit price per cubic yard.

J. Siltation Fence: Measurement for additional siltation fence shall be by the linear foot of fence installed. The accepted quantity of siltation fence will be paid for at the Contract unit price per linear foot, which shall be full compensation for furnishing, placing, maintaining and removal of the siltation fence.

K. Geomembrane, Drainage Geocomposite, Geotextiles: Measurement for additional geosynthetic products shall be by the square foot covered. The accepted quantity will be paid for at the Contract unit price per square foot, which shall be full compensation for furnishing, placing, anchoring, and maintaining. The accepted quantity will not include overlap or waste.

L. Pipe: Measurement for additional piping shall be by the linear foot installed. The acceptable quantity of pipe will be paid for at the Contract unit price per linear foot, which shall be full compensation for furnishing and installing additional piping, including fittings, geotextiles, and bedding materials.

M. Riprap: Measurement for additional quantities of riprap shall be the number of cubic yards, in-place, based upon the surface area and depth of the riprap. Payment for the accepted quantities of additional riprap will be at the unit price per cubic yard. Aggregate subbase gravel and geotextile material shall be installed under riprap as shown on the Contract Drawings. The purchase and installation of aggregate subbase gravel and geotextile shall be incidental to the riprap pay item and no additional payment will be made.

N. Erosion Control Blankets: Measurement for additional blankets shall be by the square yard covered. The accepted quantity of blankets will be paid for at the Contract unit price per square

yard, which shall be full compensation for furnishing, placing, anchoring, and maintaining. The accepted quantity will not include overlap or waste.

O. Culverts: Measurement for additional culverts shall be by the linear foot installed. The acceptable quantity of pipe will be paid for at the Contract unit price per linear foot, which shall be full compensation for furnishing and installing each culvert.

P. Manholes: Measurement for additional manholes shall be by the vertical foot installed. The acceptable quantity of manholes will be paid for at the Contract unit price per vertical foot, which shall be full compensation for furnishing and installing each manhole.

1.05 BASIS OF MEASUREMENT AND PAYMENTS:

A. Changes in the Contract work which result in reduced work will be measured based on the information shown on the Contract Drawings and described in Article 1.04, above. Measurements and volumes will be computed based on methods generally recognized as conforming to good engineering practice and acceptable to both the Contractor and the Engineer.

B. Costs of any conformance or construction testing that fails to meet the Specifications contained herein, shall be borne by the Contractor. The price shall include the cost of the failing test and any cost to resample the failing material including any shipping and handling. The Engineer, on a monthly basis, will forward a bill with a cost breakdown to the Contractor whom shall apply these in the monthly requisition for payment as a deduct from the Contract work. If the laboratory performing the tests is brought into question by the Contractor or any of his sub-Contractors and it is decided to send any further testing to a new laboratory, the Contractor(s) shall bear the cost of all new testing that will be required to demonstrate conformance of a questionable material. These “new” costs shall not be applied to the monthly requisition for payment as a deduct.

C. The Owner shall not pay for any conformance testing beyond the initial testing required to approve a material for use on this project. The Owner shall also not pay for any conformance tests required on construction materials which are required because the Contractor chooses to supply construction materials from more lots or sources than required to meet the square footage testing frequency contained in the Specifications. This does not relieve the requirement that representative samples of material used on the job be tested from each lot or source. The cost for this additional testing is the responsibility of the Contractor, and will be handled as described in paragraph B.

END OF SECTION

SECTION 01041

PROJECT COORDINATION

1.01 GENERAL:

The Contractor shall be responsible for the following:

A. Coordination of all work under this Contract.

B. Compliance with requirements of all public agencies having jurisdiction over construction.

C. Making arrangements, as necessary, for temporary electricity, heat, water, sanitary facilities, first aid facilities, fire protection and storage of materials and supplies and for the timely delivery to the job site.

D. Assisting the Owner's Representative as required in the review of construction, the testing of materials, and construction layout surveys.

E. Maintaining up to date progress records and as-built drawings.

F. Maintaining the project site in a neat condition.

G. Coordinating with all utilities, and notifying the appropriate owners when work is scheduled in areas that may affect existing utilities.

H. No extra payment shall be made to the Contractor for any delays caused by lack of progress, defective workmanship, or rescheduling of work by other Contractors, subcontractors, or equipment and material suppliers.

I. Coordinating the work of subcontractors, equipment, and material suppliers.

J. Verifying all field dimensions, notifying the Owner's Representative of any discrepancies. No additional payment will be allowed because of differences between field dimensions and those shown on the Drawings.

END OF SECTION

SECTION 01060

APPLICABLE CODES

1.01 GENERAL:

A. Comply with current edition of all local, state, and national codes applicable to the proposed construction including but not limited to the following:

1. OSHA - National Occupational Safety and Health Act
2. BOCA - Building Officials and Code Administrators - "Basic Building Code"
3. Associated General Contractors of America - "Manual of Accident Prevention in Construction"
4. ASTM - American Society for Testing Materials
5. AASHTO - American Association of State Highway and Transportation Officials
6. NFPA - National Fire Prevention Association
7. Maine Department of Environmental Protection, "Maine Erosion and Sediment Control: Best Management Practices"
8. Maine Solid Waste Management Regulations, Chapter 401.
9. Maine Construction General Permit, General Conditions.

END OF SECTION

SECTION 01300

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.01 SECTION INCLUDES:

A. Definitions.

B. Submittal procedures.

C. Construction progress schedules.

D. Proposed product list.

E. Product data.

F. Use of electronic CAD files of Project Drawings.

G. Shop Drawings.

H. Samples.

I. Other submittals.

J. Test reports.

K. Certificates.

L. Manufacturer's instructions.

M. Contractor review.

N. Architect/Engineer review.

1.02 DEFINITIONS:

A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action.

B. Informational Submittals: Written and graphic information and physical Samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

1.03 SUBMITTAL PROCEDURES:

A. Transmit each submittal electronically to the Engineer (Matt Muzzy, DolbyPhase2@smemaine.com) on an Engineer-accepted form.

B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.

C. Identify: Project, Contractor, Subcontractor and supplier, pertinent Drawing and detail number(s), and Specification Section number appropriate to submittal.

D. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.

E. Schedule submittals to expedite Project, and deliver to Engineer. Coordinate submission of related items. The Contractor may be obligated to provide submittals as dictated in the Contract between the Owner and Contractor.

F. For each submittal for review, allow seven (7) days excluding delivery time to and from Contractor.

G. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.

H. Allow space on submittals for Contractor and Engineer review stamps.

I. When revised for resubmission, identify changes made since previous submission.

J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.

K. Submittals not requested will not be recognized nor processed.

L. Incomplete Submittals: Engineer will not review incomplete submittals. Complete submittals for each item are required. Delays resulting from incomplete submittals are not the responsibility of Engineer.

1.04 CONSTRUCTION PROGRESS SCHEDULES:

A. Contractor shall prepare and submit detailed progress schedules, schedule of values and shop drawing and sample submittal schedules to the Engineer for approval in accordance with the General Conditions. The schedule shall be in bar graph from showing material delivery schedules and starting and completion dates for all phases of construction.

B. If, in the opinion of the Engineer, the Contractor falls behind the progress schedule, the contractor shall take such steps as may be necessary to improve his progress, which may require him to increase the number of shifts, and/or overtime operations, days of work, and/or the amount of construction planned, and to submit for approval such supplementary schedule or schedules as necessary to demonstrate the manner in which the agreed rate to progress will be regained, all without additional cost to the Owner.

1.05 PROPOSED PRODUCT LIST:

A. Within 15 days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

B. For products specified only by reference standards, indicate manufacturer, trade name, model or catalog designation, and reference standards.

1.06 PRODUCT DATA:

A. Product Data: Action Submittal: Submit to Engineer for review for assessing conformance with information given and design concept expressed in Contract Documents.

B. Submit electronic submittals via email as PDF electronic files to Matt Muzzy by email at DolbyPhase2@smemaine.com.

C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

1.07 ELECTRONIC CAD FILES OF PROJECT DRAWINGS:

A. Electronic CAD Files of Project Drawings: May only be used to expedite production of Shop Drawings for the Project. Use for other Projects or purposes is not allowed.

B. Electronic CAD Files of Project Drawings: Distributed only under the following conditions:

1. Use of files is solely at receiver's risk. Engineer does not warrant accuracy of files. Receiving files in electronic form does not relieve receiver of responsibilities for measurements, dimensions, and quantities set forth in Contract Documents. In the event of ambiguity, discrepancy, or conflict between information on electronic media and that in Contract Documents, notify Engineer of discrepancy and use information in hard copy Drawings and Specifications.
2. CAD files do not necessarily represent the latest Contract Documents, existing conditions, and as-built conditions. Receiver is responsible for determining and complying with these conditions and for incorporating addenda and modifications.
3. User is responsible for removing information not normally provided on Shop Drawings and removing references to Contract Documents. Shop Drawings submitted with information associated with other trades or with references to Contract Documents will not be reviewed and will be immediately returned.
4. Receiver shall not hold Engineer responsible for data or file clean-up required to make files usable, nor for error or malfunction in translation, interpretation, or use of this electronic information.
5. Receiver shall understand that even though Engineer has computer virus scanning software to detect presence of computer viruses, there is no guarantee that computer viruses are not present in files or in electronic media.
6. Receiver shall not hold Engineer responsible for such viruses or their consequences, and shall hold Engineer harmless against costs, losses, or damage caused by presence of computer virus in files or media.

1.08 SHOP DRAWINGS:

A. Shop Drawings: Action Submittal: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.

B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

C. When required by individual Specification Sections, provide Shop Drawings signed and sealed by a professional Engineer responsible for designing components shown on Shop Drawings.

1. Include signed and sealed calculations to support design.
2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
3. Make revisions and provide additional information when required by authorities having jurisdiction.

D. Submit electronic submittals via email as PDF electronic files to Matt Muzzy by email at DolbyPhase2@smemaine.com.

1.09 SAMPLES:

A. Samples: Action Submittal: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.

B. Include identification on each Sample, with full Project information.

C. Submit number of Samples specified in individual Specification Sections; Engineer will retain one sample.

D. Reviewed Samples that may be used in the Work are indicated in individual Specification Sections.

E. Samples will not be used for testing purposes unless specifically stated in individual Specification Sections.

1.10 OTHER SUBMITTALS:

A. Informational Submittal: Submit data for Engineer's knowledge as Owner's Representative or for Owner.

B. Submit information for assessing conformance with information given and design concept expressed in Contract Documents.

1.11 TEST REPORTS:

A. Informational Submittal: Submit reports for Engineer's knowledge as Owner's Representative or for Owner.

B. Submit test reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.12 CERTIFICATES:

A. Informational Submittal: Submit certification by manufacturer, installation/application Subcontractor, or Contractor to Engineer, in quantities specified for Product Data.

B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

1.13 MANUFACTURER'S INSTRUCTIONS:

A. Informational Submittal: Submit manufacturer's installation instructions for Engineer's knowledge as Contract administrator or for Owner.

B. Submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, to Engineer in quantities specified for Product Data.

C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.14 CONTRACTOR REVIEW:

A. Review for compliance with Contract Documents and approve submittals before transmitting to Engineer.

B. Contractor: Responsible for:

1. Determination and verification of materials including manufacturer's catalog numbers.
2. Determination and verification of field measurements and field construction criteria.
3. Checking and coordinating information in submittal with requirements of Work and of Contract Documents.
4. Determination of accuracy and completeness of dimensions and quantities.
5. Confirmation and coordination of dimensions and field conditions at Site.
6. Construction means, techniques, sequences, and procedures.
7. Safety precautions.
8. Coordination and performance of Work of all trades.

A. Stamp, sign or initial, and date each submittal to certify compliance with requirements of Contract Documents.

B. Do not fabricate products or begin Work for which submittals are required until approved submittals have been received from Engineer.

1.15 ENGINEER REVIEW:

A. Do not make "mass submittals" to Engineer. "Mass submittals" are defined as six (6) or more submittals or items in one (1) day or 15 or more submittals or items in one week. If "mass submittals" are received, Engineer's review time stated above will be extended as necessary to perform proper review. Engineer will review "mass submittals" based on priority determined by Engineer after consultation with Owner.

B. Informational submittals and other similar data are for Engineer's information, do not require Engineer's responsive action, and will not be reviewed or returned with comment.

C. Submittals made by Contractor that are not required by Contract Documents may be returned without action.

D. Submittal approval does not authorize changes to Contract requirements unless accompanied by Change Order.

E. Owner may withhold monies due to Contractor to cover additional costs beyond the second submittal review.

PRODUCTS - Not Used

EXECUTION - Not Used

END OF SECTION

SECTION 01561

CLEANING

PART 1 - GENERAL

1.01 DESCRIPTION:

A. Related Requirements Specified Elsewhere:

1. Summary of Work: Section 01010
2. Project Coordination: Section 01041
3. Cleaning for Specific Products or Work: Specification Section for that work

B. Maintain premises and public properties free from accumulations of waste, debris, sediment, and rubbish, caused by operations.

C. At completion of work, remove waste materials, rubbish, tools, equipment, machinery, and surplus materials, and clean all sight-exposed surfaces; leave project area clean.

Grubbings can be disposed of on-site within the limits of the landfill. The Contractor must make arrangements to properly dispose of other wastes not acceptable for disposal on-site.

1.02 SAFETY REQUIREMENTS:

A. Conduct cleaning and disposal operations to comply with local, state and federal ordinances and laws, particularly anti-pollution laws.

1. Do not burn rubbish and waste materials on project site.
2. Do not dispose of wastes into streams or waterways.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION:

A. At reasonable intervals during progress of work, clean site, and dispose of waste materials, debris, and rubbish.

B. Provide on-site containers for collection of waste materials, debris, and rubbish.

C. Remove waste materials, debris and rubbish from site and legally dispose of at approved public or private dumping areas off Owner's property.

3.02 FINAL CLEANING:

A. Perform cleaning operations described herein until project is completed.

END OF SECTION

SECTION 01562

DUST CONTROL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: Drawings, general provisions of Contract, and Supplementary General Conditions apply to the work specified under this Section.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Site Preparation: Section 02100

B. Earthwork: Section 02200

1.03 DESCRIPTION: This work shall consist of furnishing all labor, materials, and equipment for applying water for dust control in conformity with the Contract Drawings and as specified herein, or as required by the Owner's Representative.

PART 2 - PRODUCTS

2.01 GENERAL: The water shall not be salt or brackish and shall be free from oil, acid, and injurious alkali. Water shall be obtained from a source near the Landfill.

PART 3 - EXECUTION

3.01 SPRINKLING: Water shall be applied by approved methods as requested by the Owner or the Owner’s Representative. Acceptable equipment may include a tank with gauge equipped pressure pump and a nozzle-equipped spray bar. Water shall be dispersed through the nozzle under a minimum pressure of 20 pounds per square inch, gauge pressure.

3.02 CALCIUM CHLORIDE: DO NOT USE.

3.03 SWEEPING: Roads shall be kept free of soil and ash. Clay, ash, and other materials tracked, spilled and/or deposited on the roadways shall be scraped or swept clean on a daily basis or as required by the Owner’s Representative.

END OF SECTION

SECTION 01570

TRAFFIC CONTROL DEVICES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: Drawings, general provisions of Contract, and Supplementary General Conditions apply to the work specified under this Section.

1.02 DESCRIPTION: This work shall consist of furnishing all labor, materials, and equipment for traffic control devices including: signs, barricades and channelization, lighting, flagmen, and other items necessary to effectively control vehicular and pedestrian traffic through the construction.

PART 2 - PRODUCTS

2.01 Materials used shall meet the requirements of the most current version of the Maine Department of Transportation Standard Specifications for Highways and Bridges.

PART 3 - EXECUTION

3.01 Installation of traffic control devices shall be in accordance with the most current version of the Maine Department of Transportation Standard Specifications for Highways and Bridges.

END OF SECTION

SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES:

A. Products.

B. Transportation and handling.

C. Storage and protection.

D. Product options.

E. Substitutions.

1.02 RELATED SECTIONS AND DOCUMENTS:

A. Instructions to Bidders: Substitute or "Or-Equal" Items.

B. Quality Requirements.

1.03 PRODUCTS:

A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the work. Products may also include existing materials or components required for reuse.

B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.

C. Provide interchangeable components of the same manufacturer, for similar components.

1.04 TRANSPORTATION AND HANDLING:

A. Transport and handle products in accordance with manufacturer's instructions.

B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.05 STORAGE AND PROTECTION:

A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weathertight, climate controlled enclosures.

B. For exterior storage of fabricated products, place on sloped supports, above ground.

C. Provide off-site storage and protection when site does not permit on-site storage or protection.

D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.

E. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

G. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

H. Store materials (i.e., pipe, geotextiles, earthen materials, etc.) at laydown area depicted on the Contract documents or as stipulated by the Owner's Representative.

1.06 PRODUCT OPTIONS:

A. Products Specified by Reference Standards or by Description Only. Any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions. Submit a request for substitution for any manufacturer not named.

1.07 SUBSTITUTIONS:

A. Requests for Substitutions after the bidding period are subject to requirements specified in this section.

B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.

C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.

D. A request constitutes a representation that the Contractor:

1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
2. Will provide the same warranty for the Substitution as for the specified product.
3. Will coordinate installation and make changes to other work which may be required for the work to be complete with no additional cost to Owner.
4. Waives claims for additional costs or time extensions which may subsequently become apparent.

E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

F. Substitution Submittal Procedure:

1. Submit three copies of Request for Substitution for consideration. Limit each request to one proposed substitution.
2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence.
3. The Engineer will notify Contractor, in writing, of decision to accept or reject request.

END OF SECTION

DIVISION II – SITE WORK

Section 02000 Sitework - General

Section 02016 Existing Utilities and Underground Structures

Section 02100 Site Preparation

Section 02200 Earthwork

Section 02220 Erosion Control

Section 02261 Riprap

Section 02450 Pipe Installation

Section 02455 Polyethylene Piping

Section 02456 PVC Pipe and Fittings

Section 02570 Manholes and Catch Basins

Section 02771 Geomembrane Liner 40-mil HDPE

Section 02772 Geotextiles and Drainage Geocomposite

Section 02780 Interface Friction Conformance Testing

Section 02800 Seeding

SECTION 02000

SITEWORK - GENERAL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: Drawings, general provisions of Contract, and supplementary general conditions apply to the work specified under this section.

1.02 DESCRIPTION OF THE WORK: The Contractor shall provide all materials, equipment, and labor, and perform all operations necessary to complete the scope of work, including: erosion control, grading, pipe installation, culvert, seeding, and liming and fertilizing and mulching. The work shall be in accordance with the Specifications herein and shall include, but not necessarily be limited to, the following:

A. Site preparation for final cover system (including laydown areas, material stockpile areas, and topsoil manufacturing area);

B. Earthwork necessary to modify existing access roads;

C. Site dewatering and erosion control during construction;

D. Loaming, seeding, mulching, and landscaping;

E. Erosion control measures as needed to minimize flow of silt and other material from disturbed areas into existing waterways; and,

F. Layout and as-built survey of construction.

1.03 CONSTRUCTION SEQUENCE:

A. To mitigate the impact of site erosion the Contractor shall sequence construction as described in Section 02220, Erosion Control and Section 01010, Summary of Work.

B. The Contractor shall schedule and coordinate his work with all affected utilities, and other contractors as directed by the Owner's Representative.

C. The Contractor shall schedule and coordinate all confined space entry work with the Owner’s Representative.

END OF SECTION

SECTION 02016

EXISTING UTILITIES AND UNDERGROUND STRUCTURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: Drawings, general provisions of Contract, and Supplementary General Conditions apply to the work specified under this Section.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Earthwork: Section 02200

B. Notifications to Owners of Utilities: General Conditions

1.03 DESCRIPTION:

A. The existing utilities shown on the Drawings are shown diagrammatically and it is not to be inferred that the locations shown are precise. The Contractor shall locate and verify the location and invert elevations at all connection points and utilities, as shown on the Contract Drawings. The Contractor shall notify the Engineer of any discrepancies. The Contractor shall be responsible for notifying and obtaining the services of Dig Safe and On-Target to locate existing utilities as necessary.

B. Coordinate with all applicable utility owners prior to excavation in areas where it is reasonable to expect the presence of existing utilities, whether shown on the Drawings or not.

C. The Contractor will be responsible for any and all damage to any existing utilities, caused by his efforts.

D. The Contractor will contact the affected utility as soon as any damage is uncovered.

E. The utility shall make the determination as to who makes the necessary repairs.

F. In areas where existing underground structures are shown or suspected carefully uncover such structures to such extent as to enable the Owner's Representative to determine what adjustments if any need to be made to accommodate the presence or removal of such structure.

END OF SECTION

SECTION 02100

SITE PREPARATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: Drawings, general provisions of Contract, and supplementary general conditions apply to the work specified under this section.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Section 02200 – Earthwork

B. Section 02016 - Existing Utilities and Underground Structures

C. Section 02220 - Erosion Control

1.03 DESCRIPTION OF WORK:

A. Work specified in this section shall consist of furnishing all labor, materials, and equipment to prepare the site for subsequent improvements in conformity with the Contract Drawings, and as specified herein.

B. Site Preparation for each phase shall include, but is not limited to, the following:

1. Placement of erosion control measures.
2. Tree clearing and grubbing.
3. Topsoil stripping and grubbing.
4. Removal and disposal of unsuitable subgrade materials.
5. Pipeline and manhole cleaning at designated locations shown on the plans.
6. Verification of locations and elevations of all facilities to be connected to.
7. Protection of existing utilities, structures, and engineered systems (i.e., liner system, cover system, leachate collection and transport systems).
8. Providing labor and equipment necessary to control odors resulting from waste regrading.

C. Verification of existing utilities locations and elevations:

1. The Contractor shall locate and verify the location and invert elevations at all connection points and utilities, as shown on the Contract Drawings. The Contractor shall notify the Engineer of any discrepancies. The Contractor shall be responsible for notifying and obtaining the services of Dig Safe and On-Target to locate existing utilities, as necessary as described in Section 02016.
2. Prior to Phase 3 construction, the Contractor shall perform test pitting at the southwest corner of Dolby III to locate toe drain piping between CB #6 and CB #6A. The location and elevation of the toe drain shall be reported to the Engineer.

1.04 JOB CONDITIONS:

A. Protection of Existing Facilities:

1. Provide protections necessary to prevent damage to existing facilities indicated to remain.
2. Protect facilities on adjoining properties and on the Owner's property.
3. Restore damaged facilities to their original condition, as acceptable to parties having jurisdiction.

B. Adjoining Property: Confine all operations to the property of the Owner. Protect abutting properties from construction activities at all times.

C. Salvageable Facilities: Carefully remove items indicated to be salvaged, and store on the Owner's premises where indicated, unless otherwise directed.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

3.01 GENERAL:

A. The Owner's Representative will establish clearing lines and construction lines and designate the trees, shrubs, plants, and other items to remain.

B. Alignment stakes, grade stakes, witness stakes, boundary markers, benchmarks, and tie points shall be preserved until such time as their usefulness has ceased and permission for their destruction is given by the Owner's Representative.

C. Remove vegetation, facilities, or obstructions interfering with installation of new construction. Remove such items elsewhere on the site or premises as specifically indicated. Removal includes stumps and roots.

D. Carefully and cleanly cut roots and branches of trees indicated to be left standing, where such roots and branches obstruct new construction.

3.02 CLEARING:

A. In areas designated by the Owner's Representative, all trees, down timber, stubs, brush, bushes, shrubs, plants, and debris not designated to remain shall be removed and disposed of.

B. All trees and shrubs shall be cut to 6 inches from the ground.

C. Unsound or unsightly branches of trees and shrubs designated to remain, and not specified to be removed under another item shall be removed as directed. All such removing and the disposal shall be a part of and, incidental to this item.

3.03 DISPOSAL OF WASTE MATERIALS:

A. Except as otherwise provided, all wood, stumps, and woody debris generated by the on-site clearing and grubbing operations shall be disposed of by the Contractor by chipping (as described below) or by burial within the limits of the landfill, as directed by the Owner's Representative. Unsuitable subgrade materials that have been in contact with landfill leachate will be disposed of within the active landfill. Other unsuitable subgrade materials will be disposed of onsite as directed by the Owner’s representative in accordance with the MEDEP BMPs. All other trash and non-wood products generated by the Contractor as part of the closure effort will be disposed of off-site at a licensed location by the Contractor.

B. Wood Chipping: Wood chipping shall be done with approved wood chipping machines capable of reducing woody material to chips not over 1/4 inch in thickness nor over 8 inches long. Chips shall be distributed in a thin layer over the ground surface. Ground cover plants shall not be smothered and drainageways shall not be blocked. If the wood chipper or any auxiliary

machines damage existing plants or ground surface, the Owner's Representative may prohibit their further use.

3.04 PIPELINE AND MANHOLE CLEANING

A. Designated leachate collection pipelines, catch basins, and manholes shall be cleaned with high velocity jet equipment. A vacuum truck is to be used for collection of liquids and solids. The equipment shall carry its own water tank and contractor is responsible for locating a water source. No water source is available on site. Engineer shall be notified of any obstructions that may prevent the cleaning equipment from traversing the entire line. Various sections may require multiple passes with the cleaning equipment. Work shall be completed from the uphill manhole down. After manhole cleaning is complete, photographs are to be taken and submitted to the engineer within 24 hrs.

END OF SECTION

SECTION 02200

EARTHWORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements (if any) apply to the work specified in this section.

B. The requirements set forth by the Project's Quality Assurance/Quality Control Plan (if a QA/QC Plan is required for the Project's Scope of Work by the MEDEP) shall apply to work specified in this Section. QA/QC plan is provided as Appendix B to the Construction Specifications document.

C. All work performed under this specification shall be performed in accordance with the Maine Department of Environmental Protection – Maine Erosion and Sedimentation Control Best Management Practices (October 2016 or as currently revised).

1.02 DESCRIPTION: This work shall consist of survey layout, excavation, filling, and embankment construction, installation of toe drains, manholes and catch basins, placement of cover materials, and grading including hauling, compaction, and disposal of all material encountered and necessary for construction of the project.

1.03 RELATED WORK SPECIFIED ELSEWHERE:

A. Existing Utilities and Underground Structures: Section 02016

B. Site Preparation: Section 02100

C. Erosion Control: Section 02220

D. Seeding: Section 02800

E. Quality Assurance/Quality Control Plan

1.04 QUALITY CONTROL

A. Codes and Standards: Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction and with the requirements outlined in the Project's Quality Assurance/Quality Control Plan (as applicable).

B. Testing and Inspection Service:

1. Borrow Source Characterization Testing (By Contractor).
The following borrow source characterization testing shall be performed on the materials used for the project's earthworks construction. The testing program will assure that borrow materials from on-site or off-site sources meet the requirements of this specification. Borrow source testing shall be performed prior to delivering off-site material to the site and prior to using on-site material for landfill construction. Borrow source testing is not required for existing cover soil or drainage sand that is reused for the same purpose (i.e., cover soil used as cover soil, etc.). Changes in the borrow source and/or material properties shall be avoided. The Contractor shall employ a soils testing laboratory acceptable to the Engineer to perform soil testing of borrow source materials. Borrow source characterization will be performed in accordance with the Maine

Department of Environmental Protection (MEDEP) Solid Waste Management Regulations Chapter 401 Appendix A, or as directed by the Engineer.

Borrow source characterization testing on soil materials shall be done at the following frequencies:

a. The following testing of the cover soil material shall be performed with each source or change of material or:
   (1) moisture content (ASTM D 2216) 5,000 yd^3
   (2) grain size analysis (ASTM D 421) 5,000 yd^3
   (3) moisture density (ASTM D 698) 5,000 yd^3
   (4) remolded hydraulic conductivity (ASTM D 5084) 5,000 yd^3

   Note: Borrow source testing of existing cover soil is not required, provided that it is used for the same purpose (i.e., existing cover soil used as Phase 2 or 3 cover soil).

b. The following testing of the drainage sand shall be performed with each source or change of material or:
   (1) grain size analysis (ASTM D 421) 5,000 yd^3
   (2) remolded hydraulic conductivity (ASTM D 5084) 5,000 yd^3

   Note: Borrow source testing of existing drainage sand is not required, provided that it is used for the same purpose (i.e., existing drainage sand used as Phase 2 or 3 drainage sand).

c. The following testing of the drainage stone shall be performed with each source or change of material or:
   (1) grain size analysis (ASTM D 421) 2,500 yd^3
   (2) calcium carbonate content (ASTM D 4373) or approved equivalent[1]) 2,500 yd^3

d. Aggregate Subbase Material: A minimum of 1 gradation (ASTM D 421) per source.

e. Vegetative Medium (Topsoil): Perform topsoil testing at Maine Soil Testing Service – University of Maine at Orono, as described in Section 02800. Topsoil test results shall be provided to the Owner's Representative by the end of July 2022.

C. The Contractor shall supply representative materials for testing as required by the Engineer. The Contractor shall schedule his operation and submissions, so the Engineer has sufficient time to perform testing. Failing tests of materials quality, gradation, or field density will be charged to the Contractor and deducted from payments, in accordance with Part 1.05 of Section 01025.

D. Test Reports: Submit one (1) electronic copy of the borrow source test reports directly to the Engineer from the Contractor's testing subcontractor, with copy to the Contractor. If borrow source testing indicates a significant change in material index properties during construction, the in-place material testing specifications described herein should be modified.

1.05 QUALITY ASSURANCE: (By the Owner)

A. On-Site Testing and Inspection Service: The Owner will perform quality assurance and compaction testing of materials used in the work. The Contractor shall supply representative materials for testing as required by the Owner's Representative. The Contractor shall schedule his operation and submissions, so the Owner's Representative has sufficient time to perform testing. Failing tests of materials quality, gradation, or field density will be charged to the Contractor and deducted from payments.

B. Borrow Source Construction Testing shall be performed by the Owner's Representative as material is being excavated and transported to the project site during construction. This testing is performed in order to ensure the consistency of the borrow source material being excavated, and is intended to enhance and confirm testing performed earlier during the borrow source characterization.

1. The following testing of cover soil material from off-site sources shall be performed with each source or change of material or:

    a. moisture density (ASTM D 698) 1/5,000 yd^3
    b. grain size analysis (ASTM D 421 1/5,000 yd^3
    c. moisture content (ASTM D 2216) 1/5,000 yd^3
    d. Remolded hydraulic conductivity (ASTM D 5084) 1/5,000 yd^3
2. The following testing of the drainage sand or gas layer material from off-site sources shall be performed with each source or change of material or:
    a. grain size analysis (ASTM D 422) 1/5,000 yd^3
    b. remolded hydraulic conductivity (ASTM D 5084) 1/5,000 yd^3
3. Drainage Stone: A minimum of 1 gradation (ASTM D 421) and 1 calcium carbonate content (ASTM 4373) or approved equivalent[1] per source and/or every 2,500 yd^3.
4. Vegetative Medium (Topsoil): Perform topsoil testing at Maine Soil Testing Service – University of Maine at Orono, as described in Section 02800.
5. Aggregate Base or Subbase Material: A minimum of one gradation (ASTM D 421) per source.

C. In-Place Field Quality Assurance: Allow Owner's Representative or Owner's testing service to examine and test subgrades and fill layers. Before further construction work is performed, test results meeting the requirements of paragraph 2.01 and 3.09 herein, shall be obtained.

1. The following in-place testing of the cover soil material shall be required with each change of material or:
    a. Field moisture content, in-place density (ASTM D 6938) 5/acre/lift. Undisturbed hydraulic conductivity (ASTM D 6938) 3/acre/lift.
    b. Thickness and lift interface 5/acre/lift
2. The following in-place testing of the granular drainage sand material shall be required:
    a. Remolded hydraulic conductivity (ASTM D 5084) 3/acre/lift.
    b. Thickness 5/acre/lift
3. The Owner's Representative shall identify test locations. The Contractor shall assist the Owner's Representative in obtaining the required samples.
4. If, in the opinion of the Engineer, based on reports of testing service and inspection, subgrades or fills which have been placed below specified density or thickness, the Contractor shall undertake necessary corrective actions, including removal and replacement of materials or placement of additional material, and testing at no additional expense to the Owner. This stipulation does not apply to granular drainage material or cover material previously placed at the site by others.

1.06 JOB CONDITIONS:

A. Site Information: Data on indicated subsurface conditions are not intended as representations or warranties of accuracy or continuity between soil borings. It is expressly understood that Owner and/or Engineer will not be responsible for interpretations or conclusions drawn therefrom by Contractor. Data are made available for the convenience of Contractor.

Additional test borings and other exploratory operations may be made by Contractor at no cost to Owner.

B. Existing Utilities: The Contractor shall provide the services of OnTarget or DigSafe to locate existing underground utilities in the areas of work, as necessary, or as required by law. If

[1] Equivalent methods used to determine calcium carbonate content include Whole Rock Geochemistry ME XRF06 and ME ICP06.

utilities are to remain in place, provide adequate means of protection during earthwork operations.

Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult the utility owner immediately for directions. Cooperate with Owner and utilities companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.

Do not interrupt existing utilities serving facilities occupied and used by Owner or others, except when permitted in writing by Owner's Representative and then only after acceptable temporary utility services have been provided.

Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies for shut-off of services if lines are active.

C. Use of Explosives: Use of explosives at the Dolby Landfill is not permitted.

D. Protection of Persons and Property: Barricade open excavations occurring as part of this work and post with warning lights. Operate warning lights as recommended by authorities having jurisdiction.

Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations. The Contractor shall comply with all applicable rules, procedures, and regulations regarding safety as defined by all local, state, and federal agencies, including but not limited to, State of Maine Labor Department Rules, and the Occupational Safety and Health Act (OSHA) Regulations.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS:

A. Miscellaneous Materials:

1. a. Cover Soil Material (off-site source): Cover soil material shall be a till soil containing a minimum 20 percent fines passing the No. 200 sieve, with a maximum particle of 3 inch. The maximum hydraulic conductivity shall be less than or equal to $5x10^{-5}$ cm/sec with an average hydraulic conductivity less than or equal to $1x10^{-5}$ cm/sec.

   b. Cover Soil Material (existing cover soil): Cover soil material that is stripped from the Dolby III Landfill shall be a till material with a maximum particle size of 6 inches. The Contractor shall manage cover soils such that cover soils do not move from area to area. Existing cover soil stripped from Dolby Landfill Phases 2 and 3 shall be placed and compacted in the same area (i.e., existing cover soil stripped from the Northeast area shall be placed and compacted in the Northeast area; existing cover soil stripped from the Southwest area shall be placed and compacted in the Southwest area; and existing cover soil stripped from the Southeast area shall be placed and compacted in the Southeast area).

2. a. Drainage Sand: Sand shall be free of organic matter, clay clumps, and other deleterious material. The material shall have a hydraulic conductivity greater than or equal to $2x10^{-3}$ cm/sec and meet the gradation requirements shown below:

Sieve Designation	Percent Passing
1-1/2 inch	100
1 inch	95-100
1/2 inch	75-100
No. 4	50-100
No. 20	20-95

No. 40	10-85
No. 60	0-35
No. 100	0-10
No. 200	0-5

c. Drainage Sand (existing cover drainage sand): Drainage sand material that is stripped from the existing landfill shall be a sand free of organic matter, clay clumps, and other deleterious material.

3. Drainage Stone: Shall be screened and washed stone free of organic matter, silt, or clay lumps, and deleterious material. The stone shall contain no more that 15 percent calcium carbonate as determined by ASTM D 4373 or equivalent method approved by Engineer (i.e., whole rock geochemistry methods). The material shall meet the following gradation requirements:

Sieve Designation	Percent Passing
1-1/2 inch	100
1 inch	70-100
3/4 inch	20-90
1/2 inch	0-50
3/8 inch	0-30
No. 4	0-10
No. 20	0-5

4. ¾-inch Drainage Stone: Stone shall be obtained from rock of uniform quality and shall consist of clean, angular fragments of quarried rock free from soft disintegrated pieces or other questionable matter. Shall be clean and free from organic matter, silt, or clay clumps, and deleterious materials. The material shall meet the following gradation requirements:

Sieve Designation	Percent Passing
1 inch	100
3/4 inch	90-100
3/8 inch	0-75
No. 4	0-25
No. 10	0-5

5. Aggregate Base Material: Shall be crushed gravel consisting of hard durable particles, which are free from vegetative matter, lumps or balls of clay, and other deleterious substances. Gravel base shall not contain particles of rock which will not pass the 3-inch square mesh sieve. The gradation of the base materials shall meet the grading requirements of the following table:

Sieve Designation	Percent Passing
1/2 inch	45-70
1/4 inch	30-55
No. 40	0-20
No. 200	

(M.D.O.T. 703.06 Type A)

6. Aggregate Subbase Material: Aggregate subbase shall be gravel consisting of hard, durable particles which are free from vegetative matter, lumps, or balls of clay, and other deleterious substances. Gravel subbase shall not contain particles of rock which will not pass the 6-inch square mesh sieve. The gradation of the portion which will pass a 3-inch sieve shall meet the grading requirements of the following table:

Sieve Designation	Percent Passing
1/4 inch	25-70
No. 40	0-30
No. 200	0-7

(M.D.O.T. 703.06 Type D)

7. Rock Borrow: Shall consist of hard durable rock broken to various sizes that will form a compact embankment with a minimum of voids. The maximum size for any rock shall be 3 feet in its greatest dimension.
8. Vegetative Growth Medium (Topsoil): Shall be soil material stripped from the top 6 inches of the existing cover system. The material shall be in accordance with Section 02800 Seeding.
9. Satisfactory Excavated Material (On-site): Shall conform to the requirements of vegetative cover or common borrow as a minimum as determined by the Owner's Representative.

2.02 ON-SITE MATERIAL

A. Material on the site is the property of the Owner and, if suitable, shall be incorporated in the Contract work. The Owner's Representative shall classify the material under Article 2.01 headings. Any sample testing needed for this classification will be performed by an approved laboratory at the Owner's expense.

B. Material not incorporated in the work because it is unsuitable will be hauled away and disposed of, as directed by the Owner’s Representative, at the Contractor's expense.

1. Material designated to be wasted by the Owner's Representative will be disposed of by the Contractor.
2. Material designated to be saved by the Owner's Representative will be stockpiled at a location shown on the Drawings or designated by the Owner's Representative.
3. Unsuitable material shall consist of grubbings or other materials which contain rock of size exceeding specifications, organic materials, or other materials of a deleterious nature as deemed by the Owner's Representative.

PART 3 - EXECUTION

3.01 INSPECTION: Examine the areas and conditions under which excavating, filling, and grading are to be performed and notify the Owner's Representative, in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

3.02 EXCAVATION: Excavation consists of removal and disposal of material encountered when establishing required grade elevations. All excavation shall be unclassified and shall include any and all material encountered. No extra compensation shall be allowed for excavation work covered by the bid proposal.

A. Excavation for Structures: Conform to elevations and dimensions shown within a vertical tolerance of 1/2 inch and extending a sufficient horizontal distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, other construction, and for inspection.

Excavation for footings and foundations shall extend to the depth necessary to remove all fill material above the native soils. When the footing and foundation grades extend into native soils, the native soil shall be excavated to the foundation grades specified on the Drawings.

In excavating for footings and foundations, take care not to disturb bottom of excavation. Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid base to receive concrete.

Rock shattered due to drilling or ripping operations shall be removed. Excess rock excavation shall be filled with Class A or Class B concrete.

B. Excavation for Pavements: Conform to subgrade elevations and dimensions shown, within a vertical tolerance of 1 inch.

C. Excavation for Trenches: Conform to elevations and dimensions within a vertical tolerance of 1 inch. Excavate to the uniform width shown or required for the particular item to be installed. Provide adequate working space for compactive equipment.

Excavate trenches to the depth indicated or required. Carry the depth of trenches for piping to establish the indicated flow lines and invert elevations and provide suitable bedding. Pipe bedding as specified in paragraph 2.01A(2).

Where rock is encountered, carry the excavation six (6) inches below the required elevation and backfill with a 6-inch layer of crushed stone or gravel prior to installing pipe.

Grade bottoms of trenches as indicated, notching under pipe joints to provide solid bearing for the entire body of the pipe.

Do not backfill trenches until authorized by the Owner's Representative. Use care in backfilling to avoid damage or displacement of pipe systems.

D. Site Excavation: Conform to elevations and dimensions shown within a vertical tolerance of 0.1 of a foot. During the excavation to base grade, excavating equipment and trucks are to be kept off the subgrade to minimize disturbance of the subgrade. Excavate to a depth to provide for any subsequent loam, sod, or other specified surface material.

E. Excavation of Unsuitable Material: Shall consist of the excavation and removal of all fill materials including loose, uncompacted soils material, buried rubber tires and waste, saturated soil materials (muck), buried vegetation, and other organic or inorganic debris shown on the Drawings, encountered during the prosecution of the work, or as directed by the Engineer. The excavation shall extend to the limits and depth necessary to remove all fill and unsuitable material as directed by the Owner's Representative.

3.03 STABILITY OF EXCAVATIONS: Slope sides of excavations to comply with local, state and federal codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated.

Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

3.04 SHORING AND BRACING: Provide materials for shoring and bracing, such as sheet piling, uprights, stringers, and cross-braces, in good serviceable condition.

Establish requirements for trench shoring and bracing to comply with local codes and authorities having jurisdiction.

Maintain shoring and bracing in excavations regardless of time period excavations will be open. Carry down shoring and bracing as excavation progresses.

Provide permanent steel sheet piling or pressure treated timber sheet piling wherever subsequent removal of sheet piling might permit lateral movement of soil under adjacent structures. Cut off tops as required and leave permanently in place.

3.05 MATERIAL STORAGE: Stockpile satisfactory excavated materials where directed, until required for backfill or fill. Place, grade and shape stockpiles for proper drainage. Seed and mulch stockpile areas as necessary to prevent erosion in accordance with MEDEP's BMPs.

Locate and retain soil materials away from edge of excavations.

Dispose of excess soil material and waste materials as herein specified.

3.06 COLD WEATHER PROTECTION: Protect excavation bottoms against freezing when atmospheric temperature is less than 35°F.

3.07 WINTER CONSTRUCTION OF EMBANKMENTS AND CLAY BARRIERS: Frozen material shall not be placed in the embankment or clay barriers. The construction of embankments may continue during cold weather only when all frozen material in the top of the embankment or the existing ground is moved to the waste storage area, or removed from the site, before placing additional material.

Compaction shall be in accordance with the specified method of embankment and clay barriers construction. When the prevailing temperatures are below 30°F, all material used in embankment construction and clay barriers shall have a moisture content at the time of compaction equal to or less than the optimum moisture content.

The embankment shall not be constructed upon frozen material except that such construction of embankments outside the building area may be allowed providing the total depth of the added fill, including gravel bases, plus the depth of the frozen material beneath does not exceed 5 feet. Frozen material may be left in the embankment only if it has been compacted as specified prior to freezing. The Contractor shall not resume construction of any embankments built in this manner until all frozen material has thawed. If test holes are required to make this determination, they shall be dug and backfilled with satisfactory compaction at the Contractor's expense. Before additional material is added, uncompacted material on the surface of such embankments shall be either recompacted in accordance with the specified method of embankment construction or removed. Clay barrier layers shall not be constructed upon frozen material. The Contractor shall be responsible for protecting any clay barrier material placed from freezing. If previously placed clay material freezes, it shall be removed, thawed, and then replaced.

3.08 CLOSING ABANDONED UNDERGROUND UTILITIES: Close open ends of abandoned underground utilities, indicated to remain, permanently with closures sufficiently strong to withstand pressures which may result after closing.

Close open ends of metallic conduit and pipe with threaded galvanized metal caps or plastic plugs, or other suitable method for the type of material and size of pipe. Do not use wood plugs.

Close open ends of concrete and masonry utilities with not less than 8-inch thick brick masonry bulkheads, constructed to completely fill the opening.

Wet brick before laying. Lay brick in mortar so as to form a full bed with ends and side joints in one operation. Joints shall be more than 3/8 inch wide. Protect fresh masonry from freezing or from rapid drying, as necessary, and maintain protection until mortar has set.

3.09 COMPACTION:

A. General: Control soil compaction during construction providing minimum percentage of density specified for each area classification.

B. Percentage of Maximum Density Requirements: Compact soil to not less than the following percentages of maximum dry density (determined in accordance with ASTM D 698).

1. Cover Material: 90 percent maximum dry density or greater as needed to obtain required hydraulic conductivity requirement.
2. Containment Berm: 90 percent maximum dry density.
3. Pipe Trenches: Compact bedding material and each layer of backfill to 12 inches over the pipe to at least 90 percent maximum dry density for bedding materials other than 3/4-inch stone.

C. Moisture Control: Moisture content of the embankments shall be at, but not greater than, 4 percent higher than optimum as determined by ASTM D 698 (standard proctor). Where subgrade or a layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, in proper quantities to prevent free water appearing on surface during or subsequent to compaction operations.

Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density. Soil material which has been reworked or reconditioned shall be retested at approximately the same locations and frequency.

Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing or pulverizing until moisture content is reduced to a satisfactory level.

D. Placement and Compaction: Placement of fill materials will be in layers not more than 16 inches in loose depth for material compacted by heavy compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.

Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content. Compact each layer to required percentage of maximum dry density for each area classification. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.

Place backfill and fill materials evenly adjacent to structures, to required elevations. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around structure to approximately same elevation in each lift.

To eliminate desiccation cracks the surface will be moistened (as necessary) and reworked with 2 passes of a smooth drum roller. Desiccation is defined as moisture content below optimum, or cracks deeper than 1 inch. The cover soil will be placed and compacted and progressively covered with the overlying cover system (i.e., vegetative topsoil, seeded and mulched), to minimize the exposure of the cover material. The closure construction activities shall be phased in such a way that leachate generated in areas of stripped topsoil is collected and conveyed to the facility's leachate transport system without leaving the landfill waste limits.

The cover soil shall be compacted at the end of each work day to provide for moisture/density testing and prevent ponding of surface water overnight.

E. The Contractor shall be responsible for maintaining surface area to be covered by geomembrane as specified in Section 02771 3.03A and B.

F. Placement of soil over the geomembrane shall be in accordance with Section 02771 3.08.F.

3.10 BACKFILL AND FILL:

A. General: Place acceptable soil material in layers to required subgrade elevations, for each area classification listed below.

1. In excavations, use satisfactory excavated or common borrow material.
2. Under grassed areas, use satisfactory excavated or vegetative cover material.

B. Backfill excavations as promptly as work permits, but not until completion of the following:

1. Acceptance by Owner's Representative of construction below finish grade including, where applicable, dampproofing, waterproofing, and perimeter insulation.
2. Inspection, testing, approval, and recording locations of underground utilities.
3. Removal of concrete formwork.
4. Removal of shoring and bracing, and backfilling of voids with satisfactory materials. Temporary sheet piling driven below bottom of structures shall be removed in manner to prevent settlement of the structure or utilities, or cut off and left in place if required.
5. Removal of trash and debris.
6. Permanent or temporary horizontal bracing is in place on horizontally supported walls.
7. As-built survey of construction (as necessary).

C. Ground Surface Preparation: Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Plow, strip, scarify or break-up sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material will bond with existing surface.

When existing ground surface has a density less than that specified under "Compaction" for the particular area classification, break up the ground surface, pulverize, moisture-condition to the optimum moisture content, and compact to required depth and percentage of maximum density.

Equipment such as low ground pressure dozers will be used during the placement of soil materials. Extra precaution will be taken with the equipment used for placement to avoid sudden turns, stops or starts that could disturb the subbase materials. Similar equipment and precautions will be utilized during the placement of sand and topsoil above the geomembrane. The equipment used in placement of materials placed on the geomembrane shall be approved by the Engineer.

Placement of soil materials above the liner system shall be done in an upslope direction and in a manner that is least likely to cause wrinkles or damage to the underlying geosynthetics.

Equipment used to construct the landfill shall be approved by the Engineer prior to or during the pre-construction meeting.

3.11 GRADING:

A. General: Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface to required elevation within a tolerance of 0.1 foot. Compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

B. Compaction: After grading, compact subgrade surfaces to the depth and percentage of maximum density for each area classification.

3.12 TOPSOILING:

A. General: This work consists of placing vegetative cover of the specified thickness on prepared subgrade in all areas disturbed by construction and not otherwise surfaced or covered by structures and shall be in accordance with Section 02800 Seeding.

3.13 MAINTENANCE

A. Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris. If necessary, repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances at no additional cost to the Owner.

B. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, re-shape, and compact to required density prior to further construction at no additional cost to the Owner.

3.14 DISPOSAL OF EXCESS AND WASTE MATERIALS:

A. Removal from Owner's Property: Remove waste materials, including unacceptable excavated material, trash and debris, and dispose of it off the Owner's property.

END OF SECTION

SECTION 02220

EROSION CONTROL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: Drawings, general provisions of Contract, supplementary and general conditions apply to the work specified under this section.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Site Preparation: Section 02100

B. Earthwork: Section 02200

C. Seeding: Section 02800

1.03 DESCRIPTION OF WORK:

A. The Contractor shall provide all materials, equipment, and labor necessary for the dewatering of excavations and the removal and/or diversion of surface water from the construction area, and installation of siltation and erosion control structures as shown on the Drawings and according to these Specifications, and in accordance with the MEDEP "Best Management Practices" – October 2016, or as currently revised, for erosion and sedimentation control.

B. The Contractor shall build all drains and do all ditching, pumping, bailing, and all other work necessary to keep the excavation clear of groundwater, or storm water during the progress of the work and until the finished work is safe from damage. The Contractor shall make provisions on the site to detain and filter water from the excavation operation so that sediments from the dewatering operation are contained. In no case will direct discharge from the dewatering operations to off-site drainage facilities be allowed.

C. The Contractor shall perform all inspections and documentation required by the General Conditions of the MEDEP Maine General Construction Permit.

D. The Contractor shall provide temporary seeding, mulching, or other protective coverings to exposed earth surfaces or stockpiles which will be exposed to rain or wind elements for a period of greater than two weeks.

E. The Contractor shall provide siltation fences, riprap, and/or stone check dams in the newly constructed drainage ditches for temporary sediment control as shown on the Contract Drawings.

F. At the completion of landfill construction activities, the Contractor shall provide permanent seeding, mulching, or other protective landscape coverings to exposed earth surfaces effected by construction activities, and a shown on the Contact Drawings, and as specified in Section 02800.

G. The Contractor shall be responsible for inspection, maintenance, and/or repair of all temporary erosion and sedimentation control measures during construction, including temporary erosion and sedimentation control measures installed by others and used during this project. Inspections will be undertaken by qualified personnel to ensure that controls are correctly functioning, and that additional erosion control measures are in installed if needed. Such inspections will occur bi-weekly and after each significant rain fall event (1 inch or more within a 24 hour period) during construction until permanent erosion control measures have been properly installed and the site is stabilized. Trapped sediment shall be removed when the

height of the sediment reaches greater then one-half the depth of the erosion control measure.

1.04 SEDIMENT CONTROL GUIDELINES:

A. Maine Erosion and Sedimentation Control BMPs, October 2016.

B. State of Maine Department of Environmental Protection Natural Resources Protection Act Permit by Rule Standards Chapter 305 (effective February 1989, revised April 1992).

C. MEDEP Maine Construction General Permit requirements.

1.05 SUBMITTALS:

A. The Contractor shall furnish to the Engineer, in writing, his plan for dewatering excavations and diverting surface water before beginning the construction work for which the dewatering or diversion is required. Acceptance of this plan will not relieve the Contractor of responsibility for completing the work as specified.

B. Manufacturer's product data sheets, material certifications, and standard manufacturing quality control test data for products listed in Part 2 of this specification.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING:

A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis and name of manufacturer. Handle material in accordance with manufacturer's recommendations. Protect materials from deterioration during delivery, and while stored at the site.

PART 2 - PRODUCTS

2.01 SILTATION FENCE:

A. Siltation fence shall be preassembled fence consisting of synthetic filter fabric reinforced with a supporting mesh and mounted on wood or metal stakes.

2.02 EROSION CONTROL BLANKET:

A. Shall be placed on newly topsoiled and seeded areas as indicated on the Contract Drawings. The matting shall be North American Green C125 installed with Staple Pattern D, as shown on the Contract Drawings, or an approved equal.

2.03 STONE CHECK DAMS:

A. Stone for check dams shall consist of a mixture of angular stones having a particle size between 2 inch and 3 inch. The check dams shall be installed at locations as indicated on the Drawings and shall be constructed as detailed on the Drawings.

B. Exposed Stone: The exposed stones for the check dams shall be angular and as nearly rectangular in cross-section as practicable. Rounded stone will not be permitted without the Engineer's approval. The stone shall consist of durable stones that will not disintegrate by exposure to the action of water or weather.

PART 3 - EXECUTION

3.01 GENERAL

A. The Contractor shall provide for the diversion of clean surface water from the construction area for the duration of the construction project.

B. The Contractor shall provide for the dewatering of excavations and the diversion of surface water from the construction areas and install siltation and erosion control measures as necessary in accordance with MEDEP BMPs.

C. The Contractor shall build all drains, dikes, sediment basins, install all siltation fencing, mulches, grasses, seeding, ditches, channels, riprap, grading, and all other work necessary to control water pollution, surface runoff, and soil erosion.

D. The Contractor shall provide temporary seeding, mulching, or other protective coverings to exposed earth surfaces or stockpiles which will be exposed to rain or wind elements through the fall and winter seasons.

E. The Contractor shall maintain all facilities necessary to control water pollution, surface runoff, and soil erosion until permission is given by the Engineer to discontinue the use of the facilities.

3.02 EROSION CONTROL PROVISIONS:

A. The discharge from pumping operations during dewatering operations shall be contained by a dike so constructed as to prevent siltation and the area of the outlet pipe shall be protected against erosion by flowing water by the construction of a rock or timber apron.

B. Prior to removal of sediment control dikes all retained silt or other materials shall be removed and placed within landfill limits in areas not susceptible to erosion, at no additional cost to the Owner.

3.03 REMOVAL OF TEMPORARY WORKS:

A. After the temporary works have served their purposes, the Contractor shall remove them or level and grade them to the extent required to present a sightly appearance and to prevent any obstruction of the flow of water or any other interference with the operation of or access to the permanent works.

3.04 PLACEMENT OF EROSION CONTROL BLANKET: Erosion control blanket shall be placed at locations indicated on Contract Drawings. The anchoring of the blanket shall be in accordance with manufacturer's recommendations or as directed by the Engineer or Owner's Representative.

3.05 MAINTENANCE AND ACCEPTANCE:

A. The Contractor shall be responsible for inspection and maintenance of all temporary erosion and sedimentation control measures during construction. Inspections will be undertaken and documented by a qualified person to ensure that controls are correctly functioning, and that additional erosion control measures are in installed if needed. Such inspections will occur bi-weekly and after each significant rain fall event (1 inch or more within a 24 hour period) during construction until permanent erosion control measures have been properly installed and the site is stabilized. Trapped sediment shall be removed when the height of the sediment reaches greater than one-half the depth of the erosion control measure.

END OF SECTION

SECTION 02261

RIPRAP

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. Drawings and general provisions of Contract, including General and Supplementary Conditions, apply to work of this Section.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Sitework - General: Section 02000

B. Earthwork: Section 02200

C. Erosion Control: Section 02220

D. Geotextiles: Section 02772

1.03 DESCRIPTION

A. Work specified in this Section shall consist of furnishing all labor, materials, and equipment to place a protective covering of riprap on the slopes of embankments, dikes, streambanks, channels, culvert inlets and outlets, and storm sewer outlets in conformity with the Contract Drawings and as specified herein.

PART 2 - MATERIALS

2.01 TYPE OF STONE: Stones used for riprap shall consist of sound durable rock which will not become disintegrated by exposure to the action of water or weather. Either field stone or rough unhewn quarry stone may be used.

A. Riprap used in the construction shall have a minimum d_{50} size as specified on the contract drawings.

2.02 EXPOSED STONE: The exposed stones for riprap shall be angular and as nearly rectangular in cross-section as practicable. Rounded boulders or cobbles will not be permitted without Engineer's approval.

2.03 BEDDING MATERIAL: Material for bedding shall be aggregate base material conforming to Specification 02200, Earthwork; Section 2.01.A.6.

2.04 GEOTEXTILE: A non-woven geotextile conforming to Specification 02722, Geotextiles and Drainage Geocomposite, paragraph 2.01A, shall be placed along the areas receiving riprap as shown on the Contract Drawings or as directed by the Owner's Representative.

PART 3 - EXECUTION

3.01 PLACEMENT OF RIPRAP: Riprap shall be placed full depth in one operation without special handwork, shall be approximately true to the required slope line and grade and be uniform in appearance. Larger stones shall be placed at the base of the slope. The stones shall be placed on close contact with the longer axis perpendicular to the plane of the slope and so as to stagger joints. The openings between the stones shall be filled with spall, or gravel and rocks securely pressed into place.

END OF SECTION

SECTION 02450

PIPE INSTALLATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: Drawings, general provisions of contract, and supplementary general conditions apply to the work specified under this section.

A. The requirements set forth by the Quality Assurance/Quality Control Plan shall apply to the work specified in this Section.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Earthwork: Section 02200

B. Erosion Control: Section 02220

C. Polyethylene Piping: Section 02455

D. Manholes, Catch Basins, and Drainage Structures: Section 02570

E. PVC Pipe and Fittings: Section 02456

1.03 REFERENCE:

The publications listed below are part of this Technical Specification to the extent referenced. The publications are referred to in the text by the basic designation only.

A. The American Society for Testing and Materials (ASTM):

1. ASTM D 2321, "Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications"
2. ASTM D 2774, "Standard Practice for Underground Installation of Thermoplastic Pressure Piping"

1.04 DESCRIPTION OF WORK:

A. Work of this Section shall consist of furnishing all labor, materials, and equipment to install and test pipes and culverts. Only the appropriate portions of this section pertaining to the specific contract work identified in Section 01010 "Summary of Work" or as directed by the Engineer, will apply.

1.05 SUBMITTALS:

A. The Contractor shall furnish the name of the pipe and fittings manufacturer to the Engineer prior to commencing the work. Pipe of the same manufacturer shall be used throughout the project.

B. The Contractor shall submit to the Engineer a Construction Schedule for pipe installation.

PART 2 – PRODUCTS

Not Applicable.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. All materials shall be stored and handled in accordance with the manufacturer's recommendations.

B. Excavate, backfill and compact soils in accordance with Section 02200.

C. Sewer Grade Defined: The sewer grade shown on the drawings, and referred to in the specifications is as follows: When a gravel or concrete foundation is used, it is the underside of the gravel or concrete indicated on the plans. When neither a gravel nor concrete foundation is used, it is the underside of the barrel of the pipe covered by this Contract.

D. Pipe Jointing: All joints shall be made in a dry trench and in accordance with the manufacturer's recommendations and the best practices for class of pipe installed. The ends of the pipe shall be wiped clean with a dry cloth before making the joint.

E. Pipe Installation:

1. The pipe shall be accurately installed to the line and grades to the satisfaction of the Engineer. The line and grade may be adjusted by the Engineer from that shown on the drawings to meet field conditions and no extra compensation shall be claimed therefore. Whenever the nature of the material excavated is such as to render it unsuitable for bedding or backfill material, the Contractor shall furnish suitable material as otherwise provided in these specifications.
2. Dewatering: Remove any standing water in trench before pipe or bedding installation.
3. Perforated pipe shall be installed as shown in the Contract Drawings. Perforations shall be installed in the correct orientation as shown on Contract Drawings.
4. For trench conditions, the pipe shall be bedded in stone pipe bedding placed on a flat trench bottom. The bedding material shall be worked (chinked) under the haunches manually to assure proper support. The bedding material shall completely fill the trench and extend for a minimum of 6 inches above and below the top and bottom of the pipe, respectively, or as indicated in the Contract Drawings. Suitable backfill material shall be placed above the pipe bedding material in 9-inch lifts and compacted to 90 percent maximum density. The Contractor shall place warning tape along the length of the trench installation one foot below finish grade.
5. Maximum lengths of fused pipe to be handled as one section shall be places according to manufacturer's recommendations as to pipe size, pipe DR and topography so as not to cause excessive gouging or surface abrasion; but not to exceed 400 feet.
6. Temporarily cap pipe sections longer than a single length (40 feet) on both ends during placement and on leading end of fusion operations, thereby preventing unnecessary intrusion of soil.
7. Complete tie-ins within the trench where possible to prevent overstressing of the pipe and connection.
8. Notify Engineer prior to pipe installation in trench to allow time for Engineer's inspection.
9. Contractor shall maintain proper trench width during pipe installation as shown on the Contract Drawings. In areas where the Contractor's trenching operation exceeds the typical section, the Contractor may be required to use a higher strength class pipe in lieu of the designated class pipe at no additional cost to the Owner.
10. Allow sufficient time to adjust to trench temperature prior to testing, segment tie-ins or backfilling pipe.
11. Coordinate pipe installation adjacent to access roads with Owner to limit impediment of the landfill operations or operations of other Contractors.

F. Pipe Cutting:

1. Where required, sections of pipe may be cut to provide shorter sections of pipe necessary for the construction. The cutting of the pipe shall be done in accordance with the pipe manufacturer's recommendations and subject to the approval of the Engineer. Note: For dual-contained pipe, field cutting and fitting is not recommended due to the extreme importance of the conductor being centralized in the containment pipe. For tie-ins with this pipe the Contractor shall notify the pipe manufacturer of special length pipes required at the onset of the job to avoid delays.
2. When permitted and allowed by the pipe manufacturer, the pipe material shall be cut by using a saw or milling process, approved by the pipe manufacturer and not by using any impact device, such as a hammer and chisel, to break the pipe. The pipe shall be cut, not broken. The cut end of the pipe shall be square to the axis of the pipe and any rough edges ground smooth.

G. Valve Installation: All valves shall be installed in accordance with the specifications for the pipe to which they are to be connected. Valve joints shall be made up in accordance with the Contract Drawings. The valves shall bear no stresses due to loads from the adjacent pipe. All valves shall be inspected before installation and they shall be cleaned and well lubricated before being installed in the line.

H. Inspection: Pipe installation shall be subject to inspection by the Engineer for quality, adherence to line and grade, jointing, and proper backfill. Any joint not satisfactory to the Engineer shall be removed and remade to his satisfaction at the Contractor's expense. No pipe shall be backfilled until it has been approved by the Engineer**. Prior to backfilling, the contractor shall obtain as-built top of pipe coordinates and elevations at grade changes, fittings, and at least every 50 feet along the length of pipe.**

3.02 PIPE INSULATION: (NITC)

A. Exposed Condition: Install 2-inch thick Foamglass insulation by Pittsburg Corning with flexible PITTWRAP insulation jacketing where noted on plans or as directed by the Owner’s Representative.

B. Buried Trench Condition: Install 2-inch thick x 4-ft wide Styrofoam SM insulation as manufactured by Dow Chemical Co., or approved equal, between pipe and culvert or over pipe when noted on plans or as directed by the Owner’s Representative. Install over the pipe when there is less than 5 ft of cover between the top of pipe and original ground grade. Install 6 in. above the pipe unless otherwise shown on Drawings, and provide 6-in. sand blanket above and below insulation.

3.03 SPECIAL REQUIREMENTS:

A. Flexible Pipe: In the case of the installation of polyvinyl chloride pipe and HDPE, strict adherence should be made to the general pipe installation requirements (3.01-D), so that the total deflection in these pipes does not exceed 5.0% of the pipe diameter being installed.

B. Assembling Push-On Joints: Push-on joints shall be made up by first inserting the gasket into the groove of the bell and applying a thin film of special nontoxic gasket lubricant uniformly over the inner surface of the gasket which will be in contact with the spigot end of the pipe. The chamfered end of the plain pipe shall be inserted into the gasket and then pushed past it until it seats against the bottom of the socket.

C. Assembling Mechanical Joint Retainer Glands: Surfaces against which the gasket will come in contact shall be thoroughly brushed with a wire brush prior to assembly of the joint. The gasket shall be cleaned. The gasket, bell, and spigot shall be lubricated by being washed with soapy water. The gland and gasket, in that order, shall be slipped over the spigot, and the spigot shall

be inserted into the bell until it is correctly seated. The gasket shall then be seated evenly in the bell at all points, centering the spigot, and the gland shall be pressed firmly against the gasket. After all bolts have been inserted and the nuts have been made up fingertight, diametrically opposite nuts shall be progressively and uniformly tightened all around the joint to the proper tension by means of a torque wrench.

The correct range of torque as indicated by a torque wrench and the length of wrench (if not a torque wrench) used by an average man to produce such range of torque, shall not exceed the values specified in the tabulation titled TORQUE RANGE VALUES.

TORQUE RANGE VALUES

Range of torque	60 to 90 ft-lb
Length of wrench	10 in.

If effective sealing of the joint is not attained at the maximum torque indicated above, the joint shall be disassembled and thoroughly cleaned, then reassembled. Bolts shall not be overstressed to tighten a leaking joint. Set screws for retainer glands shall be torqued as recommended by the manufacturer.

END OF SECTION

SECTION 02455

POLYETHYLENE PIPING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: The general provisions of the contract, including General and Supplementary conditions and General Requirements (if any) apply to the work specified in this section.

1.02 DESCRIPTION: This work shall consist of furnishing materials in conformity with the contract drawings and as specified herein.

1.03 RELATED WORK SPECIFIED ELSEWHERE:

A. Earthwork: Section 02200

B. Pipe Installation: Section 02450

C. Geotextiles and Drainage Geocomposite: Section 02772

1.04 SUBMITTALS: The Contractor shall furnish the name of the manufacturer of pipe and appurtenances to the Owner's Representative prior to commencing work. Pipe of the same manufacturer shall be used throughout the project.

The Owner's Representative may request the manufacturer to submit a certification certifying the project meets requirements in this specification.

PART 2 - PRODUCTS

2.01 GENERAL:

A. Passive Gas Vent Pipe: Provide ADS perforated N-12 ST IB, or approved equal. Provide pipe, fittings, joint kits, and all accessories of the same material and weight class as pipe.

B. 4-inch and 6-inch Drain Pipe:

Provide ADS perforated and solid N-12 ST IB pipe with smooth interior wall or approved equal. Provide pipe, fittings, joint kits, and all accessories of the same material and weight class as pipe. The perforations shall be 0.875- x 0.125-inch slots with three slots per valley spaced 120° apart. The pipe shall be wrapped with a 2.5-3.5 oz/yd^3 polyester knitted filter sock having the following properties: Mullen Burst> 100 psi, Flow Rate 300 gallons/min/ft^2, AOS U.S. sieve No. 30 or engineer-approved equal.

C. Culvert pipe: Provide ADS N-12 ST IB pipe with smooth interior wall or approved equal. Provide pipe, fittings, joint kits, and all accessories of the same material and weight class as pipe.

D. Standards:

1. AASHTO M252 Type S for Drainage Pipe.
2. AASHTO M294 Type S for Culvert Pipe.

E. Pipe:

1. The HDPE pipe must conform to ASTM D 3035 and D 3350.
2. Outside diameter of pipe shall conform to International Standard Organization (ISO) recommendations for outside diameters.

3. The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification from the same raw material.
4. Perforated pipe shall be provided as indicated on the Contract Drawings. The perforations shall be 0.875- x 0.125-inch slots with three slots per valley spaced 120° apart.
5. The perforated pipe shall be wrapped with a 3.5 oz/yd^3 polyester knitted filter sock having the following properties: Mullen Burst> 100 psi, Flow Rate 300 gallons/min/ft^2, AOS U.S. sieve No. 30 or engineer approved equal.

F. Joints:

1. Pipes: Join to one another with bell and spigot or manufacturers joint kit for specified pipe.

G. Accessories

1. Provide and securely install Agri Drain Rat Guard (or approved equal) rodent screens on exposed ends of drain pipes, installed in a manner in which they can be removed for pipe access.

PART 3 - EXECUTION

3.01 GENERAL

A. Passive Gas Vent Pipe: Work involves possible extension of a passive gas vent piping system, in the locations shown on the Contract Drawings along the crown of the landfill. Work will be performed in conjunction with the final grading of the landfill and with the installation of the gas collection sand layer.

B. Drain Pipe: Work involves the installation of a piping system to facilitate the removal of water from within the final cover system. Pipe installation will be performed in conjunction with the drainage sand installation, and all piping will be installed in the locations identified on the Contract Drawings. To limit the potential movement of the drainage pipe during construction, bags containing drainage layer sand will be placed over the pipe every 10 to 15 feet.

C. Culvert Pipe: Shall be installed in the locations and to the elevations identified in the Contract Drawings as part of the stormwater management devices to be constructed as a component of the final cover system.

END OF SECTION

SECTION 02456

PVC PIPE AND FITTINGS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: Drawings, general provisions of contract, and supplementary general conditions apply to the work specified under this section.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Earthwork: Section 02200

B. Pipe Installation: Section 02450

C. Manholes, Catch Basins, and Drainage Structures: Section 02570

1.03 REFERENCES:

1. ASTM D 3034, "Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings"
2. ASTM D 1784, "Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds"
3. ASTM D 1785, "Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120"
4. ASTM D 2464, "Standard Specification for Threaded Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80"
5. ASTM D 2467, "Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80"
6. ASTM D 2564, "Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems"
7. ASTM D 2855, "Standard Practice for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings"
8. ASTM D 3212, "Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals"
9. ASTM D 3915, "Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds for Plastic Pipe and Fittings Used in Pressure Applications"
10. ASTM F 477, "Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe"

1.04 DESCRIPTION OF WORK:

A. Work of this Section shall consist of furnishing all labor, materials, and equipment to install and test PVC pipes as shown on the Contract Drawings. Only the appropriate portions of this section pertaining to the specific contract work identified in Section 01010 "Summary of Work" or as directed by the Engineer, will apply.

1.05 SUBMITTALS:

A. The Contractor shall furnish the name of the pipe and fittings manufacturer, to the Owner's Representative prior to commencing the work. Pipe of the same manufacturer shall be used throughout the project.

B. The Contractor shall submit to the Engineer a Construction Schedule for pipe installation.

C. The Contractor shall submit manufacturer's technical product data including chemical resistance data and installation instructions for piping joints and fittings.

1.06 PACKAGING DELIVERY AND HANDLING:

The pipe and fitting manufacturer shall package products for shipment in a manner suitable for safe transport by commercial carrier. When delivered, a receiving inspection shall be performed, and any shipping damage reported to the pipe and fittings manufacturer. Pipe and fittings shall be handled, installed and tested in accordance with manufacturer's recommendations, and the requirements of this specification.

PART 2 – PRODUCTS

2.01 PVC PIPE AND FITTINGS

A. Pipe and fittings shall be manufactured from a PVC compound which meets the requirements of Cell Classification 12454-B PVC as outlined in ASTM D 1784. Pipe and fittings materials shall be specially formulated with sufficient ultraviolet (UV) screeners to provide for longer term outdoor exposure with no deleterious effects.

B. Clean rework or recycle material generated by the manufacturer's own production may be used so long as the pipe or fittings produced meet all the requirements of this specification

C. Dimensions: Pipe Size and DR Rating shall be as shown on the Drawings.

PART 3 - EXECUTION

3.01 PIPE HANDLING

PVC pipe and pipe fittings shall be handled according to manufacturers recommendations. Under no circumstance shall Pipe and pipe fittings be dropped or dumped.

3.02 PIPE JOINTING

A. All pipe shall be inspected for cuts, scratches, or other damage prior to installation. Pipe with imperfections shall not be incorporated into the work.

B. All joints shall be made in a dry trench in accordance with the manufacturer's recommendations and the best practices for material and class of pipe installed. The ends of the pipe shall be wiped clean with a dry cloth before making each joint.

C. Bell ends of pipe shall be installed uphill.

D. Solvent cemented joints:

1. Use a good grade of PVC cement which meets ASTM standard D-2564
2. Cut pipe to desired length with pipe cutters, hack saw or cross cut saw.
3. Ream pipe both internally and externally to remove burrs and ragged edges.
4. Before making solvent weld joint be sure all joining surfaces are free of dirt, dust, water, and oil.
5. The use of a primer before the application of PVC cement is recommended.
6. Apply primer to both joining surfaces.
7. Immediately apply a smooth coat of cement to the joining surfaces.
8. Immediately insert the spigot end into the bell end to the full depth of the socket.
9. Turn pipe 1/8 to 1/4 turn in the socket to insure an even spread of cement.
10. Hold firmly in position for 15 seconds.

11. Allow joint to set according to cement manufacturer’s instructions

E. Pipe Cutting:

1. Where required, sections of pipe may be cut to provide shorter sections of pipe necessary for the construction. The cutting of the PVC pipe shall be done in accordance with the pipe manufacturer's recommendations and subject to the approval of the Engineer.
2. In general, the PVC pipe material shall be cut by using a saw or milling process, approved by the pipe manufacturer and not by using any impact device, such as a hammer and chisel, to break the pipe. The pipe shall be cut, not broken. The cut end of the pipe shall be square to the axis of the pipe and any rough edges ground smooth.

3.03 PIPE INSTALLATION AND TESTING

Install and test pipe in accordance with Section 02450 of these specifications.

3.04 PIPE SYSTEM IDENTIFICATION: All system components shall be identified in accordance with mill standards. Pipe system components shall be labeled at all accessible structures. Pipe labeling shall include labels that identify the type of fluid in the pipe and the normal flow direction of fluid in the pipe network.

END OF SECTION

SECTION 02570

MANHOLES, CATCH BASINS, AND DRAINAGE STRUCTURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. Drawings, general provisions of contract, and supplementary general conditions apply to the work specified under this section.

B. The requirements set forth by the Quality Assurance/Quality Control Plan shall apply to the work specified in this Section.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Earthwork: Section 02200

B. Erosion Control: Section 02220

C. Pipe Installation: Section 02450

1.03 DESCRIPTION OF WORK: Work specified in this section shall consist of furnishing all labor, materials, and equipment to construct manholes or catch basins, in conformity with the contract drawings and as specified herein.

1.04 SUBMITTALS:

A. The Contractor shall submit to the Engineer shop drawings of all precast units. Manufacturer's information shall be submitted for joint sealants and waterproofing. Manufacturer shall provide anti-floatation design shop drawings and calculations, including any extended base slabs as necessary, for proposed manholes. Manufacturer shall assume groundwater levels equal top of ground elevations and provide for a 1.2 factor of safety against floatation.

PART 2 – MATERIALS

2.01 PRECAST MANHOLE AND CATCH BASIN SECTIONS: Precast sections shall be manufactured in accordance with the latest ASTM Specification Designation C-478. Precast manholes shall be reinforced for H-20 loading (4,000 psi concrete).

2.02 MORTAR: Cement mortar shall be prepared in the following manner:

A. The cement shall be Type II. The mix shall be one (1) part cement to three (3) parts clean, well graded, hard, durable sand. Hydrated lime may be added to the mixture in an amount not to exceed 15% by weight of the cement. The amount of water shall be only the amount necessary to make a workable mix.

2.03 BRICK: Brick for manholes shall meet the latest AASHTO Specification Designation M-91.

2.04 PRECAST DRYWELL: Precast drywell shall be an American Concrete No. 1126 or equal. No cover is required.

2.05 WATERPROOFING: Waterproofing for manholes shall be either of the following:

A. Asphalt conforming to ASTM Designation D-41.

B. Cement base coating suitable for brush coat application.

2.06 HDPE LINER: All inner surfaces of the leachate transport manholes shall be provided with a cast-in-place, 3-mil HDPE Sure-Grip® Liner System as manufactured by Agru or equal. The HDPE shall be yellow in color.

2.07 FRAMES AND COVERS:

A. All castings shall be made of clean, even grain, gray cast iron. The castings shall be smooth, true to pattern and free from projections, sand holes, warp, and other defects which would interfere with the use of, or impair the serviceability of the castings.

B. The horizontal surface of the cover seat and under surface of the cover which rests upon the cover seat shall be machined on all frames and cover intended for vehicular traffic. After machining, it shall be impossible to rock any cover after it has been seated on its associated frame.

C. The iron used for castings shall conform to ASTM Designation A-48 for Class 30 gray iron.

D. Unless otherwise shown on the Drawings, all castings shall be coated with coal tar pitch varnish, to which sufficient oil has been added to make a smooth coating, tough and tenacious when cold, not tacky and not brittle.

E. Manufacturer's name and catalog figure number must be cast on each frame and cover. The work SEWER or STORM must be stamped on the manhole covers as appropriate.

F. Catch basin grates shall be as shown on contract drawings or approved equal.

2.08 BUTYL SEALANT

A. Butyl sealant used to seal precast concrete structures including manholes and catch basins shall meet AASHTO M-198, ASTM C 990, and Federal Specification SS-2-210 (210A)

B. Each manhole and catch basin shall utilize two (2) strips of sealant between sections.

C. Butyl Sealant shall be Kent Seal #22, ConSeal CS-202 or approved equal.

PART 3 - EXECUTION

3.01 FABRICATION:

A. The tongue and groove of manhole and catch basin sections shall be formed of concrete so as to receive a pre-molded butyl joint sealer. Sections shall be set so as to be vertical and in true alignment.

B. Each section of the precast manhole and catch basin shall have two (2) holes for the purpose of handling and installing. These holes shall be tapered and shall be plugged with mortar after installation.

C. Holes for pipes shall be cast in the base section so that there is a clear distance of 4-1/2" minimum between the inside bottom of the base section and the pipe invert.

D. The joint for the pipe at the base section shall consist of (a) a cast iron compression flange, together with cast iron inserts (embedded in the wall of the base section) and an "O"-Ring

gasket to provide a watertight seal and to allow a flexible joint capable of deflecting a maximum 9" from centerline of pipe; (b) rubber gasket anchoring rings cast into the concrete base and hard rubber wedge driven in to compress the gasket around the pipe: or (c) flexible rubber sleeve cast into the base section; or other joint as approved by the Resident Project Representative.

E. The inner HDPE liner of the leachate transport manholes shall be welded at each manhole section-joint in accordance with manufacturer's instructions. Each weld shall be provided with a spark test wire in accordance with Section 02771, 4.04(D) for membrane penetrations.

3.02 INSTALLATION:

A. General:

1. The excavation shall be properly dewatered while placing bedding material and setting the base or placing concrete. Waterstops shall be used at the horizontal joint of cast-in-place manholes. Bases shall be placed on a minimum 6" layer of compacted stone bedding.
2. Inlet and outlet stubs shall be connected and sealed as shown on the Drawings.
3. Barrel sections and cones of the appropriate combination of heights shall then be placed, using manufacturer's recommended procedure for sealing the horizontal joints, and as shown on the Drawings or the remaining barrel of the manhole shall be cast above the base.
4. A leakage test shall then be made as described in "Leakage Tests".
5. Following satisfactory completion of the leakage test, the frame and cover shall be placed on the top or some other means of preventing accidental entry by unauthorized persons, children, animals, etc., until the Contractor is ready to make final adjustment to grade.

B. Waterproofing: The waterproofing of the exterior surfaces of manholes shall be one of the following methods:

1. Bituminous Coating: After the concrete or cement plaster has set, two coats of an approved bituminous waterproofing material shall be applied to all outside surfaces of manholes. Waterproofing material shall be applied by brush or spray at approximate rate of 70 sq. ft./gal., in accordance with the manufacturer's instructions. Time shall be allowed between coats to permit sufficient drying so that the application of the second coat has no effect on the first.
2. Cement Base Coating: Cement base coatings delivered in sealed containers shall be mixed in accordance with the manufacturer's recommendations and applied with a stiff brush in 2 coats. Each coat shall be applied at the rate of 2 lb. per sq. yd.

C. Frames and Covers: Frames shall be set on mortared brick courses true to grade and concentric with the opening. All voids beneath the bottom flange and in the brick courses shall be completely filled to make a watertight fit. A ring of mortar at least 1 inch thick shall be placed around the outside of the bottom flange, extending to the edge of the manhole all around its circumference. The bricks and mortar shall not extend beyond the top of precast concrete cone section.

3.03 ALTER EXISTING MANHOLE OR CATCH BASIN: When altering existing catch basins and manholes, the structure shall be dismantled sufficiently to allow reconstruction in accordance with the applicable requirements as shown on the Drawings for complete catch basins and manholes.

3.04 VACUUM LEAKAGE TESTS: (NITC)

A. General:

1. To be observed by the Engineer on each sewer manhole.
2. A vacuum test made as described below. Manhole to pipe connection must be a flexible connector to perform this testing.

B. Preparation for Test:

1. After the manhole has been assembled in place, fill lifting holes and point with an approved non-shrinking mortar.
2. Perform test prior to placing the shelf and invert and before filling and pointing the horizontal joints, and before backfilling.
3. If the groundwater table has been allowed to rise above the bottom of the manhole, it must be lowered for the duration of the test.
4. Plug pipes and other openings into the manhole and the plugs braced to prevent blow out.

C. Test Procedure:

1. Test immediately after manhole assembly.
2. Use manhole vacuum test equipment equal to NPC Systems, Inc., Milford, New Hampshire.
3. Set tester in place.
4. Inflate compression band to seal base to structure.
5. Draw a vacuum of 10-in. Hg.
6. Close the valve.
7. Acceptable test:
    a. Less than 1 in. Hg drop in one minute for a manhole less than 10 ft. in depth.
    b. Less than 1 in. Hg drop in two minutes for a manhole 10 ft. to 20 ft. in depth.
8. If leakage occurs fill those points with non-shrink grout, allow to set and retest.
9. Rejected Manholes: Disassemble, reconstruct, or replace as directed by the Engineer.

D. Backfilling: The test may be conducted either before or after backfilling around the manhole. However, if the Contractor elects to backfill prior to testing, for any reason, it shall be at his own risk and it shall be incumbent upon the Contractor to determine the reason for any failure of the test. No adjustment in the leakage allowance will be made for unknown causes such as leaking plugs, absorption, etc., i.e., it will be assumed that all loss of water during the test is a result of leaks through the joints or through the concrete. Furthermore, the Contractor shall take any steps necessary to assure the Resident Project Representative that the water table is below the bottom of the manhole throughout the test.

END OF SECTION

SECTION 02771

GEOMEMBRANE LINER
40-MIL TEXTURED HIGH DENSITY POLYETHYLENE (HDPE)

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements (if any) apply to the work specified in this Section.

B. Requirements set forth by the Quality Assurance/Quality Control Plan prepared for the Dolby Landfill Cover Upgrade – Phase 2 and Phase 3 Project, shall apply to the work specified in this section. QA/QC is provided as Appendix B in the Construction Specifications document.

C. GRI Standard GM13.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Project Coordination: Section 01041

B. Earthwork: Section 02200

C. Pipe Installation: Section 02450

D. Geotextiles and Geocomposite: Section 02772

E. Interfacial Friction Angle Conformance Testing: Section 02780

1.03 DESCRIPTION OF WORK: Furnish and install 40-mil Textured HDPE geomembrane with smooth edges, the extent of which is shown on the Drawings. Sufficient liner material shall be furnished to cover all areas shown on the drawings including overlaps at field seams, anchor trenches and waste.

1.04 SUBMITTALS:

A. Submit the number of copies required by the contractor for quality control documentation described in 1.05A, 1.05B, and 2.01E.

B. Prior to ordering HDPE material, the Contractor shall submit, for the Project Manager's approval, a description or drawing of the method of sheet layout, detailing the orientation of sheets and the direction of the overlap between sheets.

1.05 QUALITY CONTROL DOCUMENTATION: (Furnished by Liner Manufacturer and Liner Installer)

A. Manufacturer's Experience: The manufacturer supplying the membrane shall be GRI GM 13 certified and shall satisfactorily demonstrate previous experience by letter of certification. Certification shall indicate that the manufacturer has produced, and has in service in similar applications for a period of not less than one (1) year, at least fifteen (15) million sq ft of HDPE material meeting these Specifications.

B. Installer's Experience: The Installer proposing to install the lining shall satisfactorily demonstrate previous experience by letter of certification. Certification shall indicate the Installer's successful past installation of at least 10,000,000 sq ft of HDPE membrane lining.

Installation shall be performed under the direction of a single installation supervisor who shall remain on site and be in responsible charge throughout the liner installation, including

subgrade acceptance, liner layout, seaming, testing and repairs, and all other activities contracted for with the Installer. The installation supervisor shall have supervised the installation of at least 10,000,000 sf of polyethylene geomembrane. Actual seaming shall be performed under the direction of a master seamer who may be the same person as the installation supervisor, and who has a minimum of 1,000,000 sf polyethylene geomembrane seaming experience using the same type of seaming apparatus as that specified in this project. No seaming may be done by any individual with less than 500,000 sf of polyethylene geomembrane seaming experience. The installation supervisor or master seamer must be on site whenever seaming is being performed.

C. QUALITY CONTROL DURING MANUFACTURE: Random sampling shall be performed by the Manufacturer throughout the production run at the frequencies indicated below for each of the listed properties for the geomembrane to be delivered to the site. Sampling and frequency of testing shall be in accordance with GM 13 unless more frequent testing is required below.

Property	Test Method	Frequency
Thickness	ASTM D 5994	1 per roll
Asperity height	ASTM D 7466	1 per roll
Carbon black content	ASTM D 4218	1 per 20,000 lbs
Carbon black dispersion	ASTM D 5596	1 per 45,000 lbs
Force per unit width at yield	ASTM D 6693-Type IV	1 per 20,000 lbs
Force per unit width at break	ASTM D 6693-Type IV	1 per 20,000 lbs
Elongation at yield	ASTM D 6693-Type IV	1 per 20,000 lbs
Elongation at break	ASTM D 6693-Type IV	1 per 20,000 lbs
Tear resistance	ASTM D 1004	1 per 45,000 lbs
Puncture resistance	ASTM D 4833	1 per 45,000 lbs
Density	ASTM D 1505/D 792	1 per 200,000 lbs
Environmental stress crack	ASTM D 5397	Per GRI GM10
UV resistance	ASTM D 7238/D 3895/D 5885	1 per formulation
Oxidation induction time	ASTM D 34895/D 5885	1 per formulation
Oven aging at 85°C	ASTM D 5721/D 3895/D 5885	1 per formulation

Values must meet the requirements specified in Table 1 of Part 2.

The Resin Manufacturer shall provide certification to the Geomembrane Sheet Manufacturer that the resin meets or exceeds the specifications for Density, Environmental Stress Crack and Melt Index.

Sheet thickness shall be monitored continuously during manufacture and shall be nominal thickness $\pm$10% across the sheet.

Rolls not satisfying the specifications shall be rejected. The Manufacturer shall provide certification of testing as described in Part 2.

1.06 CONFORMANCE TESTING

The geomembrane will be sampled by the Geosynthetic CQA or his agent(s), at the manufacturer or upon delivery to the site. The Geosynthetic CQA shall assure that conformance test samples are obtained for the geomembrane at a rate of 1 test per 100,000 square feet of geomembrane with a minimum of once per lot, for testing, to assure conformance to the specification. A lot consists of a group of material which is manufactured from a specific batch of raw materials (e.g., HDPE resin, or bentonite clay). The manufacturer shall identify the consecutively numbered rolls of material that are inclusive within a lot. It is not required that all rolls included in a lot be supplied to the project, as long as the specified certification test results are supplied by the manufacture to bracket

the rolls delivered to the project. The interface and internal friction angle tests shall be performed at the frequency defined in Section 02780.
The contractor or sub-contractor shall coordinate information on manufacture and delivery of the geomembrane with the Geosynthetic CQA to assure that sampling and testing occur in a timely manner as to avoid construction delays.

Any further testing required to assure conformance shall be the responsibility of the contractor in accordance with 1.05 (C) of Section 01025. The testing laboratory and the results shall be acceptable to the Engineer.

Geomembrane Conformance testing shall include the following:

Thickness	ASTM D 5994
Asperity	ASTM D 7466
Carbon black content	ASTM D 4218
Carbon black dispersion	ASTM D 5596
Force per unit width at yield	ASTM D 6693
Force per unit width at break	ASTM D 6693
Elongation at yield	ASTM D 6693
Elongation at break	ASTM D 6993
Tear resistance	ASTM D 1004
Puncture resistance	ASTM D 4833
Interface friction angle between drainage geocomposite and geomembrane	ASTM D 5321
Interface friction angle between sand and the geomembrane	ASTM D 5321

These conformance tests shall be performed in accordance with the test method specified. The Contractor shall supply the materials required to perform the conformance testing.

1.07 SPECIAL PRODUCT WARRANTY: (Furnished by Liner Manufacturer)

A. Manufacturer's Guarantee: The manufacturer of the membrane liner shall enter into agreement with the Owner guaranteeing the membrane as follows:

The manufacturer warrants the HDPE liner which is manufactured, sold as first quality, and installed with technical assistance and/or by an approved installation contractor to be (1) furnished free of manufacturing defects in workmanship or material for a period of one year from the time of delivery with the basis for judgment of defects being the applicable product specifications in effect at the time the order was placed unless modified by mutual written agreement; (2) shall not develop cracks/holes which go completely through the membrane due to the effects of normal service for a period of twenty (20) years from the date of delivery. "Normal service" does not include physical damage caused by acts of God, casualty, or catastrophe such as (but not limited to) earthquakes, fire, explosion, floods, lightning, piercing hail, tornadoes, corrosive air pollution, mechanical abuse by machinery, equipment, people or animals, or excessive flexures, pressures or stress from any source other than faulty installation, and (3) immune to chemical attack and degradation by chemicals, specified in the manufacturer's literature, as compatible with, and as not having an adverse effect on the membrane; and (4) immune to chemicals tested by the manufacturer for the Owner.

Should defects or weathering degradation within the scope of the above warranty occur, the manufacturer shall refund to the purchaser-user the pro-rata part for the unexpired term of the warranty of the purchaser-user's original cost of such product, or will supply repair or replacement materials at the then-current price. In the event the manufacturer supplies repair or replacement materials, against the then- current price, the manufacturer will credit the lesser of (1) the pro-rata part of the original sales price of the material so repaired or replaced for the unelapsed period of the warranty, or (2) the pro-rata part of the then-current price of the material so repaired or replaced to the unelapsed period of the warranty. The warranty

shall continue in effect on the repaired or replaced material for the unelapsed term of the original warranty. To enable the manufacturer's technical staff to properly determine the cause of any alleged defect and to take appropriate steps to effect timely corrective measures if such defect is within the warranty, any claim for alleged breach of warranty will be made and presented in writing to manufacturer and the installing Contractor within thirty (30) days after the alleged defect was first noticed.

PART 2 - PRODUCTS

2.01 TEXTURED HIGH DENSITY POLYETHYLENE (HDPE) MEMBRANE:

A. General: The materials supplied under these Specifications shall be first quality products designed and manufactured specifically for the purposes of this work, and which have been satisfactorily demonstrated by prior use to be suitable and durable for such purposes.

B. Description of HDPE Material: The membrane shall be a high density polyethylene (HDPE) of 40-mil thickness containing no additives, fillers or extenders. The lining material shall be manufactured a minimum of 20 feet seamless widths, and have the physical characteristics listed in Table 1:

TABLE 1

Property	Test Designation	40-mil Requirement
Sheet thickness, textured	ASTM D 5994	±10% for individual for 8 out of 10 values ±15% for individual for any of the 10 values
Asperity height	ASTM D 7466	16 mil (min. average)
Specific gravity	ASTM D 1505/D 792	0.94 g/cc
Melt index	ASTM D 1238-95 Condition E	0.1 to 0.3g per 10 minutes
Tensile strength yield	ASTM D 6693-Type IV[2]	min. 84 lb per inch
Tensile strength at break	ASTM D 6693- Type IV[2]	min. 60 lb per in. width
Elongation at yield	ASTM D 6693- Type IV[2]	min. 12 percent
Elongation at break	ASTM D 6693- Type IV[2]	min. 100 percent
Tear resistance	ASTM D 1004	min. 28 lb
Puncture resistance	ASTM D 4833	min. 60 lb
Oxidative induction time (standard) (high pressure)	ASTM D 3895 ASTM D 5885	100 minutes 400 minutes
Oven aging at 85°C (standard OIT) (high pressure OIT)	 ASTM D 3895 ASTM D 5885	55% retained at 90 days 80% retained at 90 days
Environmental stress crack	ASTM D 5397	500 hrs
Carbon black content	ASTM D 4218	2 to 3 percent
Carbon black dispersion	ASTM D 5596	See note 6
UV Resistance	ASTM D 7238	Not recommended

Property	Test Designation	40-mil Requirement
(Standard OIT) (High Pressure OIT)	ASTM D 3895 ASTM D 5885	50% retained after 1,600 hrs
Interfacial Friction Angle Between drainage geocomposite and geomembrane	ASTM D 5321-92	See Section 02780
Between geomembrane and underdrain sand	ASTM D 5321-92	See Section 02780
Property	Test Designation	40-mil Requirement
HDPE Seam Properties Bonded Seam Strength	ASTM D 6392-99[3,4]	0.9XPM[5] lbs/in
Peel adhesion fusion	ASTM D 6392-99[3,4]	0.60xPM[5] lbs/in
Peel adhesion extrusion	ASTM D 6392-99[3,4]	0.50xPM[5] lbs/in

Notes:

1 Measure thickness at 1-foot intervals across the width of the roll (perpendicular to the machine direction) and report average, standard deviation, and lowest individual readings.

2 Type IV Die. ASTM D 6693-01 test specimen shall be used. The grip separation shall be 2.5 inches. This test does not require the use of extensometers. The rate of grip separation will be 2 inches per minute. A gauge length of 1.3 inches for yield values, and 2.0 inches for break values shall be used to calculate elongation from grip movement.

3 For shear tests, the sheet shall yield before failure of the seam. For peel adhesion, seam separation shall not extend more than 25% into the seam. For either test, testing shall be discontinued when the sample has visually yielded.

4 All coupons tested in shear and peel shall be in a free condition (not 90° or 180°). Acceptable Locus of break codes for the specimen rupture mode shall be as specified in Part 3.08 D of this specification.

5 The results of 4 of the 5 individual coupon shear strength valves shall exceed 90 percent of the parent material strength, the fifth coupon must be within 70 percent of the parent material strength. For peel strength values, 4 of 5 coupons tested must be within 60 percent of parent material strength for fusion welds or 70% of the specified value, whichever is greater, and 50 percent of parent material strength for extrusion welds, and the fifth coupon must be within 50 percent of parent material strength.
Parent material strength shall be determined by sampling actual sheets adjacent to the destructive test location in the same direction the seam is tested (using the lower value of the two sheets) or by using conformance testing results or manufacturer's roll certification information, but not less than 126 ppi.

6 Carbon black dispersion (only spherical agglomerates) for 10 different views. ***9 in categories 1 and 2 and 1 in category 3***

In addition, the geomembrane shall be produced as to be free of holes, blisters, undispersed raw materials, or any sign of contamination by foreign matter, and shall not have striations, pinholes or bubbles on the surface.

C. Factory Bonded Seam: Calendered HDPE sheeting may not be fabricated into large sections at the factory.

D. Extrusion Joining Resin: Resin for extrusion joining sheets shall be HDPE produced from the same material as the sheet resin. Physical properties shall be the same as those of the resin used in the manufacture of the HDPE liner. The resin shall be supplied in black and/or natural color. Natural resin shall be colored black through addition of 2.0 to 3.0 percent master batch colorant before use.

E. Documentation: Prior to delivery of the geomembrane to the job site, the manufacturer shall be required to provide the Owner with a written certification that the product delivered meets the standards of GRI Standard GM13. The manufacturer shall provide quality control

certificates for each batch of resin and each shift's production of geomembrane, and shall follow the quality control testing program and test frequencies as described GRI Standard GM13 and in Part 4 of this Specification. These quality control certificates shall be signed by responsible parties employed by the Manufacturer, and shall be supplied to the Owner. No geomembrane will be permitted to be delivered until the Owner has in his possession such certification.

After delivery of the geomembrane to the job site, the Owner shall test samples of the delivered geomembrane. The frequency of the samples shall be once per 50,000 sf of geomembrane with a minimum of once per lot (as per QAQC) and tested in accordance with Part 4.

F. Roll Identification: Each roll shall have permanently affixed both inside and outside the roll the following information: name of manufacturer; date of manufacture; resin batch code; thickness of the material; roll number; roll length; and roll width. Unlabeled rolls will not be used and shall be returned to the manufacturer at the manufacturer's expense.

2.02 MISCELLANEOUS MATERIALS: (Furnished by Installer)

A. Pipe Boots, Vents, and Patches: All such devices shall be of the same material as the lining or a compatible approved equal.

B. Mechanical Fastenings: Mechanical fastenings shall be of the material, size, and type as detailed on the plans or approved shop drawings.

PART 3 - EXECUTION

3.01 GENERAL: Prior to installing HDPE material, the Installer shall submit, for the Owner's approval, a description or drawing of the method of sheet layout, detailing the orientation of sheets and the direction of the overlap between sheets. During installation of the geomembrane, the Installer shall label each sheet with the roll number, panel number, and date it was installed.

3.02 SHIPPING AND HANDLING: Each roll shall be individually packaged in heavy cardboard or wooden crate fully enclosed and protected to prevent damage to it during shipment, prominently identified in the same fashion as the sheet within and showing the date of shipment. Until installed, the rolls shall be stored indoors in their original unopened crates; if outdoors, they shall be stored on pallet and shall be protected from the direct rays of the sun under a light-colored heat-reflective opaque cover in a manner that provides a free-flowing air space between the crate and cover.

3.03 SURFACE PREPARATION:

A. Conditions: Surfaces to be lined shall be smooth and free of all angular rocks, stones greater than 1 inch, sticks, roots, sharp objects or debris of any kind. The surface shall provide a firm, unyielding foundation. No standing water or excessive moisture shall be allowed.

B. Acceptance: The CQARE and the Installer shall certify in writing to the Owner that the surface to be lined is acceptable. Submittal of written acceptance may proceed incrementally according to installation schedule. No geomembrane shall be placed on subgrade deemed unsuitable by the Installer/or Owner's Representative or the CQARE.

3.04 ANCHOR TRENCH: Excavation, backfill and compaction of the anchor trench will be the responsibility of the General Contractor. The anchor trench shall be excavated along the lines shown on the design drawings. The length of open trench should not exceed the amount of liner to

be placed in a two (2) day period unless approval has been provided by Owner or Owner's testing agency.

The anchor trench shall be partially backfilled during geomembrane panel placement, however the anchor trench shall not be compacted until the geomembrane has experienced sufficient expansion/contraction cycles. Compaction of the anchor trench backfill shall be performed using manually operated compaction equipment. Backfill shall be placed in lifts not greater than 12 inches in loose thickness and shall be compacted to at least 90% of the maximum dry density according to ASTM D 698. This backfill shall be the same as the dike material or clay or impervious barrow free of any debris, sticks etc. Owner's testing agency shall approve backfill material prior to anchor trench placement, and must be notified prior to compaction.

3.05 FIELD SEAMS: The Geosynthetic Quality Assurance Resident Engineer (QARE) can, at his sole discretion, not allow any individual seamer or seaming equipment to be used for the project, based on observations made in the field. The Geosynthetic QARE will notify the Installer of the individual or seaming equipment which may not be used on the project and the reason or steps necessary to demonstrate the person or equipment acceptance on the job. The Installer shall have no recourse for this decision against the Owner, Engineer, or other parties.

A. Layout: Overlap panels in shingle style from high to low elevation. Minimize and/or avoid horizontal seams whenever possible.

B. Preparation: All areas which are to become seam interfaces shall be cleaned of dust and dirt. When extrusion joining is required, the slick surfaces of the HDPE sheet which are to become seam interfaces shall be prepared by sanding or grinding (perpendicular to the seam) to a depth of less than .005 in. before joining the sheets. Field joints shall not take place unless the sheet is dry. Cleaning methods may include, but not be limited to, high pressure washing, scrub brushes, vacuums, etc. Existing geomembrane shall be cleaned thoroughly to their installed condition. A minimum of one destructive seam test shall be taken at the Phase 1 to Phase 2 geomembrane tie-in.

C. Seaming Methods: Installer shall submit to the Owner prior to construction a list of the seaming equipment and testing equipment, including manufacturer and model number to be used on-site. Field seams shall be made by overlapping adjacent sheets a minimum of 3 in. and a maximum of 6 in. and using one of the following seaming techniques:

Hot Air/Hot Wedge: Hot air/hot wedge technique shall be made by either a nozzle which directs hot air between the sheets or a hot metal surface in contact between the sheets. Each seaming unit must include a thermometer giving the temperature of the machine at the nozzle or metal surface. The seaming unit shall maintain a recordable temperature determined by on-site conditions and shall not vary more than 50 deg.F above or below the recommended seaming temperature. The overlapped sheets are then pressed together by mechanical means. Seaming equipment that makes a split hot wedge seam will be the preferred method of seaming; single hot wedge seaming will be allowed only with the approval of the Owner.

Extrusion Bonding: Extrusion and fusion bonding will be limited to areas where hot wedge cannot be used, such as pipe boots, and to any necessary repairs. The use of extrusion and fusion bonding as the primary seaming method will be allowed only with the approval of the Owner. The joining procedure shall consist of softening the liner material by heated air. The temperature of the air impinging on the sheet for this purpose shall range from 420 deg.F to 680 deg.F. The exact temperature used shall be determined by the installation supervisor. Directly following the application of heat, a one and one-half inch minimum width strip of the same high density polyethylene resin from which the sheet is made shall be extruded between the overlapped sheets. The temperature of the resin as it emerges from the extrusion die shall range from 428 deg.F to 536 deg.F. The overlapped sheets shall be firmly pressed together by mechanical means to form the extrusion joint.

Fusion Bonding: Extrusion and fusion bonding will be limited to areas where hot wedge cannot be used, such as pipe boots, and to any necessary repairs. The major seaming of the liner will be done with hot wedge. Fusion bonding shall be by means of a homogeneous overlap extrusion fusion process which provides continuous dynamic integration of the extrudate bead with the lining material. The composition of the extrudate shall be identical to the lining material. The seaming unit shall be capable of continuously monitoring and controlling the temperature of the extrudate and the zone of contact where the machine is actually fusing the lining material. Temperature of the extrudate shall range from 428 deg.F to 536 deg.F.

D. Seaming Wrinkles: Fishmouths or wrinkles at the seam overlaps shall be cut along the ridge of the wrinkle, back into the panel so as to affect a flat overlap. The cut fishmouths or wrinkles shall be seamed as well as possible, and shall then be patched with an oval or round patch extending a minimum of 6 in. beyond the cut in all directions.

E. Repairs: Any required repair of scratches >10% of the sheet thickness and small holes in the liner surface shall be made with the extrusion hand welder. Liner material shall be cleaned of all dirt, dust and other foreign material, all smooth HDPE surfaces roughened, air heated to the prescribed temperature, and a strip of HDPE resin extruded over the hole to produce an extruded welded repair.

F. Quality of Workmanship: All joints, on completion of the work, shall be tightly bonded. Any lining surface showing injury due to crimping, scuffing, penetration by foreign objects or distress from rough subgrade shall, as directed by the Owner's Representative, be replaced or covered and sealed with an additional layer of HDPE of the proper size. The Installer shall inspect the final installation and any defects shall be repaired and tested until satisfactory.

G. No seaming shall be allowed if the Geosynthetic CQA is not on-site.

3.06 PIPE BOOTS, VENTS, MECHANICAL FASTENINGS AND PATCHES: The geomembrane shall be installed around any pipes, concrete structures or other penetrations through the geomembrane in accordance with the detailed Specifications shown on the Drawings. Prior to the start of construction, the Installer may provide, for the approval of the Owner, alternate installation methods or details to successfully perform geomembrane termination.

All clamps, bolts, nuts, gaskets or other materials used to secure the geomembrane shall be compatible with and have a lifespan at least equal to that of the geomembrane. Mechanical fasteners shall be installed using a bandie tool.

Care shall be taken to protect the underside of the geomembrane from damage due to settling at any underbedding to concrete transition.

Extreme care shall be taken while welding around any penetration or similar structure since destructive testing is not likely to be possible in such areas. All seaming in these areas shall be performed by the Installer's Master Seamer and the operations shall be observed on a full time basis by the Owner's Representative. Non-destructive pressure test is applied to the boot as described in Section 3.08 of this specification.

3.07 SEAMING WEATHER CONDITIONS:

A. Normal Weather Conditions: The normal required weather conditions for seaming are as follows:

1. Ambient temperature between 32°F (0°C) and 104°F (40°C).
2. Dry conditions, i.e., no precipitation or other excessive moisture, such as fog or dew.
3. No excessive winds.

The Geosynthetic CQA shall verify that these weather conditions are fulfilled and notify the Project Manager in writing if they are not. Ambient temperature shall be measured by the

Geosynthetic CQA in the area in which the panels are to be placed. The Project Manager will then decide if the installation is to be stopped or special procedures used.

B. Cold Weather Conditions: To assure a quality installation, if seaming is conducted when the ambient temperature is below 32°F (0°C), the following conditions must be met:

1. Geomembrane surface temperatures shall be determined by the Geosynthetic CQA at intervals of at least once per 100 foot of seam length to determine if preheating is required. For extrusion welding, preheating is required if the surface temperature of the geomembrane is below 32°F (0°C).
2. Preheating may be waived by the Project Manager based on a recommendation from the Geosynthetic QARE, if the Installer demonstrates to the Geosynthetic QARE's satisfaction that welds of equivalent quality may be obtained without preheating at the expected temperature of installation.
3. If preheating is required, the Geosynthetic QARE shall inspect all areas of geomembrane that have been preheated by a hot air device prior to seaming, to assure that they have not been overheated.
4. Care shall be taken to confirm that the surface temperatures are not lowered below the minimum surface temperatures specified for welding due to winds or other adverse conditions. It may be necessary to provide wind protection for the seam area.
5. All preheating devices shall be approved prior to use by the Project Manager.
6. Additional destructive tests (as described in Section 4.7 of the Quality Assurance/Quality Control Plan (QAP) shall be taken at an interval between 500 feet and 250 feet of seam length, at the direction of the Geosynthetic QARE.
7. Sheet grinding may be performed before preheating, if applicable.
8. Trial seaming, as described in Section 4.5.4 of the QAP, shall be conducted under the same ambient temperature and preheating conditions as the actual seams. Under cold weather conditions, new trial seams shall be conducted if the ambient temperature drops by more than 5°F from the initial trial seam test conditions.

C. Warm Weather Conditions: At ambient temperatures above 104°F, no seaming of the geomembrane shall be permitted unless the Installer can demonstrate to the satisfaction of the Project Manager that geomembrane seam quality is not compromised.

Trial seaming, as described in Section 4.5.4 of the QA, shall be conducted under the same ambient temperature conditions as the actual seams.

At the option of the Geosynthetic QARE, additional destructive tests (as described in Section 4.7 of the QAP) may be required for any suspect areas.

3.08 QUALITY CONTROL DURING INSTALLATION:

A. All work shall be performed in accordance with the project's Quality Assurance/Quality Control Plan.

B. Site Test Equipment: The Installer shall maintain on site, in good working order, the following items:

Field Tensiometer: The tensiometer shall be motor driven and have jaws capable of traveling at a measured rate of 2 in./min. The tensiometer shall be equipped with a gauge which measures the force in unit pounds exerted between the jaws.

Vacuum Box: The vacuum box shall consist of a rigid housing with a transparent viewing window on top and a soft, closed- cell neoprene gasket attached to the bottom of the housing. The housing shall be equipped with a bleed valve. A separate vacuum source shall be connected to the vacuum box such that a negative pressure can be created and maintained between 4 and 8 inches of mercury to the box. A sudsy solution consisting of soap and distilled water shall be dispensed on the seam immediately ahead of the vacuum box.

Air Pressure Test Equipment: This method shall apply only when the split hot wedge seaming method is used. Equipment shall consist of an air pump capable of generating and maintaining a positive pressure of between 20 and 30 psi. A manometer capable of reading up to 30 psi attached to a needle or nipple shall be used to pressurize the air channel in the seam.

Alternative testing methods shall be submitted to the Owner or his Representative for approval prior to commencement of testing.

C. Non-Destructive Testing:

Thickness: Upon deployment of individual panels, the Owner's Representative shall randomly check the thickness at a minimum of twice (once per side) per 100 linear feet, in conformance with the specification in Section 2.01.

Test Seams: Test seams shall be made at a minimum every 4 hours to verify that adequate conditions exist for field seaming to proceed. Each seamer shall produce a test seam at the beginning of each shift. In addition, if a seaming operation has been suspended for more than 1 hour or if a breakdown of the seaming equipment occurs, a test seam shall be produced prior to resumption of seaming operations.

Test seams shall be made in the field on pieces of the approved geomembrane. Each test seam shall be at least 5 ft long by 1 ft wide and with sufficient overlap for peel testing in the field tensiometer.

Five samples 1 in. wide shall be taken across the seam using an approved template. The samples shall be tested in the field tensiometer, four in peel and one in shear and shall meet the requirements of Section 3.08.D.

If the seam fails to pass, the seaming apparatus shall not be used for field seaming until any deficiencies have been corrected. This shall be verified by the production and successful testing of two consecutive test seams.

Vacuum Testing: All extrusion welded and solid fusion welded seams shall be evaluated using vacuum box testing. Any seam overlap will be trimmed prior to testing.

A sudsy solution shall be applied to the test section and the vacuum box placed over the section. The bleed valve is then closed and the vacuum valve opened. Once a tight seal has been established (2.5 to 3.0 psi), the test section shall be visually examined for a period of not less than 15 seconds to determine whether bubbling of the soapy solution is occurring. The vacuum box is then moved and the process is repeated on the next adjacent section. A minimum 3 in. overlap shall be provided between all test sections.

All locations where bubbling of the sudsy solution was observed shall be clearly marked for repairs with a high visibility marker and recorded by number on field test reports. Any failed portion of seam shall be repaired by cap strip in accordance with Section 3.08.E.

Air Pressure Testing: All hot air/hot wedge seams shall be evaluated using air pressure testing. The seam shall be sealed off at one end and air passed through insuring an open passage. Once the seam is proven continuous the second end of the seam shall be sealed. If a seam end will be an integral part of the geomembrane the sealing shall be done in such a way that it does not harm the geomembrane. The seam should be pressurized to 25-30 psi. The feed valve shall be closed and the pressure sustained for a period of not less than 5 minutes. If a pressure loss of greater than 4 psi is observed or if the required pressure cannot be reached then the seam shall be rejected.

All faulty areas along the seam shall be identified and repaired by cap strip in accordance with Section 3.08.E. Vacuum testing shall be allowed on split wedge welds only when the faulty area cannot be isolated using air pressure testing. Any overlapping material must be removed prior to vacuum testing. All holes created during air pressure testing shall be sealed on completion of the test and vacuum tested.

All seams shall be non-destructively tested by the Installer over their full length to verify the integrity of the seam. Non-destructive testing shall be performed concurrently with field seaming. Prefabricated field seams which will be inaccessible after installation, such as those under structures or fastened to penetrations, shall be tested prior to final installation. All non-destructive testing shall be observed and documented by the Geosynthetic CQA.

Approved non-destructive testing procedure is as above. Alternate procedures shall be submitted for approval to the Owner or his Representative and the Geosynthetic CQA prior to the commencement of non-destructive testing.

Membrane Penetrations: All pipe boot penetrations shall be tested by pressurizing the site manufactured boots with air. The installer will first build the boot on an existing pipe, and then remove it. The boot will then be heat tacked at the top trunk of the boot so the boot can be pressurized. A sacrificial piece of HDPE is then heat tacked to the bottom skirt of the boot. A hole is cut in the sacrificial flap, and using a Shop – Vac motor, the boot is pressurized. Soap and water is applied to the welds on the boot and the installer looks for bubbles. All testing of pipe boots shall be witnessed by the Geosynthetic CQA. Alternative testing methods shall be submitted to the Owner or the Owner's Representative, the CQARE and the MEDEP for approval prior to commencement of testing.

D. Destructive Testing: Destructive testing of field seams shall be performed at selected locations in order to verify the criteria given in section "Test Seams". All sampling and testing shall be done concurrently with field seaming so that verification of field seam properties is made as the work progresses and corrective action implemented.

Test samples shall be taken at an average frequency of one test location per 1,000 ft of seam. Sample locations shall be determined by the Geosynthetic CQARE. The Installer shall not be informed in advance of the locations where the seam samples will be taken.

The Geosynthetic CQA may increase the amount of destructive testing based on the results of previous testing. Additional samples may also be required when the CQARE has reason to suspect the presence of excess crystallinity, contamination, faulty seaming equipment or any other reason affecting seam quality.

The test sample shall measure approximately 12 in. wide by 42 in. long with seam centered lengthwise along the sample. Two one-in. wide sample strips shall be cut using an approved template from both ends of the sample. These strips shall be tested by the Installer in the field tensiometer in both peel and shear in accordance with section "Test Seams". The remainder of the sample shall be cut into two 12-in. lengths, and one 18-in. length. The 18-inch sample shall be taken by the Geosynthetic QARE for independent laboratory testing; of the remaining two, one shall be given to the Installer for his own records or testing, and one shall be kept by the Owner for permanent record.

Samples shall be cut by the Installer under the direction of the Geosynthetic QARE. Each sample shall be indelibly numbered and identified. The sample number and location shall be recorded by the Installer on the panel layout drawing and on the sheet where the sample was taken.

The results of laboratory testing shall be made available to the Installer by the Geosynthetic QARE not more than 48 hours after the samples have been received by the testing facility. The results of laboratory testing shall determine the acceptability of a seam. Laboratory testing shall be performed in accordance with the methods given in ASTM D 413 and ASTM D 6392-99 and meet the following criteria:

Test	Designation	Requirement
Bonded seam strength (shear)	ASTM D 6392/D 6693	4 of 5 coupons must be greater than 90% of parent material strength with none less than 70% of parent material strength* and have an acceptable mode of rupture
Peel adhesion (both tracks)	ASTM D 6392/D 6693	4 of 5 coupons on each side of the weld must be greater than 60% of parent material strength* or 70% of the specified value, whichever is greater, with none less than 50% of parent material strength* and have an acceptable mode of rupture

Note:

* Parent material strength shall be determined by sampling actual sheets adjacent to the destructive test location in the same direction the seam is tested (using the lower value of the two sheets) or by using conformance testing results or manufacturer's roll certification information, but not less than 84 ppi.

Tests for peel adhesion and Shear shall be in a free condition (not 90° or 180°). Acceptable Locus of break codes for the specimen rupture mode shall be the following:

For Dual Wedge Seams: BRK, SE1, SIP and AD-BRK $\leq$ 25% adhesion failure;

For Extrusion Welds: SE1, SE2, SE3, BRK1, BRK2, HT, SIP, AD-WLD if strength is achieved, AD-BRK $\leq$ 25% adhesion failure.

Any seam that fails laboratory testing shall be repaired in accordance with section 3.08(D). The costs of repairing and retesting areas which failed destructive tests shall be the responsibility of the Installer.

The area from which the destructive test sample was taken shall be repaired without delay in accordance with the procedures given in 3.08(D).

E. Inspection and Acceptance: As the work progresses, the Geosynthetic QARE shall document all locations requiring repair work and shall verify and document that all repairs have been successfully made by the Installer.

A field seam shall only be considered acceptable when bounded by two destructive test locations which have passed laboratory testing and applicable non-destructive testing. The following procedures shall apply in the event that a seam fails laboratory testing:

The Installer may reconstruct the seam with cap strips between the previous passing test location and the next passing test location (up to a maximum 75 feet) and retest, or;

The Installer may elect to trace the extent of an unacceptable seam to some intermediate location. This shall involve taking 1-in. template-cut cross-sections from the seam at a minimum distance of 10 ft in both directions from the failed test location. These samples shall be tested in the field tensiometer in both shear and peel in accordance with section "Test Seams". If one or both of these samples fail the field test, tracing along the seam shall continue at minimum 10-ft increments until a passing result is recorded in both directions from the failed test location. At these locations large samples shall be cut for laboratory testing as in section "Destructive Testing". If laboratory testing verifies the acceptability of the seam at these locations, the Installer shall reconstruct the seam (with cap strips) between the two passing test locations. If laboratory testing shows the seam to be unacceptable, the Installer

shall further trace the unacceptable seam until acceptable test results are recorded in both directions.

Reconstructed seams shall be capped by cutting out the unacceptable seam, at least 6 inches each side of the seam and a minimum 6" beyond the defect, and patching with an acceptable material.

Reconstructed seams less than 150 ft in length shall be non- destructively tested in accordance with "Non-Destructive Testing (3.08(C)". Reconstructed seams greater than 150 ft in length shall be destructively tested in accordance with "Destructive Testing (3.08(D)."

The entire geomembrane surface shall be examined by the Geosynthetic QARE to confirm that it is free of any defects, holes, blisters, undispersed raw materials, or contamination by foreign matter. The geomembrane surface shall be cleaned by the Installer, if required so that it is free of dust, mud, debris or any other material which may inhibit a thorough examination of the surface. Any suspect areas shall be clearly marked by the Geosynthetic QARE and non-destructively tested in accordance with section "Test Seams."

F. Overburden: The Geosynthetic QARE shall identify any large wrinkles which may have been built into the geomembrane. Any such wrinkle not built in to accommodate thermal contraction of the geomembrane prior to placement of the overburden shall be cut, repaired and tested by the Installer.

The Geosynthetic QARE shall identify any slope toe, declivity, or other surface transitions which might result in bridging of the geomembrane during placement of the overburden. Any such area shall be cut, repaired and tested by the Installer.

Equipment used for placing and compacting the overburden shall not be driven directly on the geomembrane. Such equipment shall be closely monitored during placement to ensure that no damage occurs.

A minimum thickness of 1 ft of cover shall be maintained between the geomembrane and light earth moving equipment. Such equipment shall have a maximum ground pressure of 5 psi. Equipment shall have no cleats and no turning of any equipment shall be allowed on the initial 1 ft of cover. A minimum thickness of 3 feet of cover shall be maintained between the geomembrane and all tired earthmoving equipment.

In all cases, the placement of overburden shall be done with caution and in a manner which is least likely to cause wrinkles in, or damage to, the geomembrane.

For grades greater than 2 percent, all soil placement shall be done in an upslope direction.

3.09 COMPLETION OF WORK:

A. Requirements: The installation of the geomembrane shall be considered totally complete when: all required deployment, seaming, repairs, testing, and site clean-up have been completed by the Installer; the Installer has submitted all the required quality control certificates to the Owner; and the Geosynthetic QARE is satisfied that the geomembrane has been installed in accordance with the above specifications.

END OF SECTION

SECTION 02772

GEOTEXTILES AND DRAINAGE GEOCOMPOSITE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements (if any) apply to the work specified in this Section.

B. Requirements set forth by the Quality Assurance/Quality Control Plan shall apply to the work specified in this Section. QA/QC is provided as Appendix B in the Construction Specifications document.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Earthwork: Section 02200

B. Erosion Control: Section 02220

C. Textured Geomembrane: Section 02771

D. Interfacial Friction Angle Conformance Testing: Section 02780

1.03 DESCRIPTION:

A. Furnish and install woven, non-woven geotextiles, or geonet, whichever is called for at the locations and in the manner shown on the drawings or as directed by the Engineer.

1.04 SUBMITTALS:

A. If brand name materials other than those suggested in this Section are proposed for use, furnish certified copy of laboratory test results and material sample as evidence that the material is similar and equal in strength, durability, and permeability.

B. Provide the required documentation as identified in Section 1.05 Quality Control.

1.05 QUALITY CONTROL:

A. Manufacturer's Experience: If requested by the Project Engineer, the manufacturer supplying the geotextiles and geocomposite shall satisfactorily demonstrate previous experience by letter of certification. Certification shall indicate that the manufacturer has produced, and has in service in similar applications for a period of not less than one (1) year, at least ten (10) million sq ft of geotextiles and drainage net meeting these Specifications.

B. Installer's Experience: If requested by the Engineer, the Installer proposing to install the geotextile and geocomposite shall satisfactorily demonstrate previous experience by letter of certification. Certification shall indicate the Installer's successful past installation of at least five (5) million sq ft of geotextiles and drainage net.

C. Prior to the installation of any geotextile and drainage geocomposite, the Manufacturer or Installer shall provide the Project Manager with the following information, if requested:

1. The origin (resin supplier's name and resin production plant) and identification (brand name and number) of the resin used to manufacture the geotextile.
2. Copies of the quality control certificates issued by the resin supplier.

3. Reports on tests conducted by the Manufacturer to verify that the quality of the resin used to manufacture the geotextile meets the Manufacturer's resin specifications.
4. Reports on quality control tests conducted by the Manufacturer to verify that the geotextile manufactured for the project meets the project specifications.
5. A statement indicating that the reclaimed polymer added to the resin during manufacturing was done with appropriate cleanliness.
6. A list of the materials which comprise the geotextile, expressed in the following categories as percent by weight: base polymer, carbon black, other additives.
7. A specification for the geotextile which includes all properties contained in the project specifications measured using the appropriate test methods.
8. Written certification that minimum average roll values given in the specification are guaranteed by the Manufacturer.
9. For non-woven geotextiles, written certification that the Manufacturer has continuously inspected the geotextile for the presence of needles and found the geotextile to be needle free.
10. Quality control certificates, signed by a responsible party employed by the Manufacturer. The quality control certificates shall include roll identification numbers, sampling procedures, and results of quality control tests. At a minimum, results shall be given for:

    Geotextile
    a. Mass per unit area
    b. Grab tensile/elongation
    c. Trapezoidal tear strength
    d. Puncture
    e. Apparent opening size
    f. Permittivity
    g. UV resistance

    Drainage Net
    a. Density
    b. Carbon black content
    c. Thickness
    d. Tensile strength

    Drainage Geocomposite
    a. Transmissivity
    b. Ply adhesion

    Quality control tests shall be performed in accordance with the test methods specified in Section 2.01B and 2.01C for at least every 100,000 ft^2 (10,000 m^2) of geonet and geotextile produced.

The Manufacturer shall identify all rolls of geotextiles and drainage geocomposite with the following:
1. Manufacturer's name
2. Product identification
3. Roll number
4. Roll dimensions

D. If requested by the Project Engineer, the geotextile will be sampled by the Geosynthetic CQA or his agent(s), at the manufacturer or upon delivery to the site. Conformance samples shall be collected in accordance with the project's Quality Assurance Quality Control Plan. The Geosynthetic CQA shall assure that conformance test samples are obtained for the geotextile at a rate of 1 test per 100,000 square feet of each geotextile and geocomposite with a minimum of once per lot, for testing, to assure conformance to the specification. A lot consists of a group of material which is manufactured from a specific batch of raw materials (e.g., HDPE resin, or bentonite clay). The manufacturer shall identify the consecutively numbered rolls of material that are inclusive within a lot. It is not required that all rolls included in a lot be supplied to the project, as long as the specified certification test results are supplied by the

manufacture to bracket the rolls delivered to the project. Conformance tests shall be performed in accordance with the test methods specified in Section 2.01.

The Contractor or sub-contractor shall coordinate information on manufacture and delivery of the geotextile with the Geosynthetic CQA to assure that sampling and testing occur in a timely manner as to avoid construction delays.

Any further testing required to assure conformance shall be the responsibility of the Contractor in accordance with 1.05(B) and (C) of Section 01025. The testing laboratory and the results shall be acceptable to the Engineer.

The following conformance tests shall be performed on the geotextile and geocomposite:

1. Geotextile
   Mass per unit area
   Grab tensile/elongation
   Trapezoidal tear strength
   Puncture
   Permittivity
   Apparent opening size

2. Drainage Geocomposite
   Transmissivity
   Ply adhesion
   Tensile strength (geonet)
   Interfacial friction angle
   a. Between drainage geocomposite and textured HDPE geomembrane
   b. Between cover soil and drainage geocomposite

Conformance tests shall be performed in accordance with the test methods specified in Section 2.01B and 2.01C. Interfacial friction angle testing shall be done according to Section 02780 and at a frequency as indicated in Section 02780.2.01(E).

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Non-Woven Geotextiles:

1. Produced by heat bonding or needle punching.
2. The network of fibers shall be bonded so the fibers will retain their relative position with respect to each other.
3. Fibers may be made from polypropylene or polyester.
4. Geotextile shall be resistant to rot, mildew, insects, salt water, rodents, and any other biological and chemical substances commonly encountered in the ground.

a. 6 oz/sy: The geotextile heat bonded to both sides of the HDPE drainage net shall meet the minimum requirements listed below.

Property	Unit	Test Method	Value
Weight	oz/yd^2	ASTM D 5261-92	6
Grab Strength	lbs	ASTM D 4632	160
Trapezoid Tear Strength	lbs	ASTM D 4533	60
CBR Puncture Strength	lbs	ASTM D 6241	450
Apparent Opening Size	Std Sieve	ASTM D 4751	70
Permittivity	sec^{-1}	ASTM D 4491	1.4
UV Resistance	%/min. 500 hr	ASTM D 4355	70

b. 8 oz/sy: The geotextile used as a separation fabric shall meet the minimum requirements listed below.

Property	Unit	Test Method	Value
Weight	oz/yd^2	ASTM D 5261-92	8
Grab Strength	lbs	ASTM D 4632	205
Trapezoid Tear Strength	lbs	ASTM D 4533	80
CBR Puncture Strength	lbs	ASTM D 6241	500
Apparent Opening Size	Std Sieve	ASTM D 4751	80
Permittivity	sec^{-1}	ASTM D 4491	1.2
UV Resistance	%/min. 500 hr	ASTM D 4355	70

B. Drainage Geocomposite:

1. Fabric wrapped high density polyethylene (HDPE) geonet drainage media.
2. Geonet: Two overlapping strands of HDPE.
3. Geotextile fabric heat-bonded to both sides of geonet Fabric shall be bonded to the geonet so that it lies flat on the geonet, free of wrinkles and folds.
4. The geotextile shall be bonded to the geonet over 100 percent of the surface. Any material not meeting this requirement will be rejected for use on this project.
5. Geotextile extends a minimum of 2 inches beyond the edge of the geonet. The fabric edge shall be true and even to the edge of the geonet.
6. Drainage geocomposite for Type I application (see Design Drawings) shall be Skaps TN-330-2-6 or equal. Drainage geocomposite for Type II application (see Design Drawings) shall be Skaps TN-270-2-6 or equal.
7. Drainage geocomposite conforming to the following properties:

Property	Unit	Test Method	Value
Specific Gravity (geonet)	gm/cm^3	ASTM D 1505-96	0.94
Melt Flow Index (geonet)	gm/10 min.	ASTM D 1238-95 (Condition 190/2.16)	1.0
Thickness (geonet) Type I Type II	 mil mil	 ASTM D 5199 ASTM D 5199	 304/330 min / max 270/330 min / max
Percent Carbon Black (geonet)	%	ASTM D 4218	2-3
Transmissivity	m^2/sec	ASTM D 4716	See Note A.
Ply Adhesion	lbs/in	ASTM D 7005-03	1.0 min
Tensile Strength at Yield MD (geonet) Type I Type II	lbs/in	ASTM D 5035	 75 55
Note A At a normal pressure of 500 psf, the Type I drainage geocomposite shall have minimum required transmissivities of 1.1×10^{-3}, 6.5×10^{-4}, and 4.2×10^{-4} m^2/sec at gradients of 0.10, 0.20, and 0.33, respectively. At a normal pressure of 500 psf, the Type II drainage geocomposite shall have a minimum required transmissivity of 6.0×10^{-4}, 3.2×10^{-4}, and 2.3×10^{-4} m^2/sec at a gradients of 0.05, 0.10, and 0.20, respectively. The locations where the two types of drainage composite will be used are shown on the project drawing.			

The minimum calculated required transmissivity $q_{(qreqd)}$ has been determined as follows:

$$q_{reqd} = q_{design}\,[FS_d x RF_{IN} x RF_{CR} x RF_{CC} x RF_{BC}]$$

Where; q_{design}

Minimum calculated design transmissivity for geocomposite shall be as given below:

q_{design} (Type I) =

Maximum Slope (33%) = 4.7×10^{-4} m^2/sec
Intermediate Slope (20%) = 6.5×10^{-4} m^2/sec
Upper Slope (10%) = 1.1×10^{-3} m^2/sec

q_{design} (Type II) =

Minimum Slope (5%) = 6.0×10^{-4} m^2/sec
Intermediate Slope (20%) = 2.3×10^{-4} m^2/sec
Upper Slope (10%) = 3.2×10^{-4} m^2/sec

FS_d Factor of Safety for drainage = 2.0
RFIN Intrusion Reduction Factor = 1.2[1]
RFCR Creep Reduction Factor = 1.1[1]
RFCC Chemical Clogging Reduction Factor = 1.1[1]
RFBC Biological Clogging Reduction Factor = 3.0[1]

Notes

1. These Reduction Factor (RF) values were assumed in this analysis, based on published data for a wide range of geocomposite drainage materials. Project specific RF values can be applied during the material approval process if supporting documentation is provided by the manufacturer and approved by the project engineer.

Each type of drainage geocomposite shall meet the following requirement:

$$q_{100} \geq q_{reqd}$$

Where,
2100P
Flow rate of the geocomposite tested in accordance with ASTM D 4716 for all manufacturers quality control and quality assurance conformance testing, with the following conditions:

- performed between two steel plates;
- test duration = 15 mins;
- performed at a normal pressures of 500 psf;
- tested at hydraulic gradient of 0.10, 0.20, and 0.33 (Type I) and 0.05, 0.10, and 0.20 (Type II); and
- oriented in the machine direction.

Notes

1. These Reduction Factor (RF) values were assumed in this analysis, based on published data for a wide range of GCD materials. Project specific RF values shall be applied during the material approval process and shall be based on supporting documentation provided by the manufacturer and approved by the project engineer.

C. Interfacial Friction Angle:

1. Between drainage geocomposite and textured HDPE geomembrane.
2. Between cover soil and drainage geocomposite.
3. Interfacial friction angle properties shall be in accordance with the test methods specified in Section 02780.

PART 3 - EXECUTION

3.01 PREPARATION OF BASE FOR GEOTEXTILE: Subgrade surfaces shall be properly graded and compacted as called for. All sharp or protruding objects shall be removed from the subgrade surface prior to fabric placement. Geotextile fabric shall not be placed until the foundation preparation is completed and the subgrade surfaces have been inspected and approved by the Engineer.

3.02 INSTALLATION:

A. Geotextile installation shall be in accordance with manufacturer's recommendations and shall include the following considerations:

1. Place in the manner and at the locations shown on the drawings.
2. At the time of installation, geotextile shall be rejected if it has defects, rips, holes, flaws, deterioration, or damage incurred during manufacture, transportation, placement, or storage.
3. Roll Direction: Place long dimensions perpendicular to the sideslopes (i.e., up and down). Lay smooth and free of tension, stress, folds, wrinkles, or creases.
4. Join adjacent panels of geotextile with a sewn J-stitch along the entire length of the panels, or provide a minimum 6-inch overlap of geotextile in pipe trench.

B. Drainage Geocomposite Placement:

1. Place in the manner and at the locations shown on Drawings.

2. At the time of installation, drainage net shall be rejected if it has defects, rips, flaws, deterioration, or damage incurred during manufacture, transportation, or storage.
3. Join adjacent sheets of geonet with plastic ties spaced at minimum of 5 feet on-center. Adjoining sheet ends should be tied at 6 inches on-center or heat-welded along entire width.
4. Place long dimensions perpendicular to the sideslopes (i.e., up and down). Lay smooth and free of tension, stress, folds, wrinkles, or creases.
5. Provide a minimum width of 2 in. of overlap for each joint of the geotextile.
6. Tack seal or sew the overlapping geotextiles. Geotextile shall be sewn if in direct contact with soil components.
7. Place so that the upstream strip of geotextile will overlap the downstream strip.
8. Geonet geocomposite used on the sideslopes shall be extended into the anchor trench as shown on the drawing.
9. No horizontal seams shall be placed closer than 20 feet from the top of slope or on any 3 H to 1V sideslopes.

C. Geocomposite Protection: The quality assurance procedures indicated in this Section are intended only to assure that the installation of adjacent materials does not damage the geocomposite. Soil materials placed on the geosynthetic material shall be placed in accordance with specifications in this Section and in Section 02200 para. 3.10.

Soils:

1. Placement of soils on the geocomposite shall not proceed at an ambient temperature below 32°F (0°C) nor above 104°F (40°C) unless otherwise specified.
2. Placement of soil on the geocomposite should be done during the coolest part of the day to minimize the development of wrinkles in the geocomposite.
3. Equipment used for placing soil shall not be driven directly on the geocomposite.
4. A minimum thickness of 1 foot of soil is specified between a light dozer (ground pressure of 5.44 psi or lighter) and the geocomposite along any travel ways. Grading of soil to final depth shall be done to limit the number of passes to achieve required depth.
5. In any areas traversed by any vehicles other than low ground pressure vehicles shall have a minimum thickness of 3 feet. The location of these areas shall be limited by the provisions in Section 02200 para. 3.10. This requirement may be waived if provisions are made to protect the geomembrane through an engineered design. Drivers shall proceed with caution when on the overlying soil and prevent spinning of tires or sharp turns.

D. Protection of Geotextile and Drainage Net:

1. Upon delivery to the site, geotextiles shall be set up off the ground and be wrapped with a plastic tarp or stored inside a trailer or building to prevent dust clogging.
2. Exercise necessary care while transporting, storing, and installing the geotextile to prevent damaging it.
3. Protect from prolonged direct exposure to sunlight.
4. Repair all damaged areas of the geotextile by placing another piece of geotextile of sufficient size to extend a minimum of 1.0 foot beyond the limits of the damage in all directions over the damaged area.
5. Do not leave exposed more than 30 days without being covered by backfill.
6. Overlap successive pieces of geotextile a minimum of 1.0 foot.
7. When required, sew overlaps and repairs to damaged geotextile using a portable machine to provide seam strengths of at least 90 percent of the filter fabric strength concentration.

END OF SECTION

SECTION 02780

INTERFACE FRICTION CONFORMANCE TESTING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this Section.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Project Coordination: Section 01041

B. Earthwork: Section 02200

C. Geomembrane Liner (HDPE): Section 02771

D. Geotextiles and Drainage Geocomposite: Section 02772

1.03 DESCRIPTION OF WORK: The work in this Section includes all labor, materials, tools, and equipment necessary to perform conformance interface friction testing for the following interfaces:

1. 40-mil HDPE textured geomembrane (outside of roll) and drainage geocomposites Type I and Type II.
2. Underdrain Sand and 40-mil HDPE textured geomembrane (inside of roll).
3. Cover Soil and Drainage Geocomposite.

1.04 QUALITY CONTROL: (furnished by Geosynthetic Laboratory)

A. Geosynthetics Quality Conformance Laboratory (QCL) Experience. The testing laboratory performing the interface friction conformance testing shall be accredited by the Geosynthetics Accreditation Institute for interface friction testing and shall have satisfactorily demonstrated previous experience by letter of certification. Certification shall indicate the testing laboratory's experience with the materials to be tested and any limitations the materials may evoke on the testing program.

B. Test Method. The Geosynthetics QCL shall perform the required interface friction testing in accordance with ASTM D 5321.

C. Test Reports. The Geosynthetics QCL shall provide test results to the project manager within 5 days of receipt of test samples. Test results shall be in the form of figures that present shear force versus displacement and shear stress versus normal stress. Both the peak strength and the large displacement strength shall be plotted. The laboratory shall report any influences or conditions that may have affected the test results. The laboratory shall indicate the correlation coefficient of the best fit lines drawn through the strength data, and the resulting peak strength and large displacement strength values for adhesion and friction angle.

PART 2 – MATERIALS AND TESTING CONDITIONS

2.01 MATERIAL SAMPLING:

A. Materials to be tested shall be obtained from materials that will be placed into service at the Dolby Landfill in East Millinocket, Maine.

B. Sample size shall be determined by the Geosynthetic QCL requirements.

C. Label outside and inside of roll on each sample.

D. Soil components used in the laboratory testing shall be obtained from the borrow source or from soil stockpiles to be utilized in the construction of the soil components of the Dolby Landfill Cover Upgrade Project.

E. Sample and testing frequency for geosynthetics components shall be as indicated below.

Interface	Testing Frequency
HDPE textured geomembrane/drainage geocomposite	2 tests per Phase
HDPE textured geomembrane/Sand (Gas Collection)	1 test per Phase
Cover Soil/Drainage Geocomposite	1 test Per Phase

Test frequency represents minimum number of tests. Additional tests may be required at the discretion of the CQA project manager.

2.02 TESTING CONDITIONS:

The following testing conditions shall be utilized for interface friction testing:

A. Use 12-inch by 12-inch-square direct shear apparatus as defined by Test Method ASTM 5321.

B. Test specimens shall be fully secured to the direct shear apparatus to prevent premature slippage.

C. Use site-specific soils and materials.

D. Test all geosynthetics in the direction parallel to the length of the roll (machine direction).

E. Orient surface texturing of HDPE textured geomembrane so that machine direction is oriented parallel to the direction of movement of the testing apparatus.

F. Soil components shall be remolded into the testing apparatus according to the project earthwork specification Section 02200.

G. Tests shall be run wet.

H. The seating pressure, seating time, normal pressure(s), consolidation time and strain rate for each interface to be tested shall be as indicated below:

Interface	Seating Stress (psi)	Soak Time (hrs)	Normal Stress(es) (psf)	Consolidation Time After Application of Normal Pressure (hrs)	Shear Force Displacement Rate (in/min.)
HDPE textured geomembrane/drainage geocomposite	-	-	100, 200, 400	4	0.2
HDPE textured geomembrane/Underdrain Sand	-	-	100, 200, 400	4	0.2
Cover Soil drainage geocomposite	0.5	2	100, 200, 400	4	0.2

All tests shall be run out to 20 percent strain in the shear displacement direction. The large-displacement strengths shall be defined as the strength occurring at horizontal strain.

PART 3 – MINIMUM REQUIREMENTS

3.01 The geosynthetic materials tested shall demonstrate their adequacy for use in the construction of the landfill by meeting or exceeding the following minimum requirements:

Each of the tested interfaces shall have test results for peak and large-displacement strengths that plot above the "required strength envelopes" as defined in the following table.

The following table provides the required minimum interface shear strength for the associated normal stresses.

Tested Normal Stress (psf)	**Required Peak Shear Strength (psf)**	**Required Large-Displacement Strength (psf)**
100	55	46
200	110	93
400	219	185

3.02 REVIEW OF TEST RESULTS:

The Geosynthetic QARE project manager shall review all test reports to determine if the test results meet the minimum requirements stated above.

3.03 RETESTING:

The contractor, installer, and the manufacturer may elect to retest failed tests. Testing may be done at the same laboratory or an independent laboratory. The testing laboratory shall be approved by CQA project manager, and the testing conditions shall be in accordance with ASTM 5321 and this section. Testing shall be done at contractor's installer's, or manufacturer's expense. Test results shall be reviewed by the CQA project manager.

END OF SECTION

SECTION 02800

SEEDING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: The general provisions of the Contract, including General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this Section.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

A. Sitework - General: Section 02000

B. Earthwork: Section 02200

C. Erosion Control: Section 02220

1.03 DESCRIPTION OF WORK: Work specified in this section shall consist of furnishing all labor, materials, and equipment to perform seeding work in conformity with the Contract Drawings and as specified herein. Excavation, filling, and grading required to establish elevations shown on the Drawings are not specified in this Section. Refer to Section 02200, Earthwork.

1.04 QUALITY ASSURANCE: Subcontract the seeding work to a single firm specializing in landscape work.

A. Source Quality Control:

1. General: Ship landscape materials with certificates of inspection as required by governmental authorities. Comply with governing regulations applicable to landscape materials.
2. Analysis and Standards: Package standard products with manufacturer's certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agricultural Chemists, wherever applicable or as further specified.
3. Topsoil: Before delivery of topsoil, furnish written statement giving location of properties from which topsoil is to be obtained, names and addresses of owners, depth to be stripped, and crops grown during past 2 years, if requested by the Owner's Representative.
4. Grass Seed: All seed shall be certified as to mixture, germination, and purity, as being in conformity with the following requirements:
   a. Each variety of seed shall have a percentage of germination of not less than 80, a percentage of purity of not less than 85, and shall have not more than one percent of weed content.
   b. All seed shall be from the same or previous year's crop unless recent tests by an approved testing agency demonstrates that older seed meets the above requirements.
5. Inspection: The Owner's Representative reserves the right to inspect any plant materials either at the place of growth or at the site before planting, for compliance with requirements for name, variety, size, and quality.

1.05 SUBMITTALS

A. Certification: For information only, submit 2 copies of certificates of inspection as required by governmental authorities, and manufacturer's or vendors analysis for soil amendments and

fertilizer materials. Submit other data substantiating that materials comply with specified requirements.

Submit seed vendor's certified statement for each grass seed mixture required, stating botanical and common name, percentage by weight, and percentages of purity, germination, and weed seed for each grass seed species.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING:

A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery, and while stored at the site. Provide empty container of seed mix to the Owner's Representative upon completion of the project.

1.07 JOB CONDITIONS: Contractor must examine the subgrade, verify the elevations, observe the conditions under which work is to be performed and notify the Owner's Representative of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

Proceed with and complete the seeding work as rapidly as portions of the site become available, working within the required seasonal limitations.

A. Seeding Seasons: Unless variance is requested in writing and approved by the Owner's Representative, seeding shall be done within the following dates:

Permanent Seeding:	April 1 – September 15
Temporary Seeding:	September 16 - March 31

PART 2 - PRODUCTS

2.01 TOPSOIL (STRIPPINGS): Loam or approved topsoil removed within the confines of the project area shall be segregated into piles, cleaned sufficiently, and reused in accordance with Section 02200, Earthwork. If quantity of stockpiled topsoil is insufficient, or quality is not in accordance with the requirements for new topsoil, the Contractor shall provide additional new topsoil from approved sources off the site as required to complete landscape work. Manufactured topsoil will be allowed with approval of the MEDEP and the Owner.

Provide new topsoil as required which is fertile, friable, natural loam, surface soil, reasonably free of subsoil, clay lumps, brush, weeds and other litter, and free or roots, stumps, stones larger than 2 inches in any dimension (via screening or hand picking), and other extraneous or toxic matter harmful to plant growth. Obtain topsoil from local sources or from areas having similar soil characteristics to that found at project site. Obtain topsoil only from naturally, well-drained sites where topsoil occurs in a depth of not less than 4 inches; do not obtain from bogs or marshes. Mulch peat or other excessively acidic soil shall not be used. Sand, silt, and clay contents comprising existing or new topsoil shall fall within the following ranges for a sandy loam:

Sand	55%-70%
Silt	2%-40%
Clay	10%-20%

Submit representative soil samples of topsoil from off-site sources to University of Maine, Maine Soil Testing Service, Orono, Maine, as described in Section 02200 to ascertain what amendments may be necessary to obtain proper tilth, nutrient characteristics, and pH balance in accordance with the following. Provide amendments as necessary at rates indicated on the soil test in accordance with the following criteria:

Organic Matter: Greater than 5% organic matter (by weight)
pH range: 5.8 to 6.2
Phosphorus/Potassium: Optimum range
Soluble Salt: Less than 500 ppm

A. Soil Amendments:

1. Lime: Natural limestone containing not less than 90 percent of total carbonates, ground so that not less than 100 percent passes a No. 10-mesh sieve, not less than 90 percent passes a No. 20-mesh sieve, and not less than 50 percent passes a No. 100-mesh sieve.
2. Fertilizer: Fertilizer shall contain available elements in conformity with the standards of the Association of Official Agricultural Chemists. The fertilizer shall indicate the weight, contents, and guarantee analysis shown thereon or on a securely attached tag, as applicable. The selection of fertilizer shall be based on the recommended ratio of nitrogen, phosphate, and potash for the soil as determined by the chemical analysis of soil samples.
3. Manufactured Soil: If the Contractor intends to use manufactured soils, the Contractor shall include in his bid the cost to monitor the site during the growing season over time (minimum 3-year period), perform soil testing described above (including available nitrogen), and supplement soils based upon soil tests recommendations. A copy of all soil tests shall be submitted to the Owner. There shall be no extra cost for soil testing, applying recommended soil amendments or reworking the soil and reseeding the area to repair erosion or establish the required minimum 90 percent grass catch. The appropriate amount of retainage shall be determined between the Owner and the General Contractor to comply with this requirement prior to completion of the project.

2.02 GRASS MATERIAL:

Grass Seed: Provide fresh, clean, new-crop seed complying with the tolerance for purity and germination established by the Official Seed Analysts of North America. Provide seed of the grass species, proportions, and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified.

The seed mixtures shall consist of seeds proportioned by weight as follows:

Permanent Seeding (180 lbs/acre)		**Temporary Seeding (120 lbs/acre)**	
Red Fescue	50%	Winter Rye	100%
Red Top	2%		
White Clover	5%		
Annual Ryegrass	25%		
Birdsfoot Trefoil	3%		
Kentucky Bluegrass	15%		

2.03 MISCELLANEOUS LANDSCAPE MATERIALS:

A. Mulch for Seeded Areas: Hay and straw mulch may be used at any time while cellulose fiber mulch may only be used between April 1 and September 1 and with the engineers approval.

1. Hay or straw mulch shall consist of long fibered hay or straw, reasonably free from noxious weeds and other undesirable material. No material shall be used which is too wet, decayed, or compacted as to inhibit even and uniform spreading. No chopped hay, grass clippings, or other short fibered material shall be used unless directed. If necessary, mulch netting will be used to anchor the mulch as directed by the Owner's Representative. Radix mulch netting manufactured by Tenax (1-800-356-8495), A.H. Harris (207-775-5764) or an engineer approved equal shall be used to anchor the mulch.

2. Cellulose fiber mulch shall consist of natural wood, recycled paper of humus cellulose fiber containing no materials which will inhibit seed germination or plant growth. Sufficient non-toxic water soluble green dye shall be added to provide a definite color contrast to the ground surface to aid in even distribution. Cellulose fiber mulch shall be supplied in moisture resistant, sealed bags marked with the manufacturer's name, the air-dry weight, and composition of the contents. Note, cellulose fiber mulch may only be applied between April 1 and September 1.

B. Mulch Binder: Material for mulch binder may be those acceptable to the Owner's Representative and may be diluted with water to assure even distribution. Other types of approved mulch binders may be used when authorized by the Owner's Representative.

PART 3 - EXECUTION

3.01 SEEDING:

A. Do not use wet seed or seed which is moldy or otherwise damaged in transit or storage.

B. Rates of Application: Rates of application for limestone, fertilizer, and grass seed shall be as follows:

Limestone:	Based on soil lab test results
Fertilizer:	Based on soil lab test results
Seed:	180 lbs/acre permanent seeding
	120 lbs/acre temporary seeding

Areas receiving temporary seeding shall be reseeded with permanent seeding during the next permanent seeding season as soon as weather conditions permit.

C. The hydraulic spray method shall be used for seeding all areas unless alternative methods are approved by the Owner's Representative.

D. Application Procedure:

1. Hydraulic Spray Method: The hydraulic spray method of sowing seed shall be done with an approved machine operated by a competent crew. Seed and fertilizing materials shall be mixed with water in the tank of the machine and kept thoroughly agitated so the materials are uniformly mixed and suspended in the water at all times during operation. The spraying equipment must be designed and operated to distribute seed and fertilizing materials evenly and uniformly on the designated areas at the required rates. If the Owner's Representative finds the application uneven or otherwise unsatisfactory, he may require the hydraulic spray method to be abandoned and the balance of the work done as specified under another method.

E. Mulching:

1. Cellulose fiber mulch shall be applied as a waterborne slurry. The cellulose fiber and water shall be thoroughly mixed and sprayed on the area to be covered so as to form a uniform mat of mulch at the rate of not less than 60 pounds at mulch material per 1,000 square feet unit of area. The cellulose fiber mulch shall completely cover the exposed ground surface.
2. Cellulose fiber mulch may be mixed with the proper quantities of seed, fertilizer, and agricultural limestone as required, or may be applied separately the next day after seeding.
3. Hay or straw mulch shall be spread evenly and uniformly over any designated areas or as directed by the Owner's Representative in the field so to avoid damage to seeded areas.

Unless otherwise directed, mulch shall be applied at the rate of 2 tons per acre and shall completely cover the ground surface. Too heavy application of mulch shall be avoided. Lumps and thick mulch material shall be thinned.

4. Unless otherwise authorized, the mulch shall be anchored in place by uniformly applying an acceptable mulch binder at a rate of 10 to 13 gallons per 1,000 square feet. Application of a concentrated stream of mulch binder will not be allowed. Other methods of anchoring mulch such as mulch netting shall be used as directed by the Owner's Representative.
5. Areas which cannot be seeded within the normal growing season (i.e., April 1 to September 15) shall be temporary seeded and mulched to provide protection to the soil surface. The area shall be mulched with hay and tacked with fiber mulch or another engineer approved tackifier. The areas will be reseeded with permanent seed as soon as seeding dates and weather conditions permit. Mulch netting will be installed per the manufacturer's recommendations.

3.02 MAINTENANCE AND ACCEPTANCE:

A. Seeded Areas:

1. Maintain seeded areas by watering, fertilizing, weeding, mowing, trimming, and other operations such as rolling, regrading and replanting as required to establish a smooth, acceptable grass growth, free or eroded or bare areas.
2. The Contractor shall maintain each seeded area until acceptance of the individual area. Maintenance shall consist of providing protection by erecting necessary signs and barriers and by repairing damaged areas as directed. Damaged areas and areas which do not produce a satisfactory stand of grass shall be repaired to re-establish the condition and grade of the area prior to the original seeding and then refertilized, reseeded and remulched as specified to produce satisfactory results. Necessary maintenance or repairs will not be paid for separately, but shall be considered incidental to the Contract.
3. Seeded areas will be accepted only upon attainment of a reasonable thick uniform stand of not less than 90 percent coverage of permanent grasses, free from sizable thin or bare spots.

3.03 CLEANUP AND PROTECTION: During landscape work, store materials and equipment where directed. Keep pavements clean and work area in an orderly condition.

Protect landscape work and materials from damage due to landscape operation, operations by other contractors, and trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed.

3.04 RESTORATION: All pavements, sodded and planted areas, structures, and substructures not specifically provided for in the Contract disturbed by the Contractor during the execution of the work shall be restored by the Contractor, in a manner satisfactory to the Owner's Representative, to their original conditions at no additional cost to the Owner.

END OF SECTION

APPENDIX A

MEDEP BOARD ORDER

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

BOARD ORDER

IN THE MATTER OF

STATE OF MAINE, ACTING THROUGH THE	)	SOLID WASTE
DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL	)	LICENSE
SERVICES, BUREAU OF GENERAL SERVICES	)	
EAST MILLINOCKET, PENOBSCOT COUNTY, MAINE	)	
DOLBY LANDFILL FACILITY	)	
#S-000796-WO-AO-N	)	FINAL CLOSURE
(APPROVAL WITH CONDITIONS)	)	

Pursuant to the provisions of the *Maine Hazardous Waste, Septage and Solid Waste Management Act,* 38 M.R.S. §§1301 to 1319-Y; the *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2 (last amended October 19, 2015); and the *Solid Waste Management Rules: General Provisions,* 06-096 CMR 400 (last revised April 6, 2015); *Landfill Siting, Design and Operation*, 06-096 CMR 401 (last revised April 12, 2015); and *Water Quality Monitoring, Leachate Monitoring, and Waste Characterization,* 06-096 CMR 405 (last revised April 12, 2015), the Department of Environmental Protection ("Department") has considered the application of the STATE OF MAINE, acting through the Department of Administrative and Financial Services, Bureau of General Services, with its supportive data, agency review comments, staff summary, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

A. Application: The Department of Administrative and Financial Services, Bureau of General Services ("DAFS/BGS") has applied for a license to close an existing paper mill landfill facility in East Millinocket.

B. History:

(1) On June 13, 1984, the Great Northern Paper Company ("GNP") received Department approval to construct and operate the Dolby III landfill (Department license #L-000796-07-A-N).

(2) The Dolby III landfill occupies approximately 72 acres and has been operated in stages consisting of 17 waste cells. Operations are currently in Cell 16.

(3) The originally-approved waste streams were wastewater sludges, woodroom/woodyard waste, wood ash, and general rubbish from GNP's Millinocket and East Millinocket paper mills and municipal solid waste from the local communities. The disposal of municipal solid waste was discontinued in 1993 in response to new federal solid waste regulations. The site also includes the Dolby I and Dolby II landfills, which have been filled to licensed capacity and are closed. Dolby I, II and III are hereinafter collectively referred to as the Dolby Landfill Facility.

(4) On April 28, 2003, the Department approved the transfer from GNP of all solid waste licenses, and other Department licenses, associated with the Dolby Landfill Facility to Katahdin Paper Company LLC ("KPC").

(5) On August 30, 2011, the Maine State Planning Office ("SPO") acquired the Dolby Landfill Facility and related properties from KPC. On September 28, 2011, the Department approved the transfer of all solid waste licenses (Department license #S-000796-WR-AJ-T), and other Departmental licenses, associated with the Dolby Landfill Facility to the SPO from KPC.

(6) Since the issuance of the aforementioned transfer license, the SPO has been dissolved and responsibilities for the oversight and operation of the Dolby Landfill Facility have been turned over to the DAFS/BGS.

C. Summary of Proposal: The DAFS/BGS is proposing to close the remaining open portions of Dolby III and upgrade the cover system of previously closed areas of Dolby II and Dolby III in several phases over the next few years. The entire project is hereinafter referred to as the Dolby Landfill Cover Upgrade Project. An Application for Landfill Closure entitled Dolby Landfill Cover Upgrade - Phase I (hereinafter "Application" or "Dolby Landfill Cover Upgrade Project - Phase I") was prepared by Sevee & Maher Engineers, Inc. and is dated April 2016. The Department accepted the Application as complete for processing on April 27, 2016.

2. TITLE, RIGHT, OR INTEREST

The Dolby Landfill Facility site is approximately 436 acres in size. The DAFS/BGS has submitted an executed copy of the Acquisition Agreement, dated August 30, 2011, that conveyed the property that the Dolby Landfill Facility is located on from KPC to the SPO. The SPO was dissolved in 2011 and ownership of the Dolby Landfill Facility was

transferred to the DAFS/BGS by PL 2011, c. 655; thereby, establishing the DAFS/BGS as the owner/operator of the facility.

The Department finds that the DAFS/BGS has submitted sufficient evidence of title, right, or interest with respect to the property proposed for use.

3. NOTICE OF INTENT

The DAFS/BGS has provided documentation of the publication of a "Notice of Intent to File" and has documented notification of abutters as required by 06-096 CMR 2. The Notice of Intent to File was published in the March 19-20, 2016 edition of the Bangor Daily News.

The Department finds that the DAFS/BGS has complied with all of the public notice requirements of 06-096 CMR 2.

4. FINANCIAL ABILITY AND ASSURANCE

The DAFS/BGS has allocated approximately $12 million for the proposed closure/cover system upgrade at the Dolby Landfill Facility. The funds for the Dolby Landfill Cover Upgrade Project were included in the 2016-2017 State of Maine biennial budget (PL 2015, c. 267 Part M). The Dolby Landfill is a state-owned facility and is not subject to the financial assurance requirements of 06-096 CMR 400(11) of Maine's *Solid Waste Management Rules* ("Department Rules").

The Department finds that the DAFS/BGS has provided adequate evidence of financial ability and assurance for the proposed Dolby Landfill Cover Upgrade Project.

5. TECHNICAL ABILITY

The DAFS/BGS has retained Sevee & Maher Engineers, Inc. ("SME") of Cumberland, Maine to assist with the design, construction management and oversight of the Dolby Landfill Cover Upgrade Project. SME was formed in 1985 to provide civil and environmental services to private and public sectors. Services provided by SME include siting, design, permitting, and operation of solid waste landfills. Personnel from SME have been involved with various aspects of the design and operation of the Dolby Landfill Facility since the mid 1980's. SME provided information regarding the technical ability of its personnel who will be utilized to design, manage, and oversee the construction of the Dolby Landfill Cover Upgrade Project. The DAFS/BGS and SME will also work with earthworks and geosynthetics contractors experienced in landfill cover construction to complete the project. Post-closure care and maintenance of the

facility will continue to be provided by the DAFS/BGS using personnel familiar with the site.

The Department finds that the DAFS/BGS has demonstrated technical ability for the proposed Dolby Landfill Cover Upgrade Project.

6. LIABILITY INSURANCE

The DAFS/BGS is a public entity and is exempt from the liability insurance requirements of 06-096 CMR 400(10).

The Department finds that the DAFS/BGS is exempt from the liability insurance requirements of 06-096 CMR 400(10) of the Department Rules.

7. SURFACE WATER QUALITY AND FLOODING

Stormwater from the Dolby Landfill site is managed in accordance with the facility's Stormwater Pollution Plan and is in compliance with the Maine Multi-Sector General Permit Sector L. In general, surface water from the site flows towards the Partridge Brook Flowage, which then flows into Dolby Pond. Partridge Brook Flowage is not listed as an impaired water body. Stormwater management for the facility includes 3 separate sediment/detention ponds that are positioned near the downslope perimeter of the Dolby III landfill. Runoff from the closed landfill areas and access roads enter grass and stone lined ditches that flow into the sediment/detention ponds. Discharges from each sediment/detention pond flow into level spreaders and then become sheet flow into the adjacent wooded areas.

Since the Dolby III landfill ceased operations prior to reaching its permitted final waste grade, the proposed final grading plan will have sideslopes that are flatter in some areas than previously expected. The proposed cover upgrades will also utilize existing cover material to re-establish a vegetative cover surface that will mimic the current cover conditions in terms of stormwater runoff from the site. SME proposes no changes to the site's current Stormwater Management Plan with respect to the proposed cover system upgrade. However, during each phase of the cover system upgrade, a stormwater analysis will be performed to verify the capacity requirements of the site's existing structures and to design the necessary temporary and permanent erosion control measures required for the proposed cover upgrades. Based upon the stormwater analysis for the Phase I cover upgrade area, the emergency spillway of Sedimentation Pond #3 will be modified. Modifications include the installation of a riprap-lined emergency spillway and outlet pipe riprap protection.

The Department finds that the proposed Dolby Landfill Cover Upgrade Project will not have an unreasonable adverse effect on surface water quality and will not unreasonably cause or increase flooding on-site or on adjacent properties nor create an unreasonable flood hazard to any structure.

8. EROSION AND SEDIMENTATION CONTROL

The proposed Dolby Landfill Cover Upgrade Project will occur within the limits of the existing landfill footprint and will minimize the disturbance of any native soils. The design and implementation of all erosion control measures associated with the proposed project will be conducted in accordance with the Maine Erosion and Sediment Control Practices Field Guide for Contractors, March 2015, or its equivalent. Suitable erosion control measures will be in-place prior to disturbance of the existing soil cover associated with the proposed project. A comprehensive Erosion and Sedimentation Control Plan has been prepared by SME and was submitted as part of the Application.

The Department finds that the DAFS/BGS has adequately addressed erosion and sediment control for the proposed Dolby Landfill Cover Upgrade Project and has demonstrated that the proposed project will not cause unreasonable sedimentation or erosion of soil.

9. FACILITY BACKGROUND AND PROJECT DESCRIPTION

The Dolby II and Dolby III landfills are non-secure landfills that collect leachate and groundwater-containing leachate. The Dolby II and Dolby III landfills have a combined size of approximately 135 acres and were permitted by the Department in 1978 and 1984, respectively. Originally, the waste streams included municipal solid wastes from the Towns of Millinocket, East Millinocket and Medway, and wastewater treatment sludge and various pulp and papermaking residuals from the GNP mills. Over the years, the Department has approved disposal of a number of different wastes streams, including, but not limited to, the following: wood waste; boiler ash; wood ash; coal ash; demolition debris ash; asbestos-containing materials; oil-contaminated soils; lime grit; waste sulfur; ink sludge; and solid waste from Baxter State Park and GNP Woodland Operations.

Cover materials have been previously placed on all of Dolby II and a majority of Dolby III. In an effort to significantly reduce the volume of leachate generated at the Dolby Landfill Facility, the DAFS/BGS plans to close the remainder of Dolby III and upgrade the cover system of previously closed areas of Dolby III and portions of previously closed areas of Dolby II. The proposed cover system upgrades will significantly limit precipitation infiltration into the waste; thereby, reducing leachate generated at the site. The objective of reducing the leachate generated at the site is to minimize future costs

associated with the transportation and treatment of leachate from the facility that will be paid for by the taxpayers of Maine.

10. SITE ASSESSMENT REPORT

Consistent with Department Rules, the DAFS/BGS is exempt from conducting an additional site investigation for closure as long as the site was previously characterized and water quality monitoring is conducted in accordance with the requirements of 06-096 CMR 405. Previous site investigations including a study conducted by E.C. Jordan in 1981 have documented the hydrogeologic conditions at the Dolby Landfill Facility. In December 2015, SME conducted an investigation to better define the bedrock surface and groundwater divide in the vicinity of Dolby II. This investigation was performed to establish the proposed cover upgrade work limits on Dolby II that would provide the greatest long-term benefit in terms of reducing leachate generation and subsequent collection, conveyance and treatment costs. Results of the December 2015 investigation were submitted, along with interpretive bedrock and phreatic surface maps for this portion of the landfill site, as part of the Application.

A facility water quality monitoring program consisting of groundwater, surface water and leachate sampling and testing has been conducted triannually with the data submitted in the annual reports.

The Department finds that the DAFS/BGS has completed a site investigation for closure and site assessment report that adequately supports the design of the proposed final cover system and that the DAFS/BGS conducts water quality monitoring in accordance with Department Rules.

11. ENGINEERING DESIGN AND REPORT

A. Closure Design: The DAFS/BGS has submitted a proposed cover system design, prepared by SME and dated March 29, 2016. The proposed Dolby Landfill Cover Upgrade Project is to occur in phases of approximately 25 acres in size over a 4 to 5 year period. The first phase, Phase I, will include a majority of the remaining open areas of Dolby III (i.e., Cells 15 and 16) and other areas in the southwest portion of Dolby III. Other phases will follow sequentially as detailed on Figure 1-2, Conceptual Closure Sequence, submitted in the Application. The Application details the approximate amount of acreage to be covered in each construction season and is as follows: for Dolby III, Summer 2016 – 25 acres, Summer 2017 – 24 acres and Summer 2018 – 23 acres; and for Dolby II, Summer 2019 – 25 acres.

Approximately 38 acres of the existing Dolby II cover system will not be upgraded. The cover system upgrade design will incorporate existing topsoil, cover soil, and sand drainage material previously placed at the site to the extent possible. A soil re-use plan has been submitted to describe how existing soils will be re-used within Phase I of the proposed Dolby Landfill Cover Upgrade Project. The proposed cover system upgrade includes, from the bottom up, the following components: a minimum 6-inch gas collection system (i.e., sand and gas vent piping); a 40-mil high density polyethylene ("HDPE") textured geomembrane; a drainage geocomposite and cover system drainage pipes; a 14-inch cover soil layer; a 4-inch vegetative soil layer; and miscellaneous permanent erosion control measures (i.e., erosion control mats, rip rap, etc.).

B. Stability and Settlement Assessment and Monitoring: Slope stability of the proposed cover system was evaluated relative to the materials and material interfaces which will comprise the proposed cover system. Slope stability factors of safety ("FOS") were calculated using soil and geosynthetic material properties considered representative of the materials available to the project and which are consistent with geotechnical literature and accepted engineering practices. Soil and geosynthetic material properties utilized within the slope stability analyses will be verified during construction.

The slope stability calculations indicate that a stable cover system configuration will be maintained during the closure and post-closure periods. The FOSs for the proposed final cover system were calculated to be consistently greater than 1.3 and 1.5 for static construction/operational and post-closure conditions, respectively, and consistently greater than 1.1 and 1.5 for seismic construction/operational and post-closure conditions, respectively. All of the calculated slope stability FOSs meet or exceed the required minimum FOSs specified in 06-096 CMR 401(2)(F)(1) of the Department Rules.

Settlement of the proposed cover systems during the post-closure period was evaluated by SME. The calculations show that: 1) the as-placed cover grades are expected to change minimally during the post-closure period and the cover system drainage is not expected to be affected and 2) the HDPE geomembrane will maintain its integrity and performance at the maximum predicted settlements. The minimal amount of settlement calculated for Phase I is largely predicated on the minor regrading and filling that will be performed to construct the proposed cover system and that much of the waste in Phase I has been in place for several years. It is expected that only a small amount of settlement will occur during the post-closure period due to long-term waste degradation and waste compression.

C. Water Balance: Leachate volumes collected and treated from the Dolby Landfill Facility have averaged approximately 74.2 million gallons per year ("MGY") over the past 5 years. SME estimates that the leachate generation rate from the Dolby Landfill Facility will be reduced to less than 7 MGY with the placement of a geomembrane cover over the portions of Dolby II and Dolby III that contribute to the facility's leachate collection system. The resistance to infiltration and runoff characteristics of the proposed cover system has been evaluated using the Hydrogeologic Evaluation of Landfill Performance ("HELP") model. The HELP model evaluation shows that the proposed cover system will meet the intent of the Department Rules by minimizing the infiltration of precipitation into the landfill after closure.

D. Leachate Management Plan: The Dolby Landfill Cover Upgrade Project will not involve changes in the site's current leachate collection system, leachate storage pond, or leachate transport system. The proposed cover system construction will be performed in discrete sections that will allow stormwater runoff to be managed properly. Areas of waste which are uncovered during the construction process will be contained using temporary berms constructed from existing cover soil to isolate the open areas and manage impacted runoff from these areas to the greatest practical extent. Impacted runoff will be diverted and/or pumped to various perimeter manholes adjacent to the work area for collection and subsequent treatment.

E. Gas Management Plan: SME recognizes the potential for degradation of the landfill waste and has estimated the gas generation for the portion of the landfill that will be closed by Phase I of the Dolby Landfill Cover Upgrade Project. SME used historical as-built drawings and available annual reports to estimate the waste thickness and the types of waste placed in this area of the landfill. The Landfill Gas Emissions Model ("LandGEM") was used to predict the quantity of gas that could be generated and the emission rate of non-methane organic compounds ("NMOC") from Phase I. Gas collection pipe spacing and passive vent locations necessary to relieve gas pressures generated by the waste and maintain cover stability were determined using standard design methods. The gas calculations indicate that the NMOC emission rate from Phase I will be below the 50 megagrams per year threshold described in 06-096 CMR 401(5)(I)(6)(c) of the Department Rules. As such, SME states that no additional gas control measures for the Dolby Landfill Cover Upgrade Project - Phase I other than passive gas collection and venting are necessary.

Gas monitoring will be performed during construction when modifications to the landfill interior manholes are made to accommodate placement of the geomembrane.

The Department finds that the proposed final cover system will maintain its integrity and performance under the maximum predicted settlement, minimize infiltration of precipitation into the landfill after closure, and adequately manage landfill gas; provided that, an engineering report is submitted to the Department for review and approval at least 3 months prior to the commencement of construction activities within each subsequent phase of the Dolby Landfill Cover Upgrade Project.

12. QUALITY ASSURANCE PLAN

A Construction Quality Assurance (CQA) Plan, prepared by SME and dated April 2016, addressing the construction quality assurance for placement of final cover materials for the Dolby Landfill Cover Upgrade Project - Phase I has been developed and submitted with the Application. The CQA plan outlines the characterization of the cover system's physical properties to determine its ability to achieve the project's performance criteria; defines procedures for cover placement; defines tests and frequency of testing to assure the construction of the cover meets or exceeds design criteria; and provides a method for documenting the cover placement. Geosynthetics and soil components will be inspected, tested, and certified by qualified CQA personnel independent of the Owner and Contractor.

The Department finds that the DAFS/BGS will implement adequate construction quality assurance measures to assure that design specifications and performance requirements for all facility components are met during construction of the Dolby Landfill Cover Upgrade Project; provided that, a CQA Plan is submitted to the Department for review and approval at least 3 months prior to the commencement of construction activities within each subsequent phase of the Dolby Landfill Cover Upgrade Project.

13. CONSTRUCTION CONTRACT BID DOCUMENTS

The DAFS/BGS has submitted *Contract Documents and Construction Specifications, Dolby Landfill Cover System Upgrade – Phase I (Documents)*, prepared by SME and dated April 2016. The Documents include drawings, technical specifications, and contract administrative documents for the Dolby Landfill Cover Upgrade Project - Phase I. The Documents describe the proposed project and the means and methods for the installation of the final cover systems.

The Department finds that the construction contract bid documents were adequately prepared and meet the requirements of 06-096 CMR 401(5)(L); provided that, construction contract bid documents, including drawings, technical specifications, and contract administrative documents are submitted to the Department for review and approval at least 3 months prior to the commencement of construction activities within each subsequent phase of the Dolby Landfill Cover Upgrade Project.

14. POST-CLOSURE MONITORING AND MAINTENANCE

An Environmental Monitoring Plan (EMP), dated April 2011, was previously submitted and approved by the Department. The EMP meets the requirements of 06-096 CMR 405 and will be the basis for the post-closure water quality monitoring program for the Dolby Landfill Facility. Provisions for groundwater, surface water, leachate and gas monitoring are outlined in the EMP. Specific procedures for the inspection and maintenance of facility components are outlined in the facility Operating Manual, dated April 2012. Slope stability and settlement monitoring of the proposed cover systems will be routinely conducted during the post-closure period. This monitoring will consist of visual inspections of the completed cover system and periodic topographical surveys for comparison to the cover surface elevations at the time of construction completion. Post-closure slope stability and settlement monitoring will be conducted annually unless conditions are encountered that warrant more frequent monitoring. The post-closure monitoring and maintenance plan will need to be revised to reflect changes associated with the Dolby Landfill Cover Upgrade Project.

Groundwater monitoring data shows that groundwater quality at monitoring well ("MW") 301, MW-302B and MW-302C has deteriorated over time. Data shows that these wells generally began to experience increasing trends for several parameters in the year 2000. The exact cause of increasing trends is unknown; however, completion of the Dolby Landfill Cover Upgrade Project is expected to help mitigate these impacts. The EMP includes a requirement for the ongoing statistical analysis of the monitoring data, using statistical tests approved by the Department, to evaluate trends in groundwater quality. The results of the ongoing evaluation will be provided in the annual report.

SME has submitted a June 23, 2016 letter proposing to evaluate the effectiveness of the Dolby Landfill Cover Upgrade Project relative to improving groundwater quality 5 years after the substantial completion of construction activities of the Dolby Landfill Cover Upgrade Project. Completion of the Dolby Landfill Upgrade Project is scheduled to occur during 2019.

The Department finds that the DAFS/BGS has adequately addressed post-closure monitoring and maintenance for the Dolby Landfill Facility; provided that: (1) the post-

closure monitoring and maintenance plan is revised to reflect changes associated with the Dolby Landfill Cover Upgrade Project and is submitted for Department review and approval at least 30 days prior to substantial completion of construction activities within the Dolby Landfill Cover Upgrade Project - Phase I and (2) five years after the substantial completion of the Dolby Landfill Cover Upgrade Project or no later than year end of 2024, whichever is earlier, the DAFS/BGS submits to the Department, for review and approval, an evaluation of water quality data from MW-301, MW-302B and MW-302C. If there has been no improvement in the water quality at MW-301, MW-302B and MW-302C, the DAFS/BGS must submit a Corrective Action Plan within 90 days of the submittal of the evaluation of water quality data from MW-301, MW-302B and MW-302C, prepared in accordance with the applicable rules in effect at that time, to the Department for review and approval. Once the Corrective Action Plan has been approved by the Department, the plan must be implemented within one year of approval.

15. FINAL USE/PERMANENT RECORD

The DAFS/BGS proposes to maintain the property that the landfill is on as open space. Permanent buildings will not be placed within 100 feet of the landfill. Currently, there are no specific plans for final use of the Dolby Landfill Facility.

Following the completion of the Dolby Landfill Cover Upgrade Project, the DAFS/BGS will prepare and record in the Penobscot County Registry of Deeds information and necessary deed restrictions to provide notice to prospective purchasers and a public record of the location of the Dolby II and Dolby III landfills. The DAFS/BGS will also provide a copy of the record information and necessary deed restrictions to the Department as required by 06-096 CMR 401(5)(B)(4). The final cover or other components of the containment systems or the functioning of the monitoring systems may not be disturbed without the written approval of the Department.

The Department finds that the DAFS/BGS has provided for the permanent record related to the Dolby Landfill Facility.

BASED on the above Findings of Facts, and subject to the CONDITIONS listed below, the Department makes the following CONCLUSIONS:

1. The DAFS/BGS has submitted evidence of sufficient title, right, or interest with respect to the property proposed for use.

2. The DAFS/BGS has complied with all of the public notice requirements of 06-096 CMR 2 and 400.

3. The DAFS/BGS has provided adequate evidence of financial and technical ability to design, construct, operate, maintain, close and accomplish post-closure care of the solid waste facility in a manner consistent with all applicable requirements.

4. The DAFS/BGS is exempt from the liability insurance requirements of 06-096 CMR 400(10).

5. The Dolby Landfill Cover Upgrade Project will not unreasonably cause or increase flooding and will have no unreasonable effect on surface water. The DAFS/BGS has adequately addressed stormwater management for the proposed project.

6. The Dolby Landfill Cover Upgrade Project will not cause unreasonable sedimentation or erosion of soil. The DAFS/BGS has adequately addressed erosion and sedimentation control for the proposed project.

7. The DAFS/BGS has completed a site assessment report that adequately supports the design of the proposed final cover system and conducts water quality monitoring in accordance with the Department Rules.

8. The proposed final cover system will maintain its integrity and performance under the maximum predicted settlement, minimize infiltration of precipitation into the landfill after closure, and adequately manage landfill gas.

9. The DAFS/BGS has proposed a final cover system design meeting the requirements of the Department Rules; provided that, an engineering report, a CQA Plan and the construction contract bid documents, including drawings, technical specifications, and the contract administrative documents are submitted to the Department for review and approval at least 3 months prior to the commencement of construction activities within each subsequent phase of the Dolby Landfill Cover Upgrade Project.

10. The DAFS/BGS has provided for post-closure monitoring and maintenance in accordance with Department Rules; provided that: (1) the post-closure monitoring and maintenance plan is revised to reflect changes associated with the Dolby Landfill Cover Upgrade Project and is submitted for Department review and approval at least 30 days prior to substantial completion of construction activities within the Dolby Landfill Upgrade Project - Phase I and (2) five years after the substantial completion of the Dolby Landfill Cover Upgrade Project or no later than year end of 2024, whichever is earlier, an evaluation of water quality data from MW-301, MW-302B and MW-302C is submitted for Department review and approval. If there has been no improvement in the water quality at MW-301, MW-302B and MW-302C, the DAFS/BGS must submit a Corrective Action Plan within 90 days of the submittal of the evaluation of water quality from MW-

301, MW-302B and MW-302C, prepared in accordance with the applicable rules in effect at that time, to the Department for review and approval. Once the Corrective Action Plan has been approved by the Department, the plan must be implemented within one year of approval.

11. The DAFS/BGS has provided for the permanent record related to the site.

12. The Dolby Landfill Cover Upgrade Project will not pollute any waters of the State, contaminate the ambient air, constitute a hazard to health and welfare, or create a nuisance.

THEREFORE, the Department APPROVES the above noted application of the STATE OF MAINE, DEPARTMENT OF ADMINISTRATIVE and FINANCIAL SERVICES, BUREAU OF GENERAL SERVICES, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. The Standard Conditions of Approval, a copy attached as Appendix A.

2. The invalidity or unenforceability of any provision, or part thereof, of this license shall not affect the remainder of the provision or any other provisions. This license shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

3. At least 3 months prior to the commencement of construction of each subsequent phase, the DAFS/BGS shall submit an engineering report, a CQA Plan and the construction contract bid documents including drawings, technical specifications, and the contract administrative documents to the Department for review and approval.

4. At least 30 days prior to substantial completion of construction activities within the Dolby Landfill Cover Upgrade Project - Phase I, the DAFS/BGS shall submit to the Department, for review and approval, a revised post-closure monitoring and maintenance plan to reflect changes associated with the Dolby Landfill Cover Upgrade Project.

5. Five years after the substantial completion of the Dolby Landfill Cover Upgrade Project or no later than year end of 2024, whichever is earlier, the DAFS/BGS shall submit to the Department, for review and approval, an evaluation of water quality data from MW-301, MW-302B and MW-302C. If there has been no improvement in water quality at MW-301, MW-302B and MW-302C, the DAFS/BGS shall submit a Corrective Action Plan within 90 days of the submittal of the evaluation of water quality data from MW-301, MW-302B and MW-302C, prepared in accordance with the applicable rules in effect at that time, to the Department for review and approval.

STATE OF MAINE, ACTING THROUGH THE DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL SERVICES, BUREAU OF GENERAL SERVICES EAST MILLINOCKET, PENOBSCOT COUNTY, MAINE DOLBY LANDFILL FACILITY #S-000796-WO-AO-N (APPROVAL WITH CONDITIONS)	14	SOLID WASTE LICENSE FINAL CLOSURE

Once the Corrective Action Plan has been approved by the Department, the plan shall be implemented within one year of approval.

DONE AND DATED AT AUGUSTA, MAINE, THIS 30th DAY OF June, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Lisa Pilgrim for
Paul Mercer, Commissioner

Filed
JUL 06 2016
State of Maine
Board of Environmental Protection

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

Date of initial receipt of application: April 7, 2016
Date of application acceptance: April 27, 2016

Date filed with the Board of Environmental Protection:

xlp80430/lsp

Appendix A

STANDARD CONDITIONS TO ALL SOLID WASTE LANDFILL LICENSES

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL. VIOLATIONS OF THE CONDITIONS UNDER WHICH A LICENSE IS ISSUED SHALL CONSTITUTE A VIOLATION OF THAT LICENSE AGAINST WHICH ENFORCEMENT ACTION MAY BE TAKEN, INCLUDING REVOCATION.

1. **Approval of Variations from Plans.** The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed by the license. Any consequential variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

2. **Compliance with All Applicable Laws.** The licensee shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

3. **Compliance with All Terms and Conditions of Approval.** The licensee shall submit all reports and information requested by the Department demonstrating that the licensee has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

4. **Transfer of License.** The licensee may not transfer the solid waste facility license or any portion thereof without approval of the Department.

5. **Initiation of Construction or Development Within Two Years.** If the construction or operation of the solid waste facility is not begun within two years of issuance of within 2 years after any administrative and judicial appeals have been resolved, the license lapses and the licensee must reapply to the Department for a new license unless otherwise approved by the Department.

6. **Approval Included in Contract Bids.** A copy of the approval must be included in or attached to all contract bid specifications for the solid waste facility.

7. **Approval Shown to Contractors.** Contractors must be shown the license by the licensee before commencing work on the solid waste facility.

8. **Background of key individuals.** A licensee may not knowingly hire as an officer, director or key solid waste facility employee, or knowingly acquire an equity interest or debt interest in, any person convicted of a felony or found to have violated a State or federal environmental law or rule without first obtaining the approval of the Department.

Appendix A

STANDARD CONDITIONS TO ALL SOLID WASTE LANDFILL LICENSES

9. **Fees.** The licensee must comply with annual license and annual reporting fee requirements of the Department's rules.

10. **Recycling and Source Reduction Determination for Solid Waste Disposal Facilities.** This condition does not apply to the expansion of a commercial solid waste disposal facility that accepts only special waste for landfilling.

    The solid waste disposal facility shall only accept solid waste that is subject to recycling and source reduction programs, voluntary or otherwise, at least as effective as those imposed by 38 M.R.S. Chapter 13.

11. **Deed Requirements for Solid Waste Disposal Facilities.** Whenever any lot of land on which an active, inactive, or closed solid waste disposal facility is located is being transferred by deed, the following must be expressly stated in the deed:

    A. The type of facility located on the lot and the dates of its establishment and closure.

    B. A description of the location and the composition, extent, and depth of the waste deposited.

    C. The disposal location coordinates of asbestos wastes must be identified.

APPENDIX B

QUALITY ASSURANCE/QUALITY CONTROL PLAN

SME
Sevee & Maher Engineers, Inc.

QUALITY ASSURANCE/
QUALITY CONTROL PLAN
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE

Prepared for

STATE OF MAINE
BUREAU OF GENERAL SERVICES
BGS PROJECT 3345

June 2017
(Revised December 2021)

SME
Sevee & Maher Engineers, Inc.

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

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QUALITY ASSURANCE/
QUALITY CONTROL PLAN
DOLBY LANDFILL COVER UPGRADE –
PHASES 2 AND 3
EAST MILLINOCKET, MAINE

1.0 GENERAL

1.1 Scope

This Quality Assurance/Quality Control Plan (QAP) addresses construction quality assurance and quality control for placement of final cover materials for the Dolby Landfill Cover Upgrade – Phase 2 and 3 Project in East Millinocket, Maine.

This plan outlines the characterization of the cover system's physical properties to determine its ability to achieve the project's performance criteria; defines procedures for cover placement; defines tests and frequency of testing to assure the construction of the cover meets or exceeds design criteria; and provides a method for documenting the cover placement.

1.2 Parties

The parties discussed in this section are associated with the ownership, design, installation, and quality assurance of the cover system. The definitions, qualifications, and responsibilities of these parties are outlined in the following subsections.

1.2.1 Maine Department of Environmental Protection (MEDEP)

Is the State agency responsible for permit issues for Dolby Landfill Facility. The MEDEP is responsible for reviewing permit applications and associated documentation, issuing permits, reviewing changes to original permit application, and enforcement of granted permits and MEDEP Solid Waste Management Regulations.

1.2.2 Owner

Shall mean the State of Maine Bureau of General Services (BGS). The Owner's responsibilities during construction activities shall include the management of the engineering and construction contracts according to the approved permit application, approved plans and technical specifications, and this QAP.

1.2.3 Project Manager

The project manager is the official representative of the Owner. In this manual, the term Project Manager shall apply equally to Construction Coordinator and Owner's Representative. The Project Manager is responsible for coordinating construction and quality assurance activities for the project. The Project Manager shall serve as communications coordinator for the project, and is responsible for initiating the pre-bid, pre-construction, and construction meetings. As construction coordinator, the Project Manager shall serve as a liaison between all parties involved in the project to assure that communications are maintained. The Project Manager shall also be responsible for proper resolution of all quality assurance issues that arise during construction. The Project Manager for the Dolby Landfill Cover Upgrade – Phase 2 and 3 Project will be an employee of Sevee & Maher Engineers, Inc. (SME).

The selection of the Project Manager is the direct responsibility of the Owner. Qualifications for this position include familiarity with the following:

1. Applicable QAPs;
2. All applicable regulatory requirements;
3. Policies and procedures for project management; and
4. Placement techniques of low hydraulic conductivity material.

1.2.4 Designer (Engineer)

The designer (Engineer) is the individual and/or firm responsible for the preparation of the closure design including, project specific engineering drawings, technical specifications and the QAP. The Engineer is responsible for approving all design and specification changes, manufacturer's material certifications and contractor submittals, and for making any design clarifications during the contract bidding process and construction of the cover system. The Engineer may attend the pre-bid, pre-construction, and construction meetings upon the request of the Project Manager. The Engineer may also act as the Owner's Representative and Construction Quality Assurance Agent (CQA Agent) during construction of the project. As the Owner's Representative and CQA Agent, the Engineer is responsible for the documentation of the closure work and submittals of weekly construction reports that summarize the construction activity at the site. The Design Firm for the closure of the Landfill is Sevee & Maher Engineers, Inc. (SME) of Cumberland, Maine.

1.2.5 Construction Quality Assurance Agent

The CQA Agent is responsible for review of the borrow source and in-place material testing results and for the observation of the Contractor's work to assure that the constructed cover system meets the design specifications. Qualifications for this position include familiarity with the following:

1. Applicable QAPs;
2. All applicable regulatory requirements;
3. Placement techniques of low hydraulic conductivity material; and
4. Experience with clay inspection of landfill projects.

The CQA Agent is also responsible for the following:

- Approval/disapproval of borrow source material test results for the cover system;
- The in-place testing and approval of the materials placed by the Contractor; and
- Ensure that the placement techniques utilized conform to industry standard and this QAP, and as described in Technical Specifications.

The CQA Agent will provide continuous monitoring during placement of the proposed cover system. It is anticipated that only one CQA Agent will be necessary during construction of the cover. However, should the Contractor begin placing the cover over separate areas of the landfill simultaneously, additional CQA Agents will be added for oversight. A representative of SME will act as the CQA Agent for the Landfill cover project. The CQA Agent will work under the direct supervision of a State of Maine

licensed Professional Engineer and will be certified in the use of nuclear testing equipment in accordance with 49 CFR 172, Subpart H.

1.2.6 General Contractor

The general contractor (Contractor) is responsible for construction of the cover system including supplying labor, material, equipment, and supervision for placement of the cover system. The primary responsibility of the general contractor is to ensure the cover system is constructed in accordance with the design and specifications developed by the Engineer and approved by the permitting agency. The Superintendent is the Contractor's designee who is responsible for the Contractor's field crew. The Superintendent shall represent the Contractor at all site meetings and shall be responsible for acting as the Contractor's spokesman for the project. The Contractor shall be responsible for all aspects of cover system placement, including but not limited to, placement of all erosion control measures, subgrade preparation, placement of granular drainage material, placement of 40-mil HDPE liner and drainage geocomposite, placement of cover soil and vegetative layer, seeding, fertilizing, and mulching. The Contractor is also responsible for informing the Owner, the Engineer, and the CQA Agent of the scheduling and occurrence of all construction activities and of any discrepancies, errors, or omissions in the Contract Documents.

The Contractor shall be pre-qualified and approved by the BGS. The Superintendent must be qualified based on previously demonstrated construction experience and management ability. Services of the Contractor will be procured through a competitive bid process. Bid packages for the solicitation of construction services will require the Contractor to identify and demonstrate familiarity and experience with the various aspects of landfill construction.

1.2.7 Subcontractors

Subcontractors are responsible for that portion of the work that they are designated to perform by the General Contractor. Subcontractors' work as agents of the General Contractor and as such the General Contractor is responsible for the work and actions of the Subcontractor.

1.2.8 Materials Testing Lab

The materials testing lab is a qualified geotechnical laboratory contracted by the General Contractor, Owner or Owner's Representative to test the borrow source and in-place cover system materials. The material testing laboratory will determine the quality of the borrow source and in-place material in accordance with the ASTM test methods described in the project specifications. The materials testing laboratory will be independent from the General Contractor and the Owner.

1.2.9 Manufacturer

The Manufacturer is the firm responsible for production of any of the various geosynthetic liner system components outlined in this QAP. Each Manufacturer is responsible for the production of its geosynthetic product. In addition, each Manufacturer is responsible for the condition of the geosynthetic until the material is accepted by the Project Manager upon delivery. Each Manufacturer shall produce a consistent product meeting the project specifications. Each Manufacturer shall provide quality control documentation for its product as specified in this QAP.

Each Manufacturer shall be pre-qualified by the BGS or the Owner's Representative. Each Manufacturer shall provide sufficient production capacity and qualified personnel to meet the demands of the project. Each Manufacturer shall have an internal quality control program for its product that meets the requirements presented in this QAP.

A Manufacturer shall meet the following requirements and may be required to submit the following information to be considered for pre-qualification:

1. Corporate background and information;
2. Manufacturing capabilities:
    a. Information on plant size, equipment, personnel, number of shifts per day, and capacity per shift.
    b. Daily production quantity available for Dolby Landfill facilities.
    c. A list of material properties including certified test results, to which are attached geosynthetic samples.
    d. A list of at least 15 completed landfill or surface impoundment facilities totaling a minimum of 15,000,000 square feet, for which the Manufacturer has manufactured LLDPE. For each facility, the following information shall be provided:
        (1) Name and purpose of facility, its location, and date of installation.
        (2) Name of owner, project manager, designer, fabricator (if any) and installer.
        (3) Type of geosynthetic, surface area of geosynthetic manufactured.
        (4) Available information on the performance of the lining system and the facility;
3. The Manufacturer's quality control manual, including a description of the quality control laboratory facilities; and
4. The origin (supplier's name and production plant) and identification (brand name and number) of resin used to manufacture the product.

Prior to the installation of any geosynthetic material, a Manufacturer must submit to the Project Manager all quality control documentation required by the appropriate section of this QAP. This documentation shall be reviewed by the Geosynthetic Construction Quality Assurance Agent before installation can begin.

1.2.10 Installer

The Installer is the firm responsible for installation of the geosynthetics. The Installer may be affiliated with the Manufacturer.

The Superintendent is responsible for the Installer's field crew. The Superintendent shall represent the Installer at all site meetings and shall be responsible for acting as the Installer's spokesman on the project.

The Master Seamer shall be the most experienced seamer of the Installer's field crew. The Master Seamer shall provide direct supervision over less experienced seamers.

The Installer shall be responsible for field handling, storing, deploying, seaming, temporary restraining and all other aspects of the geosynthetics installation. The Installer may also be responsible for transportation of these materials to the site and for anchor systems, if required by the project specifications. The Installer shall be responsible for submittal of the documentation from the manufacturer.

The Installer shall be pre-qualified and approved by the BGS or the Owner's Representative. The Installer shall be able to provide qualified personnel to meet the demands of the project. At a minimum, the Installer shall provide a Superintendent and a Master Seamer as described below.

The Superintendent must be qualified based on previously demonstrated experience, management ability, and authority. The Superintendent, unless otherwise approved by the Project Manager, shall have previously managed, at a minimum, two installation projects which entailed the installation of at least a total of 10,000,000 square feet of polyethylene geomembrane.

For geomembrane installation, all personnel performing seaming operations shall be qualified by experience or by successfully passing seaming tests. The Master Seamer shall have experience seaming a minimum of 1,000,000 square feet of polyethylene geomembrane using the same type of seaming apparatus to be used at the site.

To be considered for pre-qualification, the Installer may be asked to submit the following information:

1. Corporate background and information;
2. Description of installation capabilities:
    a. Information on equipment (numbers and types), and personnel (number of superintendents, number of crews),
    b. Average daily production anticipated,
    c. Samples of field geomembrane seams and a list of minimum values for geomembrane seam properties;
3. A list of at least ten completed facilities, totaling a minimum of 2,000,000 square feet for which the Installer has installed HDPE geomembrane lining. For each installation, the following information shall be provided:
    a. Name and purpose of facility, its location, and date of installation,
    b. Name of owner, project manager, designer, manufacturer, fabricator (if any), and name of contact at the facility who can discuss the project,
    c. Name and qualifications of the Superintendent(s) of the Installer's crew(s),
    d. Type of geosynthetic, and surface area installed,
    e. Type of seaming and type of seaming apparatus used,
    f. Duration of installation,
    g. Available information on the performance of the lining system and the facility;
4. The Installer's quality control manual; and
5. A copy of a letter of recommendation supplied by the geomembrane manufacturer.

Prior to commencement of the installation, the Installer will submit to the Project Manager:

1. Resume of the Superintendent to be assigned to this project, including dates and duration of employment;
2. Resume of the Master Seamer to be assigned to this project, including dates and duration of employment;

3. A panel layout drawing showing the installation layout identifying field seams as well as any variance or additional details, which deviate from the engineering drawings. The layout shall be adequate for use as a construction plan and shall include dimensions, details, etc.;
4. Installation schedule;
5. A list of personnel performing field seaming operations along with pertinent experience information;
6. All geosynthetic quality control certificates as required by this QAP (unless submitted directly to the Project Manager by the Manufacturer); and
7. Certification that extrudate to be used is comprised of the same resin as the geomembrane to be used.

This documentation shall be reviewed by the Geosynthetic Construction Quality Assurance Agent before installation of the geosynthetic can begin.

During the installation, the Installer shall be responsible for the submission of:

1. Quality control documentation recorded during installation; and
2. Subgrade surface acceptance certificates for each area to be covered by the lining system, signed by the Installer.

Upon completion of the installation, the Installer shall submit:

1. The warranty obtained from the Manufacturer; and
2. The installation warranty.

1.2.11 Geosynthetic Construction Quality Assurance Agent

The Geosynthetic Construction Quality Assurance Agent (CQA) is a firm independent from the Manufacturer(s) and Installer that shall be responsible for observing and documenting activities related to the quality assurance of the production and installation of the geosynthetic system on behalf of the Owner. A representative of SME will act as the Geosynthetic CQA Agent for the Landfill cover project.

In this QAP, the term Geosynthetic Quality Assurance Engineer (QAE) shall be used to designate the Engineer (working for the Geosynthetic CQA) in charge of the quality assurance work. In some cases, the duties of the QAE described below may be shared by two individuals: A Geosynthetic Quality Assurance Managing Engineer located at the headquarters of the Geosynthetic CQA, and a Geosynthetic Quality Assurance Resident Engineer located at the site. The personnel of the Geosynthetic CQA also include Geosynthetic Quality Assurance Monitors who are located at the site for construction observation and documentation. The CQA agent will provide sufficient personnel on-site to enable complete (100%) observation of all deployment, seaming, and testing activities. The required CQA staff level will be a function of the installer's schedule.

The Geosynthetic CQA is responsible for observing and documenting activities related to the quality assurance of the production and installation of the geosynthetic system. The Geosynthetic CQA is responsible for implementation of the project QAP prepared by the Project Manager and management of the Geosynthetic Quality Assurance Laboratory. The Geosynthetic CQA is also responsible for issuing a final certification report, sealed by a registered Professional Engineer.

The specific duties of the Geosynthetic CQA personnel are as follows:

1. The Geosynthetic QAE:
    a. Reviews all design drawings and specifications,
    b. Reviews other site-specific documentation, including proposed layouts, and manufacturer's and installer's literature,
    c. Develops a site-specific addendum for quality assurance of geosynthetics (if necessary) with the assistance of the Project Manager,
    d. Administers the geosynthetic portions of the QAP (e.g., assigns and manages all geosynthetic quality assurance personnel, reviews all field reports, and provides engineering review of all quality assurance related issues)
    e. Reviews all changes to design drawings and specifications as issued by the Designer,
    f. Acts as the on-site (resident) representative of the Geosynthetic CQA,
    g. Familiarizes all Geosynthetic Quality Assurance Monitors with the site and the project QAP,
    h. Attends all quality assurance related meetings (e.g., resolution, pre-construction, daily, and weekly),
    i. Reviews all Manufacturer and Installer certifications and documentation and makes appropriate recommendations,
    j. Reviews the Installer's personnel qualifications for conformance with those qualifications pre-approved for work on site,
    k. Manages the preparation of the as-built drawing(s),
    l. Reviews the calibration certification of the on-site tensiometer, if applicable,
    m. Reviews all Geosynthetic Quality Assurance Monitor's daily reports, logs and photographs,
    n. Notes any on-site activities that could result in damage to the geosynthetics,
    o. Reports to the Project Manager, and logs in the daily report, any relevant observations reported by the Geosynthetic Quality Assurance Monitors,
    p. Prepares his own daily report,
    q. Prepares a daily summary of the quantities of geosynthetics installed that day,
    r. Prepares the weekly summary of geosynthetic quality assurance activities,
    s. Oversees the marking, packaging, and shipping of all laboratory test samples,
    t. Reviews the results of laboratory testing and makes appropriate recommendations,
    u. Designates a Geosynthetic Quality Assurance Monitor to represent the QAE whenever he is absent from the site while operations are ongoing,
    v. Reports any unapproved deviations from the QAP to the Project Manager,
    w. Prepares the final certification report,
    x. Monitors the subgrade condition and overburden soil placement, and

y. Monitors the weather conditions and verifies that the cold or warm weather seaming protocols (Section 4.5.6) are being followed.

1.2.12 The Geosynthetic Quality Assurance Monitor

1. Monitors, logs, photographs and/or documents all geosynthetic installation operations. Photographs shall be taken routinely and in critical areas of the installation sequence. These duties shall be assigned by the Geosynthetic QAE.
2. Monitors the following operations for all geosynthetics.
   a. Material delivery.
   b. Unloading and on-site transport and storage.
   c. Sampling for conformance testing.
   d. Deployment operations.
   e. Joining and/or seaming operations.
   f. Condition of panels as placed.
   g. Visual inspection by walkover.
   h. Repair operations.
   i. Construction stability.
3. Monitors and documents the geomembrane seaming operations, including:
   a. Trial seams.
   b. Seam preparation.
   c. Seaming.
   d. Nondestructive seam testing.
   e. Sampling for destructive seam testing.
   f. Field tensiometer testing.
   g. Laboratory sample marking.
   h. Repair operations.
4. Documents any on-site activities that could result in damage to the geosynthetics. Any problems noted shall be reported as soon as possible to the Geosynthetic QAE.

1.2.13 Geosynthetic Quality Assurance Laboratory

The Geosynthetic Quality Assurance Laboratory (QAL) is a firm, independent from the Manufacturer(s) and Installer responsible for conducting tests on samples of geosynthetics taken from the site.

The Geosynthetic QAL shall be responsible for conducting the appropriate laboratory tests as directed by the Geosynthetic QAE. The test procedures shall be done in accordance with the test methods outlined in this QAP and/or the project specifications.

The Geosynthetic QAL shall have experience in testing geosynthetics and be certified by the Geosynthetics Accreditation Institute Laboratory Accreditation Program (GAI-LAP) for all tests to be

performed. The Geosynthetic QAL shall be familiar with American Society for Testing and Materials (ASTM), Federal Test Method Standard (FTMS), National Sanitation Foundation (NSF), and other applicable test standards. The Geosynthetic QAL shall be capable of providing verbal results of destructive seam tests within 24 hours of receipt of test samples and shall maintain that standard throughout the installation. The Geosynthetic QAL shall be approved by the BGS or Owner's Representative.

On-site laboratory facilities may be used by the Geosynthetic QAL provided they are appropriately equipped and approved by the Geosynthetic CQA and the Project Manager.

The Geosynthetic QAL shall submit all destructive seam test results to the Geosynthetic QAE in written form within 48 hours of receipt of test samples unless otherwise specified by the Project Manager. Geomembrane destructive test results shall typically be provided verbally to the Geosynthetic QAE within 24 hours of receipt of test samples. Written test results shall be in an easily readable format and include references to the standard test methods used.

1.3 Communication

To guarantee a high degree of quality during installation and assure a final product that meets all project specifications, clear, open channels of communication are essential. This section discusses appropriate lines of communication and describes all necessary meetings.

1.3.1 Pre-Construction Meeting

A pre-construction meeting shall be held at the site prior to the beginning of the project. Typically, the meeting shall be attended by the Project Manager, Designer, CQA Agent, Contractor, Supervisor, Installer, Geosynthetic CQA, a representative of the MEDEP, and the Owner.

Specific topics considered for this meeting include review of the project QAP for any problems or additions. In addition, the responsibilities of each party should be reviewed and understood clearly. The meeting shall be documented by a person designated at the beginning of the meeting, and minutes shall be transmitted to all parties.

The MEDEP shall be notified of the preconstruction meeting schedule by written notice at least seven days prior to the meeting date.

1.3.2 Progress Meetings

A weekly progress meeting shall be held between the Owner's Representative, Superintendent, CQA Agent, and any other concerned parties. This meeting shall discuss current progress, planned activities for the next week, issues requiring resolution, and any new business or revisions to the work. The CQA Agent shall log any problems, decisions, or questions arising at this meeting in his weekly report. If any matter remains unresolved at the end of this meeting, the Project Manager shall be responsible for the resolution of the matter and the communication of the decision to the appropriate parties.

1.3.3 Construction Problem Resolution

The resolution of construction related problems shall be the responsibility of the Project Manager. Problems or changes shall be distributed to the Project Manager. Weekly construction meetings shall be the forum used to discuss and formulate resolutions to construction problems that arise. Problems shall be resolved as follows:

- Identify the problem(s) or change(s), and the parties affected by the problem;
- Identify who is responsible for gathering additional information and/or formulating any changes;
- All pertinent information and changes shall be submitted in written form to the CQA for review by the CQA, the Project Manager, the Owner, and the MEDEP;
- Solutions to problems and any resulting changes shall be documented by the Project Manager and shall be distributed to all affected parties; and
- The Project Manager shall be responsible for implementing changes and/or decisions resulting from this problem resolution process.

2.0 SOIL QUALITY CONTROL

The following quality control procedures will be incorporated into the project specifications to assure that soil cover materials used at the site meets the project specifications, and provides the data to define quality control acceptance criteria. The program will include borrow source testing from both on-site (i.e., existing cover materials) and off-site materials to demonstrate compliance with material specifications, and construction testing to demonstrate that materials have been properly installed.

2.1 Borrow Source Characterization

The Contractor, as part of his proposal, will be required to identify the sand, topsoil, till, and gravel borrow sources. Once the construction contract has been awarded, the selected Contractor will be required to perform an initial borrow source testing program. The Contractor shall obtain borrow materials from a licensed borrow pit or from an excavation that is exempt from permitting under 38 M.R.S.A. Section 481-490 (Site Location of Development Law) and 38 M.R.S.A. Subsection 409-A et.seq. The Contractor shall employ a testing laboratory acceptable to the Owner's Representative to perform the soil testing of a potential borrow source to pre-qualify it. The intent of this program will be to determine the variability of the source properties, and its compliance with the project specifications. The Owner's Representative will accompany the Contractor during the collection of the soil samples to develop an understanding of the variability of the borrow source. The Contractor will also be required to submit soil logs and a plan of the borrow source showing the locations where the samples were collected.

The laboratory shall perform the analysis as shown on Tables 2-1 through 2-5.

TABLE 2-1

BORROW SOURCE CHARACTERIZATION
COVER SOIL (OFF-SITE SOURCE)

Test	Method	Test Frequency[1]	Required Properties
Grain Size Analysis	ASTM D 422	1/5000 yd^3	100% passing 3-inch sieve. Minimum 20% soil particles passing #200 sieve
Moisture Density	ASTM D 698	1/5000 yd^3	(2)
Moisture Content	ASTM D 2216	1/5000 yd^3	(3)
Remolded Hydraulic Conductivity	ASTM D 5084	1/5000 yd^3	maximum $5x10^{-5}$ cm/sec

Notes:
1. Test frequency per source.
2. Moisture density tests used to define maximum dry density and associated optimum moisture content.
3. Moisture content tests used to define borrow source in situ moisture contents.
4. Borrow source characterization of existing cover soils is not required.

TABLE 2-2

BORROW SOURCE CHARACTERIZATION
DRAINAGE SAND OR GAS LAYER MATERIAL (OFF-SITE SOURCE)

Test	Method	Test Frequency[1]	Required Properties
Grain Size Analysis	ASTM D 422	1/5000 yd^3	(2)
Remolded Hydraulic Conductivity	ASTM D 2434	1/5000 yd^3	minimum $2x10^{-3}$ cm/sec

Notes:
1 Test frequency per source.
2 Grain size distribution listed in specifications packet.
3 Borrow source characterization of existing drainage sand and gas layer material is not required.

TABLE 2-3

BORROW SOURCE CHARACTERIZATION
DRAINAGE STONE

Test	Method	Test Frequency[1]	Required Properties
Grain Size Analysis	ASTM D 422	1/2,500 yd^3	(2)
Calcium Carbonate Content	ASTM D 4373(3)	1/2,500 yd^3	<15%

Notes:
1 Test frequency per source.
2 Grain size distribution listed in specifications.
3 Equivalent methods used to determine calcium carbonate content include Whole rock Geochemistry MEXRF06.

TABLE 2-4

BORROW SOURCE CHARACTERIZATION
VEGETATIVE MEDIUM (TOPSOIL) (OFF-SITE SOURCE)

Test	Test Frequency[1]	Required Properties
Organic Matter	Note 2	5 to 8%
pH	Note 2	5.8 to 6.2
Phosphorous/Potassium	Note 2	Low to medium range
Soluble Salt	Note 2	Less than 500 ppm

Notes:
1 Test frequency per source.
2 Test shall be performed at Maine Soil Testing Service – University of Maine at Orono.
3 Borrow source characterization for existing cover vegetative soil is not required.

TABLE 2-5

BORROW SOURCE CHARACTERIZATION
AGGREGATE BASE AND SUBBASE MATERIAL

Test	Test Frequency[1]	Required Properties
Grain Size Analysis (ASTM D 422)f	Per source	100% Passing 3-inch sieve meeting MDOT 703.06 Type D

Note:
[1] Test frequency per source.

3.0 SOIL QUALITY ASSURANCE

The following quality control procedures and testing will be utilized by the Owner's Representative to guide and document construction of the soil cover.

3.1 Borrow Source Construction Testing

Borrow source construction testing shall be performed as the borrow source material is being excavated and transported to the project site during construction. Borrow source construction testing shall also be performed on existing on-site cover materials reused by the Contractor. The testing is performed by the owner to ensure the consistency of the borrow source material being used for the project, and is intended to enhance and confirm testing performed earlier during the borrow source characterization.

TABLE 3-1

BORROW SOURCE CONSTRUCTION TESTING
COVER SOIL MATERIAL (OFF-SITE SOURCE)

Test	Method	Test Frequency[1]	Required Properties
Moisture Density	ASTM D 698	1/5000 yd^3	See Table 2-1
Grain Size	ASTM D 422	1/5000 yd^3	See Table 2-1
Moisture Content	ASTM D 2216	1/5000 yd^3	See Table 2-1
Remolded Hydraulic Conductivity	ASTM D 5084	1/5000 yd^3	See Table 2-1

Notes
1 Test frequency per source.
2 Borrow source construction testing of existing cover soil is not required.

TABLE 3-2

BORROW SOURCE CONSTRUCTION TESTING
COMMON BORROW MATERIAL (OFF-SITE SOURCE)

Test	Method	Test Frequency[1]	Required Properties
Moisture Density	ASTM D 698	1/5000 yd^3	See Table 2-2
Grain Size	ASTM D 422	1/5000 yd^3	See Table 2-2
Moisture Content	ASTM D 2216	1/5000 yd^3	See Table 2-2

Note
1 Test frequency per source.

TABLE 3-3

BORROW SOURCE CONSTRUCTION TESTING
DRAINAGE SAND OR GAS LAYER MATERIAL (OFF-SITE SOURCE)

Test	Method	Test Frequency[1]	Required Properties
Grain Size	ASTM D 422	1/5000 yd^3	See Table 2-3
Remolded Hydraulic Conductivity	ASTM D 2434	1/5000 yd^3	See Table 2-3

Notes:
1 Test frequency per source.
2 Borrow source construction testing of existing drainage sand and gas layer material is not required.

TABLE 3-4

BORROW SOURCE CONSTRUCTION TESTING
DRAINAGE STONE

Test	Method	Test Frequency[1]	Required Properties
Grain Size	ASTM D 422	1/2,500 yd^3	See Table 2-4
Calcium Carbonate Content	ASTM D 4373[2]	1/2,500 yd^3	See Table 2-4

Notes:
1 Test frequency per source.
2 Equivalent methods used to determine calcium carbonate content include Whole Rock Geochemistry MEXRF06.

TABLE 3-5

BORROW SOURCE CONSTRUCTION TESTING
VEGETATIVE MEDIUM (TOPSOIL) (OFF-SITE SOURCE)

Test	Test Frequency[1]	Required Properties
Organic Matter	Note 2	See Table 2-5
pH	Note 2	See Table 2-5
Phosphorous/Potassium	Note 2	See Table 2-5
Soluble Salt	Note 2	See Table 2-5

Notes:
1 Test frequency per source.
2 Test shall be performed at Maine Soil Testing Service – University of Maine at Orono.
3. Borrow source construction testing of existing cover vegetative soil is not required.

TABLE 3-6

BORROW SOURCE CONSTRUCTION TESTING
AGGREGATE BASE AND SUBBASE MATERIAL

Test	Test Frequency	Required Properties
Grain Size Analysis (ASTM D 422)	Per source	See Table 2-6

3.2 Subgrade Preparation

The areas receiving cover soil will be prepared by the Contractor prior to placing the drainage sand and cover materials. Preparation of the subgrade will include grading and tracking the of waste to create a uniform surface.

3.3 Cover Soil Placement

The following QA/QC procedures will be used during placement of the soil cover materials (i.e., gas vent sand, cover soil, and vegetative layer).

3.3.1 Moisture Control

Moisture content of the cover shall range from 0 to 4 percent higher than optimum, as determined by ASTM D 698 (standard proctor), or as determined necessary to meet the project specifications. Where subgrade or a layer of soil material must be moisture conditioned before compaction, water will be uniformly applied to surface of subgrade, or layer of soil material, in proper quantities to prevent free water appearing on surface during or subsequent to compaction operations.

Soil material that is too wet to permit compaction to the specified density will be removed and replaced, or scarified and air dried.

Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. The soils may be disced, harrowed, or pulverized until moisture content is reduced to a satisfactory level.

3.3.2 Placement and Compaction

Placement of fill materials will be in layers not more than 16 inches loose depth for material compacted by heavy compaction equipment, and not more than 6 inches loose depth for material compacted by hand-operated tampers. Lift thickness will be measured by the Contractor and the CQA Agent during placement at the frequency of 5 tests per acre per lift. Other methods of determining lift thickness include laser survey or free-standing flexible grade stakes can also be used. Hand-driven wooden grade stakes shall not be allowed for placement of soil materials above the HDPE liner. The CQA Agent may also determine lift thickness by digging small test pits through the loose soil lift into the underlying layer.

Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content. Compact each layer to required percentage of maximum dry density for each area classification. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.

Place backfill and fill materials evenly adjacent to structures, to required elevations. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around a structure to approximately same elevation in each lift. To connect cover soil barrier layer lifts to a completed barrier layer section (as a result of repairs or sequential cover section at construction), offset the lifts by one-half the compaction equipment width to create a horizontal bench without continuous vertical joints through all lifts of the barrier layer.

To eliminate desiccation cracks the surface will be moistened (as necessary) and reworked with two passes of a smooth drum roller. Desiccation is defined as moisture content below optimum, or cracks deeper than 1 inch. The cover soil will be placed and compacted and progressively covered with the overlying cover soil or vegetative topsoil, seeded and mulched, to minimize the exposure of the cover material. The closure construction activities on the sideslopes shall be phased in such a way as to limit the work area to approximately 5 acres in size at any one time, with no area open for more than any two week period.

3.4 In-Place Testing

As the cover material is used in the landfill closure, in-place testing will be performed by the owner's representative to monitor material placement and conformance with the criteria specified in the construction specifications. In-place material testing will be performed by a qualified materials testing laboratory and will be observed by the CQA Agent. Testing will be performed on each lift prior to placement of the subsequent lift. The Contractor will be required to remove or rework material not conforming with material properties specified.

The owner's testing service shall perform the tests specified in Table 3-7 through 3-9 to document the in-place properties of the cover soil.

TABLE 3-7

IN-PLACE TESTING PROGRAM
COVER SOIL

Test	Method	Test Frequency	Required Properties
Field Moisture Content	ASTM D 6938	5/acre/lift	0 to 4% above optimum
Field Density	ASTM D 6938	5/acre/lift	90% of maximum
Undisturbed Hydraulic Conductivity	ASTM D 6938	3/acre/lift	• maximum $5x10^{-5}$ cm/sec (off-site soil) • average $2x10^{-5}$ cm/sec SW (off-site soil) • $1x10^{-5}$ cm/sec NE (off-site soil)
Cover Thickness	Hand Auger	5/acre/lift	

TABLE 3-8

IN-PLACE TESTING PROGRAM
COMMON BORROW MATERIAL
(Containment Berm/Temporary Cover)

Test	Method	Test Frequency	Required Properties
Moisture Content and In-Place Density	ASTM D 6938	1/200 lf/lift (berm)	90% maximum density 0 to 4% above optimum

TABLE 3-9

IN-PLACE TESTING PROGRAM
DRAINAGE SAND OR GAS LAYER SAND

Test	Method	Test Frequency	Required Properties
Remolded Hydraulic Conductivity	ASTM D 2434	3/acre/lift	minimum $2x10^{-3}$ cm/sec
Sand Thickness	Hand Auger	5/acre/lift	

4.0 GEOMEMBRANES

4.1 Quality Control Documentation

Prior to the installation of any geomembrane material, the Manufacturer or Installer shall provide the Project Manager with the following information, if requested:

1. The origin (resin supplier's name and resin production plant), identification (brand name and number), and production date of the resin;
2. Copies of the quality control certificates issued by the resin supplier;
3. Reports on tests conducted by the Manufacturer to verify that the quality of the resin used to manufacture the geomembrane meets the specifications;
4. Reports on quality control tests conducted by the Manufacturer to verify that the geomembrane manufactured for the project meets the project specifications;
5. A statement indicating that the amount of reclaimed polymer added to the resin during manufacturing was done with appropriate cleanliness and does not exceed 2 percent by weight;
6. A list of the materials which comprise the geomembrane, expressed in the following categories as percent by weight: polyethylene, carbon black, other additives;
7. A specification for the geomembrane which includes all properties contained in the specifications measured using the appropriate test methods;
8. Written certification that minimum values given in the specification are guaranteed by the Manufacturer; and
9. Quality control certificates, signed by a responsible party employed by the Manufacturer. Each quality control certificate shall include roll identification numbers, sampling procedures, and results of quality control tests. At a minimum, results shall be given for:
    a. Density
    b. Carbon black content
    c. Carbon black dispersion
    d. Thickness
    e. Tensile properties
    f. Tear resistance.

These quality control tests shall be performed in accordance with the test methods specified in the specifications and sampled at a frequency outlined in GRI Test Method GM 13.

The Manufacturer shall identify all rolls of geomembranes with the following:

1. Manufacturer's name;
2. Product identification;
3. Thickness;
4. Roll number; and

5. Roll dimensions.

4.1.1 Product Review

The Project Manager shall verify that:

1. Property values certified by the Manufacturer meet all of its guaranteed specifications;
2. Measurements of properties by the Manufacturer are properly documented and that the test methods used are acceptable;
3. Quality control certificates have been provided at the specified frequency for all rolls, and that each certificate identifies the rolls related to it;
4. Roll packages are appropriately labeled; and
5. Certified minimum properties meet the specifications.

4.2 Conformance Testing

Upon delivery of the rolls of geomembrane, the Geosynthetic CQA shall assure that conformance test samples are obtained for the geomembrane. These samples shall then be forwarded to the Geosynthetic QAL for testing to assure conformance to the specifications.

If the Project Manager desires, the Geosynthetic CQA can perform the conformance test sampling at the manufacturing plant. This may be advantageous in expediting the installation process for very large projects.

At a minimum, the following conformance tests shall be conducted:

1. Density;
2. Carbon black content;
3. Carbon black dispersion;
4. Thickness; and
5. Tensile properties.

These conformance tests shall be performance in accordance with the test methods specified in the specifications.

4.2.1 Sampling Procedures

The rolls to be sampled shall be selected by the Geosynthetic CQA. Samples shall be taken across the entire width of the roll and shall not include the first 3 feet (1 m). Unless otherwise specified, samples shall be 3 feet (1 m) long by the roll width. The Geosynthetic CQA shall mark the machine direction on the samples with an arrow.

A lot shall be defined as a group of consecutively numbered rolls from the same manufacturing line. Alternatively, a lot may be designated by the Geosynthetic CQA based on a review of all roll information including quality control documentation and manufacturing records.

Unless otherwise specified, samples shall be taken at a rate of one per lot, not to exceed one conformance test per 100,000 square feet of geomembrane.

4.2.2 Test Results

All conformance test results shall be reviewed and accepted or rejected by the Geosynthetic CQA prior to the deployment of the geomembrane.

The Geosynthetic CQA shall examine all results from laboratory conformance testing and shall report any nonconformance to the Project Manager. The Geosynthetic CQA shall be responsible for checking that all test results meet or exceed the property values listed in the project specifications.

If the Manufacturer has reason to believe that failing tests may be the result of the Geosynthetic QAL incorrectly conducting the tests, the Manufacturer may request that the sample in question be retested by the Geosynthetic QAL with a technical representative of the Manufacturer present during the testing. This retesting shall be done at the expense of the Manufacturer. Alternatively, the Manufacturer may have the sample retested at two different approved independent laboratories at the expense of the Manufacturer. If both laboratories produce passing results, the material shall be accepted. If both laboratories do not produce passing results, then the original Geosynthetic QAL test results shall be accepted. The use of these procedures for dealing with failed test results is subject to the approval of the Project Manager.

If a test result is in nonconformance, all material from the lot represented by the failing test should be considered out of specification and rejected. Alternatively, at the option of the Project Manager, additional conformance test samples may be taken to "bracket" the portion of the lot not meeting specification (note that this procedure is valid only when all rolls in the lot are consecutively produced and numbered from one manufacturing line). To isolate the out of specification material, additional samples must be taken from rolls that have roll numbers immediately adjacent to the roll that was sampled and failed. If both additional tests pass, the roll that represents the initial failed test and the roll manufactured immediately after that roll (next larger roll number) shall be rejected. If one or both of the additional tests fail, then the entire lot shall be rejected, or the procedure repeated with two additional tests that bracket a greater number of rolls within the lot.

4.3 Subgrade Preparation

4.3.1 Surface Preparation

The earthwork contractor shall be responsible for preparing the supporting soil for geomembrane placement. The Project Manager shall coordinate the work of the earthwork contractor and the Installer so that the requirements of the specification are met.

Before the geomembrane installation begins, the Geosynthetic CQA shall verify that:

1. A qualified land surveyor has verified all lines and grades;
2. The supporting soil meets the density specified in the project specifications;
3. The surface to be lined has been rolled, compacted, or handworked so as to be free of irregularities, protrusions, loose soil, and abrupt changes in grade;
4. The surface of the supporting soil does not contain stones which may be damaging to the geomembrane;
5. There is no area excessively softened by high water content; and

6. There is no area where the surface of the soil contains excessive desiccation cracks with dimensions exceeding those allowed by the project specifications.

The Installer, in conjunction with the Geosynthetic Construction Quality Assurance Agent, shall certify in writing that the surface on which the geomembrane will be installed is acceptable. A certificate of acceptance shall be given by the Installer to the Geosynthetic CQA prior to commencement of geomembrane deployment in the area under consideration. The Project Manager shall be given a copy of this certificate by the Geosynthetic CQA.

After the supporting soil has been accepted by the Installer, it is the Installer's responsibility to indicate to the Project Manager any change in the supporting soil condition that may require repair work. The Project Manager may consult with the Geosynthetic CQA regarding the need for repairs. If the Geosynthetic CQA concurs with Installer, the Project Manager shall assure that the supporting soil is repaired.

At any time before or during the geomembrane installation, the Geosynthetic CQA shall indicate to the Project Manager any locations which may not be adequately prepared for the geomembrane.

4.3.2 Anchor Trench

The Geosynthetic CQA shall verify that the anchor trench has been constructed according to the design drawings and specifications.

If the anchor trench is excavated in a clay material susceptible to desiccation, the amount of trench open at any time should be minimized. The Geosynthetic CQA shall inform the Project Manager of any signs of significant desiccation associated with the anchor trench construction.

Slightly rounded corners shall be provided in the trench so as to avoid sharp bends in the geomembrane. Excessive amounts of loose soil shall not be allowed to underlie the geomembrane in the anchor trench.

The anchor trench shall be adequately drained to prevent ponding or softening of the adjacent soils while the trench is open. The anchor trench shall be backfilled and compacted as outlined in the project specifications.

Care shall be taken when backfilling the trenches to prevent any damage to the geosynthetics. The Geosynthetic CQA shall observe the backfilling operation and advise the Project Manager of any problems. Any problems shall be documented by the Geosynthetic CQA in his daily report.

4.4 Geomembrane Deployment

4.4.1 Panel Nomenclature

A field panel is defined as a unit of geomembrane which is to be seamed in the field (i.e., a field panel is a roll or a portion of roll cut in the field).

It shall be the responsibility of the Installer to assure that each field panel is given an identification code (number or letter-number) consistent with the layout plan. This identification code shall be agreed upon by the Project Manager, Installer and Geosynthetic CQA. This field panel identification code shall be as simple and logical as possible. In general, it is not appropriate to identify panels using roll numbers since roll numbers established in the manufacturing plant are usually cumbersome and are not related to location in the field. The Geosynthetic CQA shall establish a table or chart showing correspondence

between roll numbers and field panel identification codes. The field panel identification code shall be used for all quality assurance records.

The Geosynthetic CQA shall verify that field panels are installed at the locations indicated on the Installer's layout plan, as approved by the Project Manager.

4.4.2 Panel Deployment Procedure

The Geosynthetic CQA shall review the panel deployment progress of the Installer (keeping in mind issues relating to wind, rain, clay liner desiccation, and other site-specific conditions) and advise the Project Manager on its compliance with the approved panel layout drawing and its suitability to the actual field conditions. Once approved, only the Project Manager can authorize changes to the panel deployment procedure. The Geosynthetic CQA shall verify that the condition of the supporting soil does not change detrimentally during installation.

The Geosynthetic CQA shall record the identification code, location, and date of installation of each field panel.

4.4.3 Deployment Weather Conditions

Geomembrane deployment shall not proceed at an ambient temperature below 32°F (0°C) or above 104°F (40°C) unless otherwise authorized, in writing, by the Project Manager. Geomembrane placement shall not be performed during any precipitation, in the presence of excessive moisture (e.g., fog, dew), in an area of ponded water, or in the presence of excessive winds. Geomembrane deployment shall not be undertaken if weather conditions will preclude material seaming following deployment.

The Geosynthetic CQA shall verify that the above conditions are fulfilled. Ambient temperature shall be measured by the Geosynthetic CQA in the area in which the panels are to be deployed. The Geosynthetic CQA shall inform the Project Manager of any weather related problems which may not allow geomembrane placement to proceed.

4.4.4 Method of Deployment

Before the geomembrane is handled on site, the Geosynthetic CQA shall verify that handling equipment to be used on the site is adequate and does not pose risk of damage to the geomembrane. During handling, the Geosynthetic CQA shall observe and verify that the Installer's personnel handle the geomembrane with care.

The Geosynthetic CQA shall verify the following:

1. Any equipment used does not damage the geomembrane by handling, trafficking, excessive heat, leakage of hydrocarbons, or other means;
2. The prepared surface underlying the geomembrane has not deteriorated since previous acceptance, and is still acceptable immediately prior to geomembrane placement;
3. Any geosynthetic elements immediately underlying the geomembrane are clean and free of debris;
4. All personnel do not smoke or wear damaging shoes while working on the geomembrane, or engage in other activities which could damage the geomembrane;

5. The method used to unroll the panels does not cause excessive scratches or crimps in the geomembrane and does not damage the supporting soil;
6. The method used to place the panels minimized wrinkles (especially differential wrinkles between adjacent panels);
7. The method used to place the panels prevents bridging of the geomembrane;
8. Adequate temporary loading and/or anchoring (e.g., sand bags, tires), not likely to damage the geomembrane, has been placed to prevent uplift by wind. In case of high winds, continuous loading (e.g., by sand bags), is recommended along edges of panels to minimize risk of wind flow under the panels; and
9. Direct contact with the geomembrane is minimized, and the geomembrane is protected by geotextiles, extra geomembrane, or other suitable materials, in areas where excessive traffic may be expected.

The Geosynthetic CQA shall inform the Project Manager if the above conditions are not fulfilled.

4.4.5 Damage and Defects

Upon delivery to the site, the Geosynthetic CQA shall conduct a surface observation of all rolls for defects and for damage. This inspection shall be conducted without unrolling rolls unless defects or damages are found or suspected. The Geosynthetic CQA shall advise the Project Manager, in writing, of any rolls or portions of rolls which should be rejected and removed from the site because they have severe flaws, and/or minor repairable flaws.

The Geosynthetic CQA shall inspect each panel, after placement and prior to seaming, for damage and/or defects. The Geosynthetic CQA shall advise the Project Manager which panels, or portions of panels, should be rejected, repaired, or accepted. Damaged panels, or portions of damaged panels, which have been rejected shall be marked and their removal from the work area recorded by the Geosynthetic CQA. Repairs shall be made using procedures described in Section 4.8.

4.4.6 Writing on the Liner

To avoid confusion, the Installer and the Geosynthetic CQA shall each use different colored markers that are readily visible for writing on the geomembrane. The markers used must be semi-permanent and compatible with the geomembrane.

4.5 Field Seaming

4.5.1 Seam Layout

Before installation begins, the Installer must provide the Project Manager and the Geosynthetic CQA with a panel layout drawing (i.e., a drawing of the facility to be lined showing all expected seams). The Geosynthetic CQA shall review the panel layout drawing and verify that it is consistent with accepted state-of-practice. No panels may be seamed without the written approval of the panel layout drawing by the Project Manager. In addition, panels not specifically shown on the panel layout drawing may not be used without the Project Manager's prior approval.

In general, seams should be oriented parallel to the line of maximum slope (i.e., oriented along, not across, the slope). In corners and odd-shaped geometric locations, the number of seams should be minimized. No horizontal seam should be less than 5 feet (1.5 m) from the toe of the slope, or areas of potential stress concentrations, unless otherwise authorized by the Project Manager.

A seam numbering system compatible with the panel numbering system shall be used by the Geosynthetic CQA.

4.5.2 Accepted Seaming Methods

Approved processes for field seaming are extrusion welding and fusion welding. Proposed alternate processes shall be documented and submitted by the Installer to the Project Manager for approval. Only apparatus which have been specifically approved by make and model shall be used. The Project Manager shall submit all documentation regarding seaming methods to be used to the Geosynthetic CQA for review.

4.5.2.1 Extrusion Process

The Geosynthetic CQA shall log ambient, seaming apparatus, and geomembrane surface temperatures at appropriate intervals and report any noncompliances to the Project Manager.

The Geosynthetic CQA shall verify that:

1. The Installer maintains on-site the number of spare operable seaming apparatus decided upon at the pre-construction meeting;
2. Equipment used for seaming is not likely to damage the geomembrane;
3. Prior to beginning a seam, the extruder is purged until all heat-degraded extrudate has been removed from the barrel;
4. Clean and dry welding rods or extrudate pellets are used;
5. The electric generator is placed on a smooth base such that no damage occurs to the geomembrane;
6. Grinding shall be completed no more than 1 hour prior to seaming;
7. A smooth insulating plate or fabric is placed beneath the hot welding apparatus after usage;
8. The geomembrane is protected from damage in heavily trafficked areas;
9. Exposed grinding marks adjacent to an extrusion weld shall be minimized. In no instance shall exposed grinding marks extend more than 1/4 inch from the seamed area;
10. In general, the geomembrane panels are aligned to have a nominal overlap of 3 inch for extrusion welding. In any event, the final overlap shall be sufficient to allow peel tests to be performed on the seam;
11. No solvent or adhesive is used unless the product is approved in writing by the Project Manager prior to use (samples shall be submitted to the Project Manager for testing and evaluation); and
12. The procedure used to temporarily bond adjacent panels together does not damage the geomembrane; in particular, the temperature of hot air at the nozzle of any temporary welding apparatus is controlled such that the geomembrane is not damaged or degraded.

4.5.2.2 Fusion Process

The Geosynthetic CQA shall log ambient, seaming apparatus, and geomembrane surface temperatures at appropriate intervals and report any noncompliances to the Project Manager.

The Geosynthetic CQA shall also verify that:

1. The Installer maintains on-site the number of spare operable seaming apparatus decided upon at the pre-construction meeting;
2. Equipment used for seaming is not likely to damage the geomembrane;
3. For cross seams, the edge of the cross seam is ground to an incline prior to welding;
4. The electric generator is placed on a smooth base such that no damage occurs to the geomembrane;
5. A smooth insulating plate or fabric is placed beneath the hot welding apparatus after usage;
6. The geomembrane is protected from damage in heavily trafficked areas;
7. A movable protective layer is used as required by the Installer directly below each overlap of geomembrane that is to be seamed to prevent buildup of moisture between the sheets and prevent debris from collecting around the pressure rollers;
8. In general, the geomembrane panels are aligned to have a nominal overlap of 5 inches for fusion welding. In any event, the final overlap shall be sufficient to allow peel tests to be performed on the seam; and
9. No solvent or adhesive is used unless the product is approved in writing by the Project Manager prior to use (samples shall be submitted to the Project Manager for testing and evaluation).

4.5.3 Seam Preparation

The Geosynthetic CQA shall verify that prior to seaming, the seam area is clean and free of moisture, dust, dirt, debris or foreign material of any kind. If seam overlap grinding is required, the Geosynthetic CQA must assure that the process is completed according to the Manufacturer's instructions within one hour of the seaming operation, and in a way that does not damage the geomembrane. The Geosynthetic CQA shall also verify that seams are aligned with the fewest possible number of wrinkles and "fishmouths."

4.5.4 Trial Seams

Trial seams shall be made on fragment pieces of geomembrane liner to verify that conditions are adequate for production seaming. Such trial seams shall be made at the beginning of each seaming period, and at least once each five hours, for each production seaming apparatus used that day. Each seamer shall make at least one trial seam each day. Trial seams shall be made under the same conditions as actual seams. Additional trial seams will be required after any change of operator, equipment shutdown, significant idle time, or significant weather change. Additional trial seams due to idle time or weather will be at the discretion of the Geosynthetic CQA.

The trial seam sample shall be at least 5 feet (1.0 m) long by 1 foot (0.3 m) wide (after seaming) with the seam centered lengthwise. Seam overlap shall be as indicated in Section 4.5.2.

Five specimens shall be cut from the sample with a 1-inch-wide die. The specimens shall be cut by the Installer at locations selected randomly along the trial seam sample by the Geosynthetic CQA. The specimens shall be tested in peel (3) and shear (2), using a field tensiometer. The tensiometer shall be capable of maintaining a constant jaw separation rate of 20 inches per minute. If a specimen fails, the entire operation shall be repeated. If the additional specimen fails, the seaming apparatus and seamer

shall not be accepted and shall not be used for seaming until the deficiencies are corrected and two consecutive successful trial welds are achieved. The Geosynthetic CQA shall observe all trial seam procedures.

4.5.5 General Seaming Procedures

During general seaming, the Geosynthetic CQA shall be cognizant of the following:

1. For fusion welding, it may be necessary to place a movable protective layer of plastic directly below each overlap of geomembrane that is to be seamed. This is to prevent any moisture buildup between the sheets to be welded and prevent debris from collecting around the pressure rollers;
2. If required, a firm substrate shall be provided by using a flat board, a conveyor belt, or similar hard surface directly under the seam overlap to achieve proper support;
3. Fishmouths or wrinkles at the seam overlaps shall be cut along the ridge of the wrinkle in order to achieve a flat overlap. The cut fishmouths or wrinkles shall be seamed and any portion where the overlap is inadequate shall then be patched with an oval or round patch of the same geomembrane extending a minimum of 6 inches beyond the cut in all directions;
4. If seaming operations are carried out at night, adequate illumination shall be provided;
5. Seaming shall extend to the outside edge of panels placed in the anchor trench;
6. All cross seam tees should be patched with an oval or round patch of the same geomembrane extending a minimum of 6 inches beyond the cut in all directions; and
7. No field seaming shall take place without the Master Seamer being present.

The Geosynthetic CQA shall verify that the above seaming procedures (or any other procedures agreed upon and indicated in the project manual) are followed, and shall inform the Project Manager of any nonconformance.

4.5.6 Seaming Weather Conditions

4.5.6.1 Normal Weather Conditions

The normal required weather conditions for seaming are as follows:

1. Ambient temperature between 32°F (0°C) and 104°F (40°C);
2. Dry conditions (i.e., no precipitation or other excessive moisture, such as fog or dew); and
3. No excessive winds.

The Geosynthetic CQA shall verify that these weather conditions are fulfilled and notify the Project Manager in writing if they are not. Ambient temperature shall be measured by the Geosynthetic CQA in the area in which the panels are to be placed. The Project Manager will then decide if the installation is to be stopped or special procedures used.

4.5.6.2 Cold Weather Conditions

To assure a quality installation, if seaming is conducted when the ambient temperature is below 32°F (0°C), the following conditions must be met:

1. Geomembrane surface temperatures shall be determined by the Geosynthetic CQA at intervals of at least once per 100 foot of seam length to determine if preheating is required. For extrusion welding, preheating is required if the surface temperature of the geomembrane is below 32°F (0°C);
2. Preheating may be waived by the Project Manager based on a recommendation from the Geosynthetic CQA, if the Installer demonstrates to the Geosynthetic CQA's satisfaction that welds of equivalent quality may be obtained without preheating at the expected temperature of installation;
3. If preheating is required, the Geosynthetic CQA shall inspect all areas of geomembrane that have been preheated by a hot air device prior to seaming, to assure that they have not been overheated;
4. Care shall be taken to confirm that the surface temperatures are not lowered below the minimum surface temperatures specified for welding due to winds or other adverse conditions. It may be necessary to provide wind protection for the seam area;
5. All preheating devices shall be approved prior to use by the Project Manager;
6. Additional destructive tests (as described in Section 4.7) shall be taken at an interval between 500 feet and 250 feet of seam length, at the discretion of the Geosynthetic CQA;
7. Sheet grinding may be performed before preheating, if applicable; and
8. Trial seaming shall be conducted under the same ambient temperature and preheating conditions as the actual seams. Under cold weather conditions, new trial seams shall be conducted if the ambient temperature drops by more than 5°F from the initial trial seam test conditions.

4.5.6.3 Warm Weather Conditions

At ambient temperatures above 104°F, no seaming of the geomembrane shall be permitted unless the Installer can demonstrate to the satisfaction of the Project Manager that geomembrane seam quality is not compromised.

Trial seaming, as described in shall be conducted under the same ambient temperature conditions as the actual seams.

At the option of the Geosynthetic CQA, additional destructive tests (as described in Section 4.7) may be required for any suspect areas.

4.6 Nondestructive Seam Testing

The Installer shall nondestructively test all field seams over their full length using a vacuum test unit, air pressure test (for double fusion seams only), or other approved method. Vacuum testing and air pressure testing are described in Sections 4.6.1 and 4.6.2, respectively. The purpose of nondestructive tests is to check the continuity of seams. It does not provide quantitative information on seam strength. Nondestructive testing shall be carried out as the seaming work progresses, not at the completion of all field seaming. At a minimum of once every 4 hours of seaming and when operation has been suspended for greater than one hour or if breakdown of seaming equipment occurs, weld samples will be tested in peel and shear in accordance with the destructive test requirements of the contract documents.

For all seams, the Geosynthetic CQA shall:

1. Observe nondestructive testing procedures;
2. Record location, data, test unit number, name of tester, and outcome of all testing; and
3. Inform the Installer and Project Manager of any required repairs.

4.6.1 Vacuum Testing

The following procedures are applicable to vacuum testing.

1. The equipment shall consist of the following:
   a. A vacuum box assembly consisting of a rigid housing, a transparent viewing window, a soft neoprene gasket attached to the bottom, a porthole or valve assembly, and a vacuum gauge;
   b. A pump assembly equipped with a pressure controller and pipe connections;
   c. A rubber pressure/vacuum hose with fittings and connections;
   d. A soapy solution of distilled water; and
   e. A bucket and wide paint brush, or other means of applying the soapy solution.
2. The following procedures shall be followed:
   a. Energize the vacuum pump and reduce the tank pressure to approximately 5 psi gauge;
   b. Wet a strip of geomembrane approximately 12 inches by 48 inches (0.3 m x 1.2 m) with the soapy distilled water solution;
   c. Place the box over the wetted area;
   d. Close the bleed valve and open the vacuum valve;
   e. Assure that a leak-tight seal is created;
   f. For a period of not less than 10 seconds, apply vacuum and examine the geomembrane through the viewing window for the presence of soap bubbles;
   g. If no bubble appears after 10 seconds, close the vacuum valve and open the bleed valve, move the box over the next adjoining area with a minimum 3 inches overlap, and repeat the process; and
   h. All areas where soap bubbles appear shall be marked and repaired in accordance with Section 4.8.

4.6.2 Air Pressure Testing

The following procedures are applicable to double fusion welding which produces a double seam with an enclosed space.

1. The equipment shall consist of the following:
   a. An air pump (manual or motor driven), equipped with pressure gauge capable of generating and sustaining a pressure between 25 and 30 psi (160 and 200 kPa) and mounted on a cushion to protect the geomembrane;
   b. A rubber hose with fittings and connections; and

c. A sharp hollow needle, or other approved pressure feed device.

2. The following procedures shall be followed:

   a. Seal both ends of the seam to be tested;

   b. Insert needle or other approved pressure feed device into the air channel created by the fusion weld;

   c. Insert a protective cushion between the air pump and the geomembrane;

   d. Energize the air pump to a pressure between 25 and 30 psi (160 and 200 kPa), close valve, allow 2 minutes for pressure to stabilize, and sustain pressure for at least 5 minutes;

   e. If loss of pressure exceeds 4 psi (30 kPa) or does not stabilize, locate faulty area and repair in accordance with Section 4.8;

   f. Cut opposite end of tested seam area once testing is completed to verify continuity of the air channel. If air does not escape, locate blockage and retest unpressurized area. Seal the cut end of the air channel; and

   g. Remove needle or other approved pressure feed device and seal.

4.6.3 Test Failure Procedures

The Installer shall complete any required repairs in accordance with Section 4.8. For repairs, the Geosynthetic CQA shall:

1. Observe the repair and testing of the repair;
2. Mark on the geomembrane that the repair has been made; and
3. Document the repair procedures and test results.

4.7 Destructive Seam Testing

Destructive seam tests shall be performed at selected locations. The purpose of these tests is to evaluate seam strength. Seam strength testing shall be done as the seaming work progresses, not at the completion of all field seaming.

4.7.1 Location and Frequency

The Geosynthetic CQA shall select locations where seam samples will be cut out for laboratory testing. Those locations shall be established as follows:

1. A minimum frequency of one test location per 1,000 feet of seam length performed by each welder. This minimum frequency is to be determined as an average taken throughout the entire facility;
2. Test locations shall be determined during seaming at the Geosynthetic CQA's discretion. Selection of such locations may be prompted by suspicion of overheating, contamination, offset welds, or any other potential cause of imperfect welding; and
3. Additional samples may be cut at the end of each seam for field testing. Sample locations shall be chosen by the Geosynthetics CQA.

The Installer shall not be informed in advance of the locations where the seam samples will be taken.

4.7.2 Sampling Procedures

Samples shall be cut by the Installer at locations chosen by the Geosynthetic CQA as the seaming progresses so that laboratory test results are available before the geomembrane is covered by another material. The Geosynthetic CQA shall:

1. Observe sample cutting;
2. Assign a number to each sample, and mark it accordingly;
3. Record sample location on layout drawing; and
4. Record reason for taking the sample at this location (e.g., statistical routine, suspicious feature of the geomembrane).

All holes in the geomembrane resulting from destructive seam sampling shall be immediately repaired in accordance with repair procedures described in Section 4.8. The continuity of the new seams in the repaired area shall be tested according to the project specifications.

4.7.3 Sample Dimensions

At a given sampling location, two types of samples shall be taken by the Installer. First, two samples for field testing should be taken. Each of these samples shall be cut with a 1-inch-wide die, with the seam centered parallel to the width. The distance between these two samples shall be 42 inches (1.1 m). If both samples pass the field test described in Section 4.7.4, a sample for laboratory testing shall be taken.

The sample for laboratory testing shall be located between the samples for field testing. The sample for laboratory testing shall be 12 inches (0.3 m) wide by 42 inches (1.1 m) long with the seam centered lengthwise. The sample shall be cut into three parts and distributed as follows:

1. One portion to the Installer for optional laboratory testing, 12 inches x 12 inches (0.3 m x 0.3 m);
2. One portion for Geosynthetic QAL testing, 12 inches x 18 inches (0.3 m x 0.5 m); and
3. One portion to the Project Manager for archive storage, 12 inches x 12 inches (0.3 m x 0.3 m).

Final determination of the sample sizes shall be made at the pre-construction meeting.

4.7.4 Field Testing

The two 1-inch-wide strips mentioned in Section 4.7.3 shall be tested in the field using a tensiometer for peel and shear and shall not fail according to the criteria in the project specifications. The tensiometer shall be capable of maintaining a constant jaw separation rate of 20 inches per minute. If the test passes in accordance with this section, the sample qualifies for testing in the laboratory. If it fails, the seam should be repaired in accordance with Section 4.8. Final judgment regarding seam acceptability, based on the failure criteria, rests with the Geosynthetic CQA. Both tracks are to be tested in peel.

The Geosynthetic CQA shall witness all field tests and mark all samples and portions with their number. The Geosynthetic CQA shall also log the date and time, ambient temperature, number of seaming unit, name of seamer, welding apparatus temperatures and pressures, and pass or fail description, and attach a copy to each sample portion.

4.7.5 Laboratory Testing

Destructive test samples shall be packaged and shipped, if necessary, under the responsibility of the Geosynthetic QAL in a manner which will not damage the test sample. The Project Manager will be responsible for storing the archive samples. Test samples shall be tested by the Geosynthetic QAL.

Testing shall include properties as defined in the specifications. The minimum acceptable values to be obtained in these tests are indicated in the specifications. At least 5 specimens shall be tested in each shear and peel. Specimens shall be selected alternately by test from the samples (i.e., peel, shear, peel, shear...). Parent material strength will be determined by sampling the actual sheets adjacent to the destructive test location, in the same direction the seam is tested.

The Geosynthetic QAL shall provide verbal test results no more than 24 hours after they receive the samples. The Geosynthetic CQA shall review laboratory test results as soon as they become available, and make appropriate recommendations to the Project Manager.

4.7.6 Destructive Test Failure Procedures

The following procedures shall apply whenever a sample fails a destructive test, whether that test is conducted by the Geosynthetic QAL, or by field tensiometer. The Installer has two options:

1. The Installer can repair the seam between any two passing test locations; and
2. The Installer can trace the welding path to an intermediate location (at 10 feet (3 m) minimum from the point of the failed test in each direction) and take a sample with a 1 inch wide die for an additional field test at each location. If these additional samples pass the test, then full laboratory samples are taken. If these laboratory samples pass the tests, then the seam is repaired between these locations. If either sample fails, then the process is repeated to establish the zone in which the seam should be repaired.

All acceptable repaired seams shall be bound by two locations from which samples passing laboratory destructive tests have been taken. Passing laboratory destructive tests of trial seam samples taken as indicated in Section 4.7 may be used as a boundary for the failing seam. In cases exceeding 150 feet (50 m) of repaired seam, a sample taken from the zone in which the seam has been repaired must pass destructive testing. Repairs shall be made in accordance with Section 4.8.

The Geosynthetic CQA shall document all actions taken in conjunction with destructive test failures.

4.8 Defects and Repairs

4.8.1 Identification

All seams and non-seam areas of the geomembrane shall be examined by the Geosynthetic CQA for identification of defects, holes, blisters, undispersed raw materials, and any sign of contamination by foreign matter. Because light reflected by the geomembrane helps to detect defects, the surface of the geomembrane shall be clean at the time of examination. The geomembrane surface shall be cleaned by the Installer if the amount of dust or mud inhibits examination.

4.8.2 Evaluation

Each suspect location both in seam and non-seam areas shall be nondestructively tested using the methods described in Section 4.6 as appropriate. Each location which fails the nondestructive testing

shall be marked by the Geosynthetic CQA and repaired by the Installer. Work shall not proceed with any materials which will cover locations which have been repaired until appropriate nondestructive and laboratory test results with passing values are available.

4.8.3 Repair Procedures

Any portion of the geomembrane exhibiting a flaw, or failing a destructive or nondestructive test, shall be repaired. Several procedures exist for the repair of these areas. The final decision as to the appropriate repair procedure shall be agreed upon between the Project Manager, Installer, and Geosynthetic CQA.

1. The repair procedures available include:
    a. Patching, used to repair large holes, tears, undispersed raw materials, and contamination by foreign matter;
    b. Spot welding or seaming, used to repair small tears, pinholes, or other minor, localized flaws;
    c. Capping, used to repair large lengths of failed seams;
    d. Extrusion welding the flap, used to repair areas of inadequate fusion seams, which have an exposed edge. Repairs of this type shall be approved by the Geosynthetic CQA and shall not exceed 50 feet (15 m) in length; and
    e. Removing bad seam and replacing with a strip of new material welded into place.
2. For any repair method, the following provisions shall be satisfied:
    a. Surfaces of the geomembrane which are to be repaired using extrusion methods shall be abraded no more than one hour prior to the repair;
    b. All surfaces shall be clean and dry at the time of the repair;
    c. All seaming equipment used in repairing procedures shall meet the requirements of the QAP; and
    d. Patches or caps shall extend at least 6 inches beyond the edge of the defect, and all corners of patches shall be rounded with a radius of approximately 3 inches.

4.8.4 Repair Verification

Each repair shall be numbered and logged. Each repair shall be nondestructively tested using the methods described in Section 4.6 as appropriate. Repairs which pass the nondestructive test shall be taken as an indication of an adequate repair. Repairs more than 150 feet long may be of sufficient extent to require destructive test sampling, at the discretion of the Geosynthetic CQA. Failed tests indicate that the repair shall be redone and retested until a passing test results. The Geosynthetic CQA shall observe all nondestructive testing of repairs and shall record the number of each repair, date, and test outcome.

4.8.5 Large Wrinkles

When seaming of the geomembrane is completed, and prior to placing overlying materials, the Geosynthetic CQA shall indicate to the Project Manager which wrinkles should be cut and reseamed by the Installer. The number of wrinkles to be repaired should be kept to an absolute minimum. Therefore, wrinkles should be located during the coldest part of the installation process, while keeping in mind the forecasted weather to which the uncovered geomembrane may be exposed. Wrinkles are considered to

be large when the geomembrane can be folded over onto itself. This is generally the case for a wrinkle that extends 12 inches from the subgrade. Seams produced while repairing wrinkles shall be tested as outlined above.

When placing overlying material on the geomembrane, every effort must be made to minimize wrinkle development. If possible, cover should be placed during the coolest weather available. In addition, small wrinkles should be isolated and covered as quickly as possible to prevent their growth. The placement of cover materials shall be observed by the Geosynthetic CQA to assure that wrinkle formation is minimized.

4.9 Geomembrane Protection

The quality assurance procedures indicated in this Section are intended only to assure that the installation of adjacent materials does not damage the geomembrane.

4.9.1 Soils

A copy of the specifications prepared by the Designer for placement of soils shall be given to the Geosynthetic CQA by the Project Manager. The Geosynthetic CQA shall verify that these specifications are consistent with the state-of-practice such as:

1. Placement of soils on the geomembrane shall not proceed at an ambient temperature below 32°F (0°C) nor above 104°F (40°C) unless otherwise specified;
2. Placement of soil on the geomembrane should be done during the coolest part of the day to minimize the development of wrinkles in the geomembrane;
3. A geotextile or other cushion approved by the Designer is generally required between aggregate and the geomembrane;
4. Equipment used for placing soil shall not be driven directly on the geomembrane;
5. A minimum thickness of 1 foot (0.3 m) of soil is specified between a light dozer (ground pressure of 5 psi (35 kPa) or lighter) and the geomembrane; and
6. In any areas traversed by any vehicles other than low ground pressure vehicles approved by the Project Manager, the soil layer shall have a minimum thickness of 3 feet (0.9 m). This requirement may be waived if provisions are made to protect the geomembrane through an engineered design. Drivers shall proceed with caution when on the overlying soil and prevent spinning of tires or sharp turns.

The Geosynthetic CQA shall measure soil thickness and verify that the required thicknesses are present. The Geosynthetic CQA must also verify that final thicknesses are consistent with the design and verify that placement of the soil is done in such a manner that geomembrane damage is unlikely. The Geosynthetic CQA shall inform the Project Manager if the above conditions are not fulfilled.

4.9.2 Sumps and Appurtenances

A copy of the plans and specifications prepared by the Designer for appurtenances shall be given by the Project Manager to the Geosynthetic CQA. The Geosynthetic CQA shall review these plans and verify that:

1. Installation of the geomembrane in appurtenant areas, and connection of geomembrane to appurtenances have been made according to specifications;

2. Extreme care is taken while welding around appurtenances since neither non-destructive nor destructive testing may be feasible in these areas; and
3. The geomembrane has not been visibly damaged while making connections to appurtenances.

The Geosynthetic CQA shall inform the Project Manager in writing if the above conditions are not fulfilled.

4.10 Lining System Acceptance

Upon written recommendation by the Geosynthetic CQA, the Project Manager shall consider accepting the geosynthetic lining system. The conditions of acceptance are described below. The Installer and Manufacturer(s) will retain all ownership and responsibility for the geosynthetics in the lining system until acceptance by the Owner. At the Owner's discretion, the geosynthetic lining system may be accepted in sections or at points of substantial completion.

The geosynthetic lining system shall be accepted by the Owner when:

1. The installation of the lining system, or section thereof, is finished.
2. Verification of the adequacy of all seams and repairs, including associated testing, is completed.
3. All documentation of installation is completed.
4. The Geosynthetic CQA is able to recommend acceptance.

The Geosynthetic CQA shall certify that installation has proceeded in accordance with the geosynthetic portions of the project QAP except as noted to the Project Manager.

5.0 GEOTEXTILES

5.1 Quality Control Documentation

Prior to the installation of any geotextile, the Manufacturer or Installer shall provide the Project Manager with the following information, if requested:

1. The origin (resin supplier's name and resin production plant) and identification (brand name and number) of the resin used to manufacture the geotextile;
2. Copies of the quality control certificates issued by the resin supplier;
3. Reports on tests conducted by the Manufacturer to verify that the quality of the resin used to manufacture the geotextile meets the Manufacturer's resin specifications;
4. Reports on quality control tests conducted by the Manufacturer to verify that the geotextile manufactured for the project meets the project specifications;
5. A statement indicating that the reclaimed polymer added to the resin during manufacturing was done with appropriate cleanliness;
6. A list of the materials which comprise the geotextile, expressed in the following categories as percent by weight: base polymer, carbon black, other additives;
7. A specification for the geotextile which includes all properties contained in the project specifications measured using the appropriate test methods;
8. Written certification that minimum average roll values given in the specification are guaranteed by the Manufacturer;
9. For non-woven geotextiles, written certification that the Manufacturer has continuously inspected the geotextile for the presence of needles and found the geotextile to be needle free;
10. Quality control certificates, signed by a responsible party employed by the Manufacturer. The quality control certificates shall include roll identification numbers, sampling procedures and results of quality control tests. At a minimum, results shall be given for those properties stated in Section 02772 Part 2.01(A and B) of the project specifications; and
11. Quality control tests shall be performed in accordance with the test methods specified in the project specifications for at least every 100,000 square feet of geotextile produced.

The Manufacturer shall identify all rolls of geotextiles with the following:

1. Manufacturer's name
2. Product identification
3. Roll number
4. Roll dimensions

5.1.1 Product Review

The Project Manager shall verify that:

1. Property values certified by the Manufacturer meet all of its guaranteed specifications.

2. Measurements of properties by the Manufacturer are properly documented and that the test methods used are acceptable.
3. Quality control certificates have been provided at the specified frequency for all rolls, and that each certificate identifies the rolls related to it.
4. Roll packages are appropriately labeled.
5. Certified minimum average roll properties meet the project specifications.

5.2 Conformance Testing

If requested by the Project Engineer, upon delivery of the rolls of geotextiles, the Geosynthetic QAE shall assure that conformance test samples are obtained for the geotextile. These samples shall then be forwarded to the Geosynthetic QAL for testing to assure conformance to the project specifications.

If the Project Manager desires, the Geosynthetic QAE or his agent, can perform the conformance test sampling at the manufacturing plant. This may be advantageous in expediting the installation process for very large projects.

The conformance tests shall be performed in accordance with the test methods indicated in Section 02772 Part 2.01 of the project specifications. Other conformance tests may be required by the Project Manager.

5.2.1 Sampling Procedures

The rolls to be sampled shall be selected by the Geosynthetic QAE. Samples shall be taken across the entire width of the roll and shall not include the first complete revolution of fabric on the roll. Samples shall not be taken from any portion of a roll which has been subjected to excess pressure or stretching. Unless otherwise specified, samples shall be 3 feet long by the roll width. The Geosynthetic QAE shall mark the machine direction on the samples with an arrow. All lots of material and the particular test sample that represents each lot should be defined before the samples are taken.

A lot shall be defined as a group of consecutively numbered rolls from the same manufacturing line. Alternatively, a lot may be designated by the Geosynthetic QAE based on a review of all roll information including quality control documentation and manufacturing records.

Unless otherwise specified, samples shall be taken at a rate of one per lot, not to exceed one conformance test per 100,000 square feet of geotextile.

5.2.2 Test Results

All conformance test results shall be reviewed and accepted or rejected by the Geosynthetic QAE prior to the deployment of the geotextile.

The Geosynthetic QAE shall be responsible for checking that all test results meet or exceed the property values listed in the project specifications.

If the Manufacturer has reason to believe that failing tests may be the result of the Geosynthetic QAL incorrectly conducting the tests, the Manufacturer may request that the sample in question be retested by the Geosynthetic QAL with a technical representative of the Manufacturer present during the testing. This retesting shall be done at the expense of the Manufacturer. Alternatively, the Manufacturer may have the sample retested at two different approved independent laboratories at the expense of the

Manufacturer. If both laboratories produce passing results, the material shall be accepted. If both laboratories do not produce passing results, then the original Geosynthetic QAL test results shall be accepted. The use of these procedures for dealing with failed test results is subject to the approval of the Project Manager.

If a test result is in nonconformance, all material from the lot represented by the failing test should be considered out of specification and rejected. Alternatively, at the option of the Project Manager/RPR, additional conformance test samples may be taken to "bracket" the portion of the lot not meeting specification (note that this procedure is valid only when all rolls in the lot are consecutively produced and numbered from one manufacturing line). To isolate the out of specification material, additional samples must be taken from rolls that have roll numbers immediately adjacent to the roll that was sampled and failed. If both additional tests pass, the roll that represents the initial failed test and the roll manufactured immediately after that roll (next larger roll number) shall be rejected. If one or both of the additional tests fail, then the entire lot shall be rejected, or the procedure repeated with two additional tests that bracket a greater number of rolls within the lot.

5.3 Geotextile Deployment

During shipment and storage, the geotextile shall be protected from ultraviolet light exposure, precipitation or other inundation, mud, dirt, dust, puncture, cutting, or any other damaging or deleterious conditions. Geotextile rolls shall be shipped and stored in relatively opaque and watertight wrappings. Wrappings shall be removed shortly before deployment.

The Geosynthetic QAE shall observe rolls upon delivery at the site and any deviation from the above requirements shall be reported to the Project Manager/RPR.

The Installer shall handle all geotextiles in such a manner as to assure they are not damaged in any way, and the following shall be complied with:

1. On slopes, the geotextiles shall be securely anchored and then rolled down the slope in such a manner as to continually keep the geotextile sheet in tension;
2. In the presence of wind, all geotextiles shall be weighted with sandbags or the equivalent. Such sandbags shall be installed during deployment and shall remain until replaced with cover material;
3. Geotextiles shall be cut using a geotextile cutter (hook blade) only. If in place, special care shall be taken to protect other materials from damage which could be caused by the cutting of the geotextiles;
4. The Installer shall take any necessary precautions to prevent damage to underlying layers during placement of the geotextile;
5. During placement of geotextiles, care shall be taken not to entrap, in or beneath the geotextile, stones, excessive dust, or moisture that could damage the geomembrane, cause clogging of drains or filters, or hamper subsequent seaming; and
6. A visual examination of the geotextile shall be carried out over the entire surface, after installation, to assure that no potentially harmful foreign objects, such as needles, are present.

The Geosynthetic QAL shall note any noncompliance and report it to the Project Manager.

5.4 Seaming Procedures

On slopes steeper than 10 horizontal:1 vertical, all geotextiles shall be continuously sewn (i.e., spot sewing is not allowed). Geotextiles shall be overlapped a minimum of 3 inches prior to seaming. In general, no horizontal seams shall be allowed on sideslopes (i.e., seams shall be along, not across, the slope), except as part of a patch.

On bottoms and slopes shallower than 10 (horizontal):1 (vertical), geotextiles shall be seamed as indicated above (preferred), or continuously thermally bonded with the written approval of the Project Manager.

The Installer shall pay particular attention at seams to assure that no earth cover material could be inadvertently inserted beneath the geotextile.

Any sewing shall be done using polymeric thread with chemical and ultraviolet light resistance properties equal to or exceeding those of the geotextile. Sewing shall be done using machinery and stitch types specified in the project specifications or as approved in writing by the Project Manager/RPR.

5.5 Defects and Repairs

Any holes or tears in the geotextile shall be repaired as follows:

On slopes, a patch made from the same geotextile shall be sewn into place in accordance with the project specifications. Should any tear exceed 10 percent of the width of the roll, that roll shall be removed from the slope and replaced.

Care shall be taken to remove any soil or other material which may have penetrated the torn geotextile.

The Geosynthetic QAE shall observe any repair and report any noncompliance with the above requirements in writing to the Project Manager.

5.6 Geotextile Protection

All soil materials located on top of a geotextile shall be deployed in such a manner as to assure:

1. The geotextile and underlying lining materials are not damaged;
2. Minimal slippage of the geotextile on underlying layers occurs; and
3. No excess tensile stresses occur in the geotextile.

Unless otherwise specified by the Geosynthetic QAE, all lifts of soil material shall be in conformance with the guidelines given in Section 4.9.1.

6.0 GEONET/DRAINAGE GEOCOMPOSITES/DRAINAGE GEOCOMPOSITES

6.1 Quality Control Documentation

Prior to the installation of any geonet/drainage geocomposite, the Manufacturer or Installer shall provide the Project Manager with the following information:

1. The origin (resin supplier's name and resin production plant), identification (brand name and number), and production date of the resin;
2. Copies of the quality control certificates issued by the resin supplier;
3. Reports on tests conducted by the Manufacturer to verify that the quality of the resin used to manufacture the geonet/drainage geocomposite meets the specifications;
4. Reports on quality control tests conducted by the Manufacturer to verify that the geonet/drainage geocomposite manufactured for the project meets the project specifications;
5. A statement indicating that the amount of reclaimed polymer added to the resin during manufacturing was done with appropriate cleanliness and does not exceed 2 percent by weight;
6. A list of the materials which comprise the geonet/drainage geocomposite, expressed in the following categories as percent by weight: polyethylene, carbon black, other additives;
7. A specification for the geonet/drainage geocomposite which includes all properties contained in the specifications measured using the appropriate test methods;
8. Written certification that minimum values given in the specification are guaranteed by the Manufacturer; and
9. Quality control certificates, signed by a responsible party employed by the Manufacturer. The quality control certificates shall include roll identification numbers, sampling procedures and results of quality control tests. At a minimum, results shall be given for those properties stated in Section 02772 Part 1.05 of the project specifications.

   Quality control tests shall be performed in accordance with the test methods specified in the specifications, for every 100,000 ft^2 of geonet/drainage geocomposite produced.

The Manufacturer shall identify all rolls of geonet/drainage geocomposite with the following:

1. Manufacturer's name
2. Product identification
3. Roll number
4. Roll dimensions

The Geosynthetic QARE shall review these documents and shall report any discrepancies with the above requirements to the Project Manager. The Geosynthetic QARE shall verify that:

1. Property values certified by the Manufacturer meet all of its guaranteed specifications;
2. Measurements of properties by the Manufacturer are properly documented and that the test methods used are acceptable;

3. Quality control certificates have been provided at the specified frequency for all rolls, and that each certificate identifies the rolls related to it;
4. Roll packages are appropriately labeled; and
5. Certified minimum properties meet the specifications.

6.2 Conformance Testing

Upon delivery of the rolls of geonet/drainage geocomposite, the Geosynthetic QARE shall assure that conformance test samples are obtained for the geonet/drainage geocomposite. These samples shall then be forwarded to the Geosynthetic QAL for testing to assure conformance to the specifications.

The conformance tests shall be performed in accordance with the test methods indicated in Section 02772 Part 2.01 of the project specifications. Other conformance tests may be required by the Project Manager.

6.2.1 Sampling Procedures

The rolls to be sampled shall be selected by the Geosynthetic QARE. Samples shall be taken across the entire width of the roll, and shall not be taken from any portion of a roll which has been subjected to excess pressure or stretching. Unless otherwise specified, samples shall be 3 ft (1 m) long by the roll width. The Geosynthetic QARE shall mark the machine direction on the samples with an arrow. All lots of material and the particular test sample that represents each lot should be defined before the samples are taken.

A lot consists of a group of materials which is manufactured from a specific batch of raw materials (e.g., HDPE resin, or bentonite clay). The manufacturer shall identify the consecutively numbered rolls of material, that are inclusive within a lot.

Unless otherwise specified, samples shall be taken at a rate of one per lot, not less than one conformance test per 100,000 ft^2 (10,000 m^2) of geonet/drainage geocomposite.

6.2.2 Test Results

All conformance test results shall be reviewed and accepted or rejected by the Geosynthetic QARE prior to the deployment of the geotextile.

The Geosynthetic QARE shall be responsible for checking that all test results meet or exceed the property values listed in the project specifications.

If the Manufacturer has reason to believe that failing tests may be the result of the Geosynthetic QAL incorrectly conducting the tests, the Manufacturer may request that the sample in question be retested by the Geosynthetic QAL with a technical representative of the Manufacturer present during the testing. This retesting shall be done at the expense of the Manufacturer. Alternatively, the Manufacturer may have the sample retested at two different GAI-LAP accredited, engineer approved independent laboratories at the expense of the Manufacturer. If both laboratories produce passing results, the material shall be accepted. If both laboratories do not produce passing results, then the original Geosynthetic QAL test results shall be accepted. The use of these procedures for dealing with failed test results is subject to the approval of the Project Manager.

If a test result is in nonconformance, all material from the lot represented by the failing test should be considered out of specification and rejected. Alternatively, at the option of the Project Manager, additional conformance test samples may be taken to "bracket" the portion of the lot not meeting specification (note that this procedure is valid only when all rolls in the lot are consecutively produced and numbered from one manufacturing line). To isolate the out of specification material, additional samples must be taken from rolls that have roll numbers immediately adjacent to the roll that was sampled and failed. If both additional tests pass, the roll that represents the initial failed test and the roll manufactured immediately after that roll (next larger roll number) shall be rejected. If one or both of the additional tests fail, then the entire lot shall be rejected or the procedure repeated with two additional tests that bracket a greater number of rolls within the lot.

6.3 Drainage Geocomposite Deployment

During shipment and storage, the geocomposite shall be protected from inundation, mud, dirt, dust, puncture, cutting, or any other damaging or deleterious conditions.

The Geosynthetic QARE shall observe rolls upon delivery at the site and any deviation from the above requirements shall be reported to the Project Manager.

The Installer shall handle all geocomposite in such a manner as to assure they are not damaged in any way, and the following shall be complied with:

1. On slopes, the geocomposite shall be securely anchored and then rolled down the slope in such a manner as to continually keep the geocomposite sheet in tension;
2. In the presence of wind, all geocomposite shall be weighted with sandbags or the equivalent. Such sandbags shall be installed during deployment and shall remain until replaced with cover material;
3. Geocomposite shall be cut using a hook blade only. If in place, special care shall be taken to protect other materials from damage which could be caused by the cutting of the geocomposite;
4. The Installer shall take any necessary precautions to prevent damage to underlying layers during placement of the geocomposite;
5. During placement of geocomposite, care shall be taken not to entrap, in or beneath the geocomposite, stones, excessive dust, soil, or moisture that could damage the geomembrane, cause clogging of drains or filters, or hamper subsequent seaming; and
6. A visual examination of the geocomposite shall be carried out over the entire surface, after installation, to assure that no potentially harmful foreign objects are present.

The Geosynthetic QAL shall note any noncompliance and report it to the Project Manager.

6.4 Seaming Procedures

Geonet/drainage geocomposites shall be overlapped a minimum of 4 inches (75 mm) prior to tying. In general, no horizontal seams shall be allowed on sideslopes (i.e., seams shall be along, not across, the slope), except as part of a patch.

6.5 Seams and Overlaps

Adjacent geonet/drainage geocomposite shall be joined according to construction drawings and specifications. At a minimum, the following requirements shall be met:

1. Adjacent rolls shall be overlapped by at least 4 inches (100 mm);
2. Overlaps shall be secured by tying;
3. Tying can be achieved by plastic fasteners or polymer braid. Tying devices shall be white or yellow for easy inspection. Metallic devices are not allowed;
4. Tying shall be every 5 feet (1.5 m) along the slope, every 6 inches (0.15 m) in the anchor trench, and every 6 inches (0.15 m) along end-to-end seams on the base of the landfill;
5. In general, no horizontal seams shall be allowed on sideslopes;
6. In the corners of the sideslopes of rectangular landfills, where overlaps between perpendicular geonet/drainage geocomposite strips are required, an extra layer of geonet/drainage geocomposites shall be unrolled along the slope, on top of the previously installed geonet/drainage geocomposite, from top to bottom of the slope;
7. When more than one layer of geonet/drainage geocomposite is installed, joints shall be staggered; and
8. The geotextiles shall be heat sealed or sewn at geonet/drainage geocomposite overlaps.

The Geosynthetic QARE shall note any noncompliance and report it to the Project Manager.

When several layers of geonet/drainage geocomposite are stacked, care shall be taken to prevent strands of one layer from penetrating the channels of the next layer, thereby significantly reducing the transmissivity. This cannot happen if stacked geonet/drainage geocomposite are placed in the same direction. A stacked geonet/drainage geocomposite shall never be laid in perpendicular directions to the underlying geonet/drainage geocomposite (unless otherwise specified by the Designer).

6.6 Defects and Repairs

Any holes or tears in the geocomposite shall be repaired by placing a patch extending 1 foot (0.3 m) beyond the edges of the hole or tear. The patch shall be secured to the original geonet/drainage geocomposite by tying every 6 inches (0.15 m). Tying devices shall be as indicated in Section 6.5. If the hole or tear width across the roll is more than 50 percent of the width of the roll, the damaged area shall be repaired as follows:

1. On the base of the landfill, the damaged area shall be cut out and the two portions of the geocomposite shall be joined as indicated in Section 6.5; and
2. On sideslopes, the damaged geocomposite shall be removed and replaced.

6.7 Geonet/drainage geocomposite Protection

Soil should never be placed in direct contact with geonet/drainage geocomposite component of the geocomposite. Soil materials near the geocomposite shall be placed in such a manner as to assure:

1. The geocomposite and underlying lining materials are not damaged;

2. Minimal slippage of the geocomposite on underlying layers occurs; and
3. No excess tensile stresses occur in the geonet/drainage geocomposite.

Unless otherwise specified by the Designer, all lifts of soil material shall be in conformance with the guidelines given in Section 3.0.

The geocomposite shall not be exposed for more than two days without being covered by backfill. A greater exposure time may be approved by the Project Manager based upon written manufacturer's recommendations.

Any noncompliance shall be noted by the Geosynthetic QARE and reported to the Project Manager.

7.0 HDPE PIPE, FITTINGS AND APPURTENANCES

7.1 Quality Control Documentation

Prior to the installation of any pipe, fittings, and appurtenances at the landfill facilities, the contractor shall provide the Engineer with material submittals on the materials to be used in construction of the landfill facilities. Submittals shall be prepared according to the project specifications. The following information shall be supplied if requested by the Engineer:

1. The origin (resin supplier's name and resin production plant), identification (brand name and number), and production date of the resin;
2. Copies of the quality control certificates issued by the resin supplier;
3. Reports on tests conducted by the Manufacturer to verify that the quality of the resin used to manufacture the HDPE pipe and fittings meets the specifications;
4. Reports on quality control tests conducted by the Manufacturer to verify that the HDPE pipe and fittings manufactured for the project meets the project specifications;
5. A statement indicating that the amount of reclaimed polymer added to the resin during manufacturing was done with appropriate cleanliness and does not exceed 2 percent by weight;
6. A list of the materials which comprise the HDPE pipe and fittings, expressed in the following categories as percent by weight: polyethylene, carbon black, other additives;
7. A specification for the pipe and fittings which includes all properties contained in the specifications measured using the appropriate test methods;
8. Written certification that minimum values given in the specification are guaranteed by the Manufacturer; and
9. Quality control certificates, signed by a responsible party employed by the Manufacturer. The quality control certificates shall include pipe identification numbers, sampling procedures and results of quality control tests. At a minimum, results shall be given for:
    a. Density
    b. Melt flow index
    c. Carbon black content

    Quality control tests shall be performed in accordance with the test methods specified in the specifications, for every 1,000 ft of pipe produced.

The Manufacturer shall identify all pipe according to ASTM D 1248 and ASTM F 714.

The Pipe CQA shall review these documents and shall report any discrepancies with the above requirements to the Project Manager. The CQA shall verify that:

1. Property values certified by the Manufacturer meet all of its guaranteed specifications;
2. Measurements of properties by the Manufacturer are properly documented and that the test methods used are acceptable;
3. Quality control certificates have been provided at the specified frequency for pipe produced, and that each certificate identifies the pipe related to it;

4. Pipe is appropriately labeled; and
5. Certified minimum properties meet the specifications.

7.2 Conformance Testing

Upon delivery of the HDPE pipe, the CQA shall inspect the pipe and based on the pipe condition and review of the manufacturer's certification documentation, may elect to sample the pipe for conformance testing. Conformance test samples shall be identified in a manner appropriate for the ASTM standard for HDPE pipe. These samples shall then be forwarded to the QAL for testing to assure conformance to the specifications.

The following conformance tests shall be performance on the pipe:

1. Physical dimensions by ASTM D 2122
2. Density by ASTM D 1505
3. Plate bearing test by ASTM D 2412
4. Impact resistance by ASTM D 2444

These conformance tests shall be performed in accordance with the test methods specified. Other conformance tests may be required by the Project Manager.

7.2.1 Sampling Procedures

A lot shall be defined as a group of consecutively numbered pipes from the same manufacturing line. Alternatively, a lot may be designated by the CQA based on a review of all pipe information including quality control documentation and manufacturing records.

Unless otherwise specified, samples shall be taken at a rate of one per lot, not less than one conformance test per 1,000 ft of HDPE pipe.

7.2.2 Test Results

All conformance test results must be reviewed and accepted or rejected by the CQA prior to the deployment of the pipe.

The CQA shall examine all results from laboratory conformance testing and shall report any nonconformance to the Project Manager. The CQA shall be responsible for checking that all test results meet or exceed the minimum property values listed in project specifications.

If the Manufacturer has reason to believe that failing tests may be the result of the QAL incorrectly conducting the tests, the Manufacturer may request that the sample in question be retested by the QAL with a technical representative of the Manufacturer present during the testing. This retesting shall be done at the expense of the Manufacturer. Alternatively, the Manufacturer may have the sample retested at two different Owner-approved independent laboratories at the expense of the manufacturer. If both laboratories produce passing results, the material shall be accepted. If both laboratories do not produce passing results, then the original QAL's test results shall be accepted. The use of these procedures for dealing with failed test results is subject to the approval of the Project Manager.

If a test result is in nonconformance, all material from the lot represented by the failing test shall be considered out of specification and rejected. Alternatively, at the option of the Project Manager, additional conformance test samples may be taken to "bracket" the portion of the lot not meeting specification (note that this procedure is valid only when all pipes in the lot are consecutively produced and numbered from one manufacturing line). To isolate the out of specification material, additional samples must be taken from pipes that have pipe numbers immediately adjacent to the pipe that was sampled and failed. If both additional tests pass, the pipe that represents the initial failed test and the pipe manufactured immediately after that pipe (next larger pipe number) shall be rejected. If one or both of the additional tests fail, then the entire lot shall be rejected or the procedure repeated with two additional tests that bracket a greater number of pipes within the lot.

7.3 Pipe and Fitting Placement

The Installer shall handle all pipe in such a manner as to ensure it is not damaged in any way, and the following shall be complied with:

1. HDPE pipe, fittings, and appurtenances shall be placed as shown in the Contract Drawings, specifications, and/or as directed by the CQA;
2. Piping placed within a trench shall be placed according to the contract drawings. Pipe bedding and backfill shall be done according to the specifications;
3. Pipe fittings shall be installed as shown on the contract drawings and as recommended by the pipe manufacturer and CQA; and
4. Solid wall HDPE transport pipe and associated fittings shall be pressure leak tested according to general industry standards. The CQA is responsible for observing and documenting these tests. The installer is responsible for locating and repairing all leaks in such a manner that is acceptable to the CQA.

7.4 Pipe Seams and Fusion Techniques

Butt fusion welding shall be used to seam pipe lengths together and install pipe fittings. Welding shall be done by qualified personnel and according to manufacturer’s instructions. The installer shall provide the CQA with documentation of the pipe welder’s experience. The CQA shall observe and document welding operations as necessary to assure welding techniques are highest quality.

7.5 Repairs

Any damaged pipe shall be discarded. No repairs shall be allowed.

7.6 Manholes, Valves and Other Appurtenances

Manholes, valves and other appurtenances associated with the piping systems shall be constructed according to the contract drawings and specifications. All connections to piping and/or associated equipment shall be according to the contract drawings and the manufacturer’s recommendations. All manholes, valves and other pipe connections shall be leak tested according to general industry standards. The installer is responsible for repair of faulty material and repairs required to provide a leakproof installation. The CQA is responsible for observing and documenting installation and testing necessary to assure installation techniques are highest quality.

7.7 Soil Materials Placement

All soil materials located on top of a pipe shall be placed in such a manner as to ensure:

1. The pipe and underlying materials are not damaged or dislocated; and
2. The pipe structural integrity is not compromised.

Unless otherwise specified by the Designer, all lifts of soil material shall be in conformance with the guidelines given in Section 3.0.

Any noncompliance shall be noted by the CQA and reported to the Project Manager.

8.0 CONSTRUCTION DOCUMENTATION

During construction, the Owner's Representative will document that the cover placement procedures are being followed, and the cover materials are as specified. A full-time project representative will be assigned to the construction of the cover.

8.1 Weekly Inspection Reports

Inspection reports will be prepared daily and summarized weekly by the Owner's Representative during the closure of the Landfill. The reports will include, but is not limited to:

- Contractor submittals and actions taken;
- Soil material test results;
- A summary of work progress;
- Summary of significant problems encountered and their resolutions;
- Change order status;
- Photographs;
- Record drawings;
- Upcoming work items for the next two weeks; and
- Punchlist items as applicable.

The weekly summaries will be forwarded to the MEDEP within one week of the completion of each construction week.

8.2 Final Construction Certification and Report

A final construction report will be submitted by the Owner to the MEDEP within 45 days following the completion of closure construction at the Landfill. The report will include, but is not limited to:

- Written certification signed and stamped by Engineer supervising project inspection (Statement of Compliance);
- Submittals;
- Field changes and construction modifications;
- QA/QC testing reports;
- Daily reports; and
- Photographs.

The report will also contain a request that the MEDEP conduct an inspection of the facility for a finding of compliance with the Solid Waste Management Regulations.

APPENDIX C

TEST PIT DATA

PHASE 2/3 TEST PIT SUMMARY
DOLBY III LANDFILL
EAST MILLINOCKET, MAINE

	Soil Depth - inches		
Test Pit ID	**Top Soil**	**Barrier Layer (till)**	**Sand**
TP-16-1	0-4	4-24	24-44
TP-16-2	0-3	3-32	32-45
TP-16-3	0-8	8-29	29-49
TP-16-4	0-6	6-34	34-50
TP-16-5	0-8	8-23	23-37
TP-16-6	0-7	7-29	29-39
TP-16-7	0-6	6-30	30-38
TP-16-8	0-4	4-22	22-31
TP-16-9	0-8	8-39	39-51
TP-16-10	0-6	6-36	36-46
TP-16-11	0-6	6-26	26-41
TP-16-12	0-3	3-28	28-40
TP-16-13	0-5	5-36	36-60
TP-16-14	0-3	3-23	23-40
TP-16-15	0-4	4-27	27-39
TP-16-16	0-5	5-28	28-45
TP-16-17	0-4	4-26	26-50
TP-16-18	0-6	6-24	24-43
TP-16-19	0-6	6-30	30-41
TP-16-20	0-5	5-36	36-55

PHASE 2/3 TEST PIT SUMMARY
DOLBY III LANDFILL
EAST MILLINOCKET, MAINE

	Soil Depth - inches		
Test Pit ID	**Top Soil**	**Barrier Layer (till)**	**Sand**
TP-16-21	0-4	4-23	23-41
TP-16-22	0-5	5-28	28-40
TP-16-23	0-4	4-25	25-34
TP-16-24	0-6	6-25	25-38
TP-16-25	0-5	5-18	18-28
TP-16-26	0-4	4-23	23-33
TP-16-27	0-6	6-22	22-33
TP-16-28	0-6	6-24	24-40
TP-16-29	0-5	5-23	23-32
TP-16-30	0-5	5-19	19-40
TP-16-31	0-6	6-22	22-39
TP-16-32	0-6	6-26	26-40
TP-16-33	0-4	4-21	21-23
TP-16-34	0-6	6-22	22-47
TP-16-35	0-6	6-24	24-36
TP-16-36	0-6	6-20	20-34
TP-16-37	0-5	5-14	14-27
TP-16-38	0-4	4-21	21-38
TP-16-39	0-4	4-19	19-39

ATTACHMENT 11

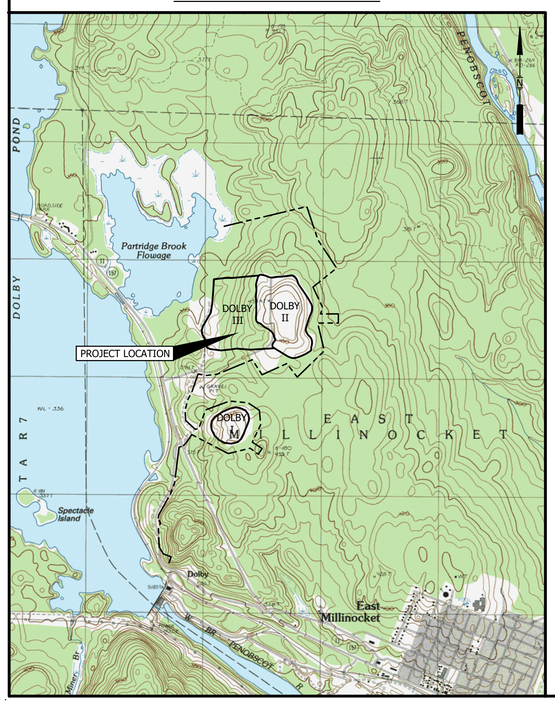
RECORD DRAWINGS

SME
SEVEE & MAHER
ENGINEERS

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

TITLE	DWG NO
COVER SHEET	
SYMBOLS & ABBREVIATIONS	C-100
PHASED CLOSURE PLAN	C-101
EXISTING CONDITIONS PLAN	C-102
SITE BASE GRADING PLAN - PHASE 2	C-103
SITE BASE GRADING PLAN - PHASE 3	C-104
SITE PLAN - PHASE 2	C-105
SITE PLAN - PHASE 3	C-106
GAS COLLECTION AND FINGER DRAIN PIPING PLAN - PHASE 2	C-107
GAS COLLECTION AND FINGER DRAIN PIPING PLAN - PHASE 3	C-108
UNDERDRAIN PIPING PLAN - PHASE 2	C-109
UNDERDRAIN PIPING PLAN - PHASE 3	C-110
SECTIONS AND DETAILS	C-300
SECTIONS AND DETAILS	C-301
SECTIONS AND DETAILS	C-302
SECTIONS AND DETAILS	C-303

LOCATION MAP



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STATE OF MAINE
BRIAN D. PIERCE
9809
LICENSED
PROFESSIONAL ENGINEER
12/8/2023

RECORD DRAWINGS

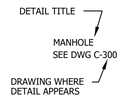
\\Maine-dc\Projects\DOLBY\LF\PDR\DOLBY | Plans 2-3\Submittals\Design Phase\DOLBY-Rec Dwgs-Cover.dwg, C-000, 12/20/2023 2:59:29 PM, bob

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			DRAINAGE COURSE (WITH DIRECTION)	G	UG	UNDERGROUND GAS MAIN
DATE		NORTH ARROW (MAGNETIC)			EDGE OF WATER	T	UT	UNDERGROUND TELEPHONE LINE
N		NORTH ARROW (PLAN NORTH)			WATER ELEVATION (GROUND OR SURFACE)	E	UE	UNDERGROUND ELECTRICAL LINE
25	25	CONTOUR LINES			FENCE LINE (WOOD)	OE	OE	OVERHEAD ELECTRICAL LINE
	INV 25.56	SPOT ELEVATION (INVERT ELEVATION)	X X	X X	FENCE LINE (WIRE)	OT	OT	OVERHEAD TELEPHONE LINE
		EXISTING GROUND			STONE WALL	12" SS	12" SS	SANITARY SEWER
		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION PT.			RETAINING WALL	8" FM	8" FM	FORCE MAIN
		PROPERTY LINE OR R.O.W.			GUARD RAIL	8" W	8" W	WATER MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			BUILDING AND STRUCTURES	12" SD	12" SD	STORM DRAIN
	0+00 1+00	CONSTRUCTION BASELINE		2 1 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)	8" UD	8" UD	UNDERDRAIN
		BOUNDARY LINE (State, County, Municipality)	TOP OF SLOPE 2	TOP OF SLOPE 2	SLOPES (WITH SLOPE RATIO)	6" PD	6" PD	PERIMETER DRAIN
⊡	■	SURVEY MONUMENT			EDGE OF ROAD	6" LT	6" LT	LEACHATE TRANSPORT
		SURVEY CONTROL		C P	CUT OR FILL LINE	6" LC	6" LC	LEACHATE COLLECTION
○	●	PROPERTY PIN, DRILL HOLE, PK, OR STAKE			BITUMINOUS PAVEMENT	LD	6" LD	LEAK DETECTION
		WOODS OR BRUSH LINE			CONCRETE	GC	6" G	GAS COLLECTION
		INDIVIDUAL TREE	B-12 MW-12 P-12	B-12 MW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER	▷	▶	REDUCER
		MAPPED WETLAND	TP-12	TP-12	TEST PIT AND NUMBER			MECHANICAL CAP OR PLUG
◍	◑	GAS VENT	△ SW-12	▲ SW-12	SURFACE WATER SAMPLE LOCATION			COUPLING
◍		GAS VENT (CAPPED)			GAS EXTRACTION WELL			BEND
⊘	⊘	CLEAN OUT STRUCTURE	○	●	MANHOLE			TEE
		CULVERT	◎	✪	CATCH BASIN			PIPE TO BE ABANDONED
		RAILROAD			WATER OR GAS VALVE			RISER PIPE & INLET GRATE
✪	✪	SLOPE INCLINOMETER			HYDRANT	▤	▤	STORM GRATE
⊠	⊠	VIBRATING WIRE SETTLEMENT CELL			AIR RELEASE VALVE			DRAINAGE INLET STRUCTURE
⊗	⊗	VERTICAL/HORIZONTAL DISPLACEMENT MONUMENT			SURGE RELEASE VALVE	□	■	UNDERDRAIN SUMP
▷	▶	VERTICAL DISPLACEMENT MONUMENT			UTILITY POLE		SF	SILTATION FENCE
⊗	⊗	LIQUID SETTLEMENT GAGE			LIGHT POLE		CLL	CLEARING OR CONSTRUCTION LIMIT LINE

ACCMP	ASPHALT COATED CMP	D	DEGREE OF CURVE	HDPE	HIGH DENSITY POLYETHYLENE	PERF	PERFORATED
ACP	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HORIZ	HORIZONTAL	PP	POWER POLE
AC	ACRE	DEG OR °	DEGREE	HP	HORSEPOWER	PSI	POUNDS PER SQUARE INCH
AGG	AGGREGATE	DEPT	DEPARTMENT	HYD	HYDRANT	PVC	POLYVINYL CHLORIDE
ALUM	ALUMINUM	DI	DUCTILE IRON			PVMT	PAVEMENT
APPD	APPROVED	DIA OR Ø	DIAMETER	ID	INSIDE DIAMETER		
APPROX	APPROXIMATE	DIM	DIMENSION	IN OR "	INCHES	QTY	QUANTITY
ARMH	AIR RELEASE MANHOLE	DIST	DISTANCE	INV	INVERT		
ASB	ASBESTOS	DN	DOWN	INV EL	INVERT ELEVATION	RCP	REINFORCED CONCRETE PIPE
ASP	ASPHALT	DR	DRAIN			ROW	RIGHT OF WAY
AUTO	AUTOMATIC	DWG	DRAWING	LB	POUND	RAD	RADIUS
AUX	AUXILIARY			LC	LEACHATE COLLECTION	REQD	REQUIRED
AVE	AVENUE	EA	EACH	LD	LEAK DETECTION	RT	RIGHT
AZ	AZIMUTH	EG	EXISTING GROUND OR GRADE	LF	LINEAR FEET	RTE	ROUTE
		ELEC	ELECTRIC	LOC	LOCATION		
BCCMP	BITUMINOUS COATED CMP	EL	ELEVATION	LT	LEACHATE TRANSPORT	S	SLOPE
BM	BENCH MARK	ELB	ELBOW			SCH	SCHEDULE
BIT	BITUMINOUS	EOP	EDGE OF PAVEMENT	MH	MANHOLE	SF	SQUARE FEET
BLDG	BUILDING	EQUIP	EQUIPMENT	MJ	MECHANICAL JOINT	SHT	SHEET
BOT	BOTTOM	EST	ESTIMATED	MATL	MATERIAL	SMH	SANITARY MANHOLE
BRG	BEARING	EXC	EXCAVATE	MAX	MAXIMUM	ST	STREET
BV	BALL VALVE	EXIST	EXISTING	MFR	MANUFACTURE	STA	STATION
				MIN	MINIMUM	SY	SQUARE YARD
CB	CATCH BASIN	FG	FINISH GRADE	MISC	MISCELLANEOUS		
CEN	CENTER	FBRGL	FIBERGLASS	MON	MONUMENT	TAN	TANGENT
CEM LIN	CEMENT LINED	FDN	FOUNDATION			TDH	TOTAL DYNAMIC HEAD
CMP	CORRUGATED METAL PIPE	FLEX	FLEXIBLE	NITC	NOT IN THIS CONTRACT	TEMP	TEMPORARY
CO	CLEAN OUT	FLG	FLANGE	NTS	NOT TO SCALE	TYP	TYPICAL
CF	CUBIC FEET	FLR	FLOOR	N/F	NOW OR FORMERLY		
CFS	CUBIC FEET PER SECOND	FPS	FEET PER SECOND	NO OR #	NUMBER	UD	UNDERDRAIN
CI	CAST IRON	FT OR '	FEET				
CL	CLASS	FTG	FOOTING	OC	ON CENTER	V	VOLTS
CONC	CONCRETE			OD	OUTSIDE DIAMETER	VA TEE	VALVE ANCHORING TEE
CONST	CONSTRUCTION	GA	GAUGE			VERT	VERTICAL
CONTR	CONTRACTOR	GAL	GALLON	PC	POINT OF CURVE		
CS	CURB STOP	GALV	GALVANIZED	PD	PERIMETER DRAIN	WG	WATER GATE
CTR	CENTER	GPD	GALLONS PER DAY	PI	POINT OF INTERSECTION	W/	WITH
CU	COPPER	GPM	GALLONS PER MINUTE	PIV	POST INDICATOR VALVE	W/O	WITHOUT
CY	CUBIC YARD			PT	POINT OF TANGENT	YD	YARD

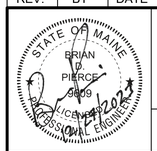
VIEW MARKERS & IDENTIFICATION



GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY FULLY WITH CONDITIONS OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION (MEDEP) OPERATING PERMIT, BOARD ORDER, MEDEP CONSTRUCTION GENERAL PERMIT, MEDEP "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES", AND MAINE DEPARTMENT OF TRANSPORTATION (MDOT) ENTRANCE PERMIT REQUIREMENTS, AS APPLICABLE.
2. THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL ABIDE BY ALL SAFETY REQUIREMENTS ASSOCIATED WITH WORKING AT AN ACTIVE SOLID WASTE LANDFILL FACILITY (i.e., RISK OF WORKER EXPOSURE TO LANDFILL GASES, LEACHATE, SOLID WASTE) INCLUDING THE FOLLOWING:
   - COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS;
   - INCLUDING, BUT NOT LIMITED TO, USE OF HARD HATS, SAFETY GLASSES, AND FLUORESCENT SAFETY VESTS AT ALL TIMES;
   - FOLLOW ALL APPLICABLE OSHA RULES, INCLUDING, BUT NOT LIMITED TO, THOSE RELATED TO MANHOLES, CATCH BASINS, PUMP STATIONS, TEST PITS, TRENCHES, ETC.
3. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO ENSURE THAT NO SILTATION OF STORMWATER DRAINAGE COURSES OCCURS AS A RESULT OF SOIL DISTURBANCE ASSOCIATED WITH THE CONTRACT SCOPE OF WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING COMPLETE PROTECTION OF THE PROJECT DURING CONSTRUCTION FROM ANY ACTS OF NATURE OR MAN, SUCH AS, BUT NOT LIMITED TO, FLOODS, WIND DAMAGE, EARTH SLIDES, AND SLOPE FAILURES. DAMAGE TO THE PROJECT CAUSED BY SUCH ACTS WILL NOT BE SUFFICIENT CAUSE TO INCREASE CONTRACT COSTS TO THE OWNER.
5. THE CONTRACTOR SHALL PROTECT EXISTING ON-SITE STRUCTURES FROM DAMAGE DURING CONSTRUCTION, INCLUDING: MONITORING WELLS, POWER LINES, MAINTENANCE FACILITIES, EXISTING LEACHATE COLLECTION, LINER AND TRANSPORT SYSTEMS, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS REQUIRED TO CORRECT DAMAGE MADE TO EXISTING ON-SITE STRUCTURES DESCRIBED ABOVE RESULTING FROM ANY CONSTRUCTION ACTIVITY.
6. THE DESIGN INTENT, AS DETERMINED BY THE ENGINEER, WILL GOVERN IN THE CASE OF DISCREPANCY IN OR BETWEEN THE DRAWINGS AND SPECIFICATIONS. THE SPECIFICATIONS ARE INTENDED TO SUPPLEMENT AND CLARIFY THE WORK SHOWN IN THE DRAWINGS, AS SOMETIMES WORK IS CALLED FOR IN THE SPECIFICATIONS THAT IS NOT SHOWN ON THE DRAWINGS AND SOMETIMES THE DRAWINGS INDICATE WORK THAT IS NOT MENTIONED IN THE SPECIFICATIONS. BOTH DRAWINGS AND SPECIFICATIONS MUST BE COMPLIED WITH IN ORDER TO FULFILL THE CONTRACT REQUIREMENTS, AND ANY WORK CALLED FOR BY EITHER IS AS BINDING AS THOUGH IT WERE CALLED FOR BY BOTH. THE CONTRACTOR SHALL TAKE NO ADVANTAGE OF ANY ERROR OR OMISSION IN THE DRAWINGS OR OF ANY DISCREPANCY BETWEEN THE DRAWINGS AND SPECIFICATIONS. IN ALL CASES OF DOUBT AS TO THE TRUE MEANING OF THE DRAWINGS AND SPECIFICATIONS, THE DECISION OF THE ENGINEER WILL BE FINAL AND CONCLUSIVE.

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW



MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SYMBOLS AND ABBREVIATIONS

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	NMT
DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	NONE
CTB:	SME-STD
JOB NO. 21588.07	DWG FILE SYMSHT

C-100

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NOTES

1. BASE MAP OUTSIDE THE LIMIT OF WORK PREPARED BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 5/4/2021. HORIZONTAL DATUM MAINE STATE COORDINATE SYSTEM EAST ZONE, NAD 83. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. VERTICAL DATUM: NAVD 1929.
3. ADDITIONAL DITCH TOPOGRAPHY ALONG TOE OF DOLBY III LANDFILL BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 10/7/2015
4. PHASED CLOSURE AREAS ARE APPROXIMATE AND ARE SUBJECT TO CHANGE.
5. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL BE IN COMPLIANCE WITH MEDEP BEST MANAGEMENT PRACTICES AND EXISTING FEDERAL, STATE, AND LOCAL PERMITS AND PERMITTING REQUIREMENTS FOR THE SITE.

75 0 150 300 FEET

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN D PIERCE
3809
LICENSED PROFESSIONAL ENGINEER
12/14/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

PHASED CLOSURE PLAN

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DATE:	12/2021
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LMN:	PHASED
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

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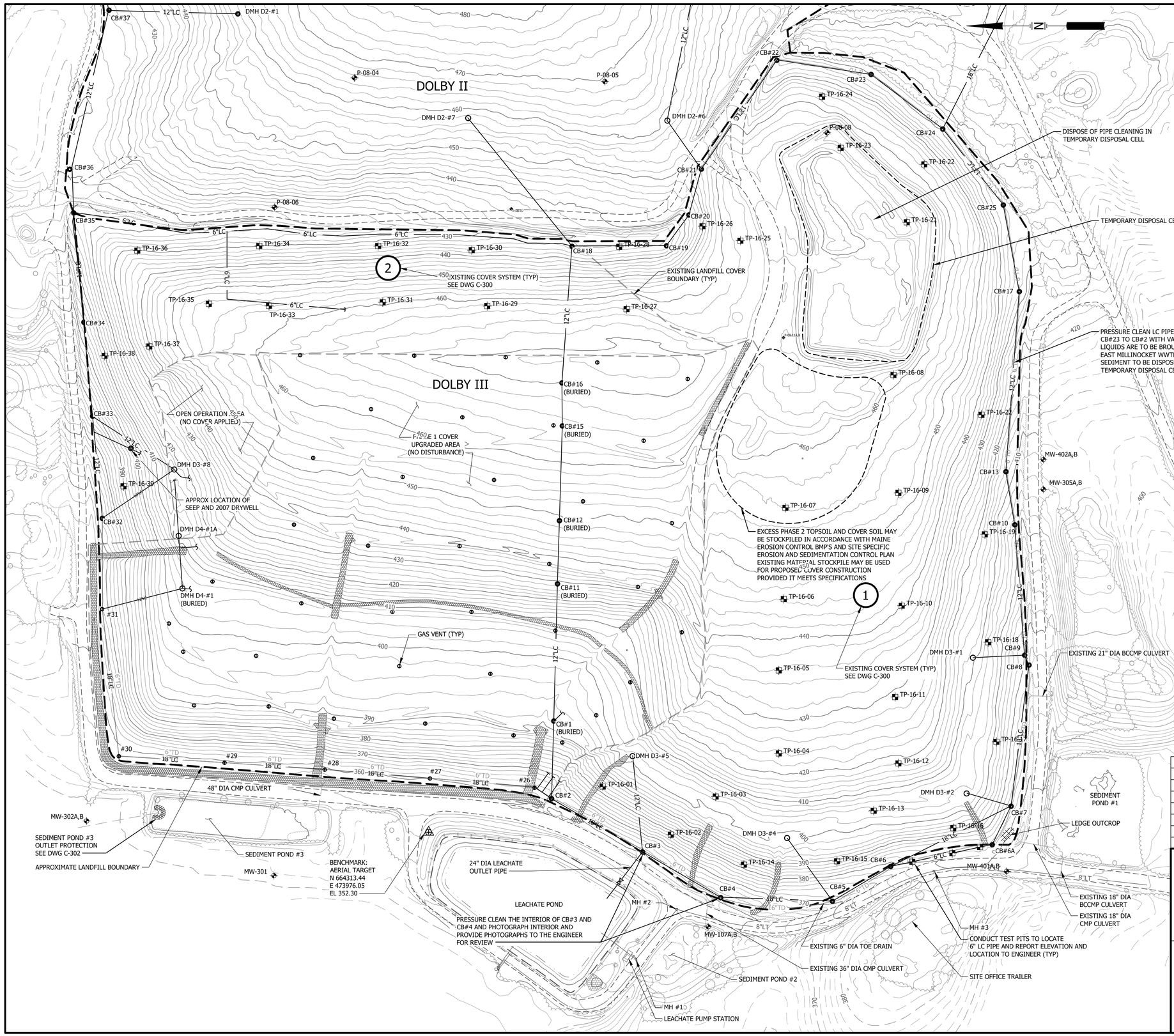

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5. CATCH BASIN DATA AS SHOWN ON HISTORICAL DRAWINGS FOR SITE DEVELOPMENT PLAN CELL 2, CELL 9 AND CELL 14 CONSTRUCTION AND CELL 12 CLOSURE.
6. ALL SITE AND CONSTRUCTION ACTIVITIES (INCLUDING SOIL STOCKPILE AREAS) SHALL BE IN COMPLIANCE WITH MEDEP BEST MANAGEMENT PRACTICES AND EXISTING FEDERAL, STATE, AND LOCAL PERMITS AND PERMITTING REQUIREMENTS FOR THE SITE.

PHASE 2 CATCH BASIN SCHEDULE

CB ID	INV IN	INV OUT
CB#18	422.2 (18") 423.7 (12")	423.2 (18")
CB#19	428.3 (6") 428.0(6")	425.4(12")
CB#20	437.3 (6") 437.3(6")	434.7(12")
CB#21	448.9 (6") 449.1(6") 436.9(12") 445.4(12")	445.5 (12")
CB#32	358.8 (18")	358.65 (18")
CB#33	373.2 (18")	373.2 (18")
CB#34	391.2 (12") 397.0 (8")	391.1 (12")
CB#35	407.2 (12") 415.0 (6") 415.0 (6")	407.1 (12")

PHASE 3 CATCH BASIN SCHEDULE

CB ID	INV IN	INV OUT
CB#2	350.9 (18") 350.5 (18")	350.5 (18")
CB#3	349.0 (18") 348.8 (18")	345.8 (24")
CB#4	352.7 (18") 349.4 (18")	349.23 (18")
CB#5	361.9 (18")	354.1 (18")
CB#6	368.1 (18")	362.2 (18")
CB#6A	378.9 (6")	379.2 (6")
CB#7	371.2 (18")	371.0 (18")
CB#8	375.6 (18")	375.13 (18")
CB#9	378.7 (12") 381.3 (2")	378.1 (18")
CB#10	392.8 (12")	392.5 (12")

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
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STATE OF MAINE
BRIAN D. PIERCE
9809
LICENSED PROFESSIONAL ENGINEER
12/14/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

EXISTING CONDITIONS PLAN

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DATE:	12/2021
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LMN:	EXCON
CTB:	SME-STD
JOB NO. 21588.07	DWG FILE BASE

C-102

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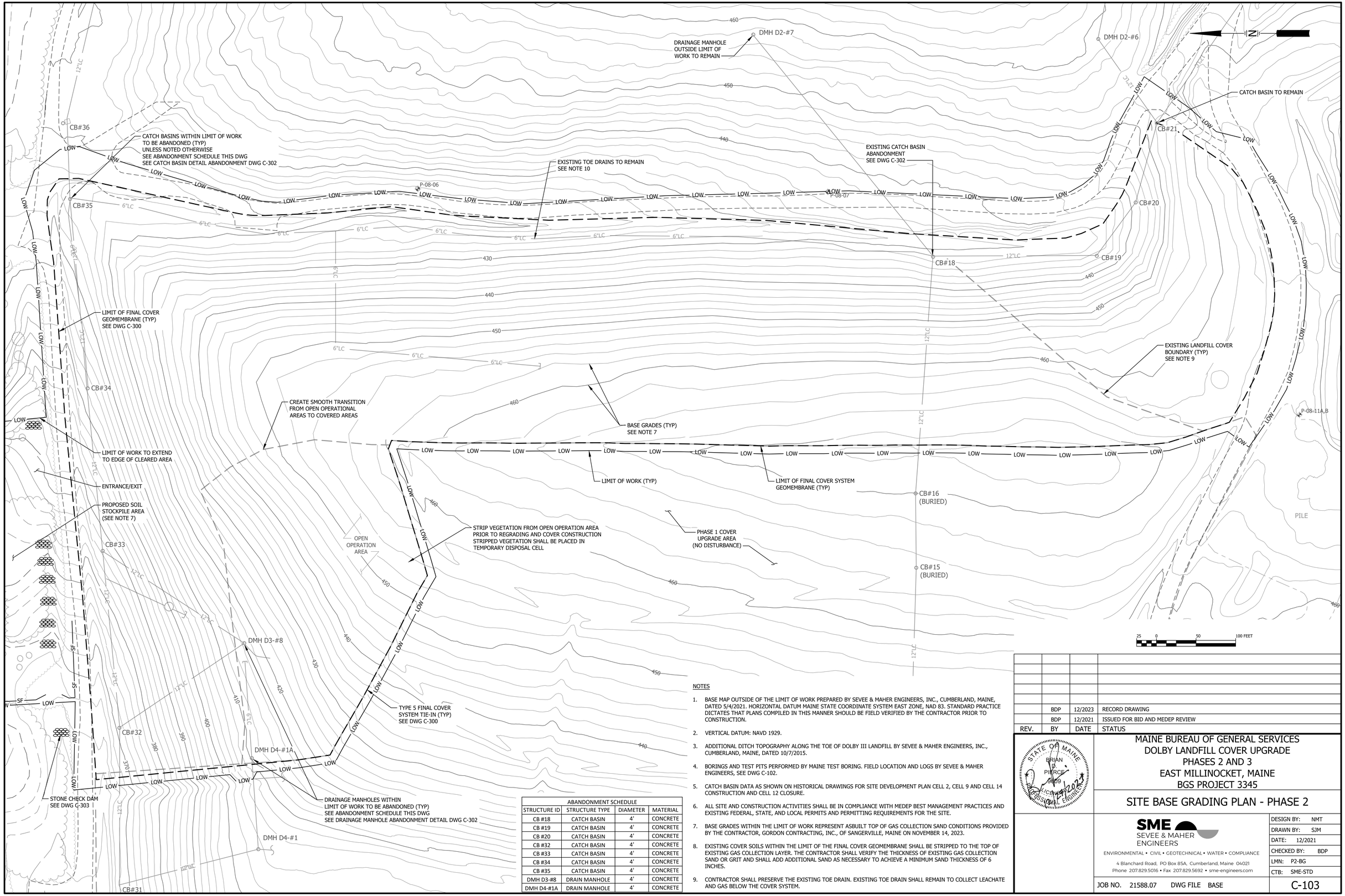

ABANDONMENT SCHEDULE			
STRUCTURE ID	STRUCTURE TYPE	DIAMETER	MATERIAL
CB #18	CATCH BASIN	4'	CONCRETE
CB #19	CATCH BASIN	4'	CONCRETE
CB #20	CATCH BASIN	4'	CONCRETE
CB #32	CATCH BASIN	4'	CONCRETE
CB #33	CATCH BASIN	4'	CONCRETE
CB #34	CATCH BASIN	4'	CONCRETE
CB #35	CATCH BASIN	4'	CONCRETE
DMH D3-#8	DRAIN MANHOLE	4'	CONCRETE
DMH D4-#1A	DRAIN MANHOLE	4'	CONCRETE

NOTES

1. BASE MAP OUTSIDE OF THE LIMIT OF WORK PREPARED BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 5/4/2021. HORIZONTAL DATUM MAINE STATE COORDINATE SYSTEM EAST ZONE, NAD 83. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
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7. BASE GRADES WITHIN THE LIMIT OF WORK REPRESENT ASBUILT TOP OF GAS COLLECTION SAND CONDITIONS PROVIDED BY THE CONTRACTOR, GORDON CONTRACTING, INC., OF SANGERVILLE, MAINE ON NOVEMBER 14, 2023.
8. EXISTING COVER SOILS WITHIN THE LIMIT OF THE FINAL COVER GEOMEMBRANE SHALL BE STRIPPED TO THE TOP OF EXISTING GAS COLLECTION LAYER. THE CONTRACTOR SHALL VERIFY THE THICKNESS OF EXISTING GAS COLLECTION SAND OR GRIT AND SHALL ADD ADDITIONAL SAND AS NECESSARY TO ACHIEVE A MINIMUM SAND THICKNESS OF 6 INCHES.
9. CONTRACTOR SHALL PRESERVE THE EXISTING TOE DRAIN. EXISTING TOE DRAIN SHALL REMAIN TO COLLECT LEACHATE AND GAS BELOW THE COVER SYSTEM.

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN D. PIERCE
3809
LICENSED PROFESSIONAL ENGINEER
12/7/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SITE BASE GRADING PLAN - PHASE 2

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CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

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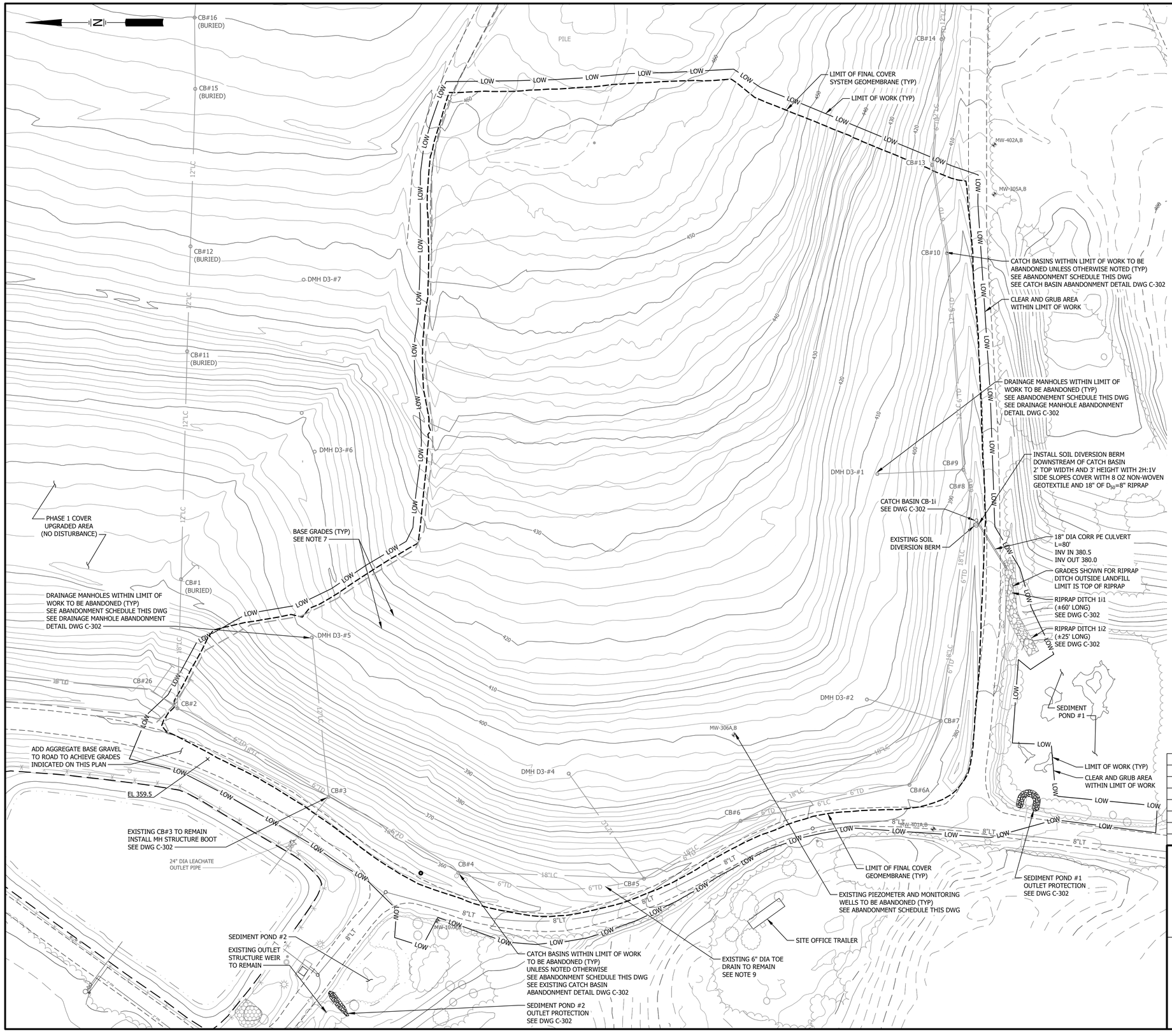

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ABANDONMENT SCHEDULE

STRUCTURE ID	STRUCTURE TYPE	DIAMETER	MATERIAL
CB #2	CATCH BASIN	4'	CONCRETE
CB #4	CATCH BASIN	4'	CONCRETE
CB #5	CATCH BASIN	4'	CONCRETE
CB #6	CATCH BASIN	4'	CONCRETE
CB #6A	CATCH BASIN	4'	CONCRETE
CB #7	CATCH BASIN	4'	CONCRETE
DMH D3-#2	DRAIN MANHOLE	4'	CONCRETE
DMH D3-#4	DRAIN MANHOLE	4'	CONCRETE
DMH D3-#5	DRAIN MANHOLE	4'	CONCRETE
MW-306 A,B	MONITORING WELL	1"	PVC
CB #8	CATCH BASIN	4'	CONCRETE
CB #9	CATCH BASIN	4'	CONCRETE
CB #10	CATCH BASIN	4'	CONCRETE
CB #13	CATCH BASIN	4'	CONCRETE
CB #17	CATCH BASIN	4'	CONCRETE
CB #21	CATCH BASIN	4'	CONCRETE
CB #22	CATCH BASIN	4'	CONCRETE
CB #23	CATCH BASIN	4'	CONCRETE
CB #24	CATCH BASIN	4'	CONCRETE
CB #25	CATCH BASIN	4'	CONCRETE
P-08-08	PIEZOMETER	1"	PVC
P-08-11A	PIEZOMETER	1"	PVC
P-08-11B	PIEZOMETER	1"	PVC
MW-204A	MONITORING WELL	1"	PVC
MW-204B	MONITORING WELL	1"	PVC
MW-307A	MONITORING WELL	1"	PVC
MW-307B	MONITORING WELL	1"	PVC

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
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STATE OF MAINE
BRIAN D. PIERCE
9809
LICENSED PROFESSIONAL ENGINEER
12/14/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SITE BASE GRADING PLAN - PHASE 3

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LMN: P3-BG
CTB: SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-104

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CB#36
CB#35
CB#34
CB#33
CB#32
CB#31
CB#21
CB#20
CB#19
CB#18
CB#16 (BURIED)
CB#15 (BURIED)
DMH D2-#7
DMH D2-#6
DMH D3-#8
DMH D4-#1A
DMH D4-#1
RIPRAP DITCH RD-4/RD-5 SEE DWG C-302
RIPRAP DITCH RD-4 SEE DWG C-302
RIPRAP DITCH RD-5 SEE DWG C-302
TYPE 1 FINAL COVER TERMINATION (TYP) SEE DWG C-300
FINAL COVER GRADE (TYP)
LIMIT OF WORK (TYP)
SURFACE SWALE (TYP) SEE DWG C-300
SWALE SLOPE 2% TO 4% (FIELD FIT AND MODIFY AS NEEDED)
TYPE 5 FINAL COVER SYSTEM TIE-IN (TYP) SEE DWG C-300
PHASE 1 COVER UPGRADED AREA (NO DISTURBANCE)
LIMIT OF FINAL COVER GEOMEMBRANE (TYP) SEE DWG C-300
MATCH INTO EXISTING SURFACE SWALE
TYPE 4 FINAL COVER TERMINATION (TYP) SEE DWG C-300
P-08-11A,B
PILE
N
25 0 50 100 FEET

FINAL COVER TIE-IN/TERMINATION LEGEND

- 1 — TYPE 1 FINAL COVER TERMINATION
- 4 — TYPE 4 FINAL COVER TERMINATION
- 5 — TYPE 5 FINAL COVER SYSTEM TIE-IN

NOTE: FOR DETAILS SEE DWG C-300

NOTES

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REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE BRIAN D. PIERCE 9809 LICENSED PROFESSIONAL ENGINEER 12/21/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SITE PLAN - PHASE 2

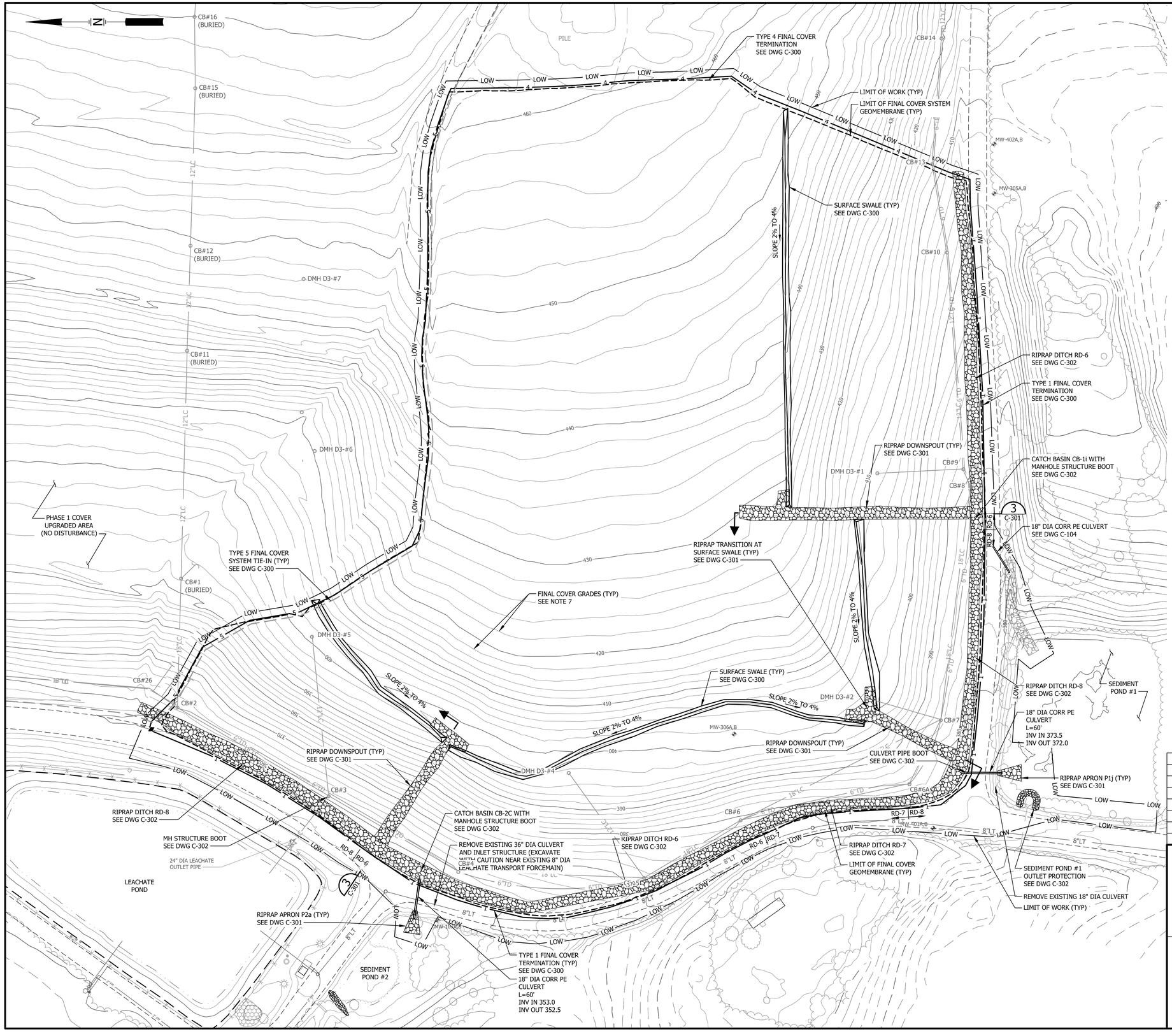
SME SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	NMT
DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	P2-SITE
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-105

\\sme-nfs01\projects\DOLDY\EVE\PGRADE2021 Phase 2-3\Acad\Plots\pgrPhase3ASE.dwg, C-105, 12/22/2023 1:54:19 PM, bwh



NOTES

1. BASE MAP OUTSIDE OF THE LIMIT OF WORK PREPARED BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 5/4/2021. HORIZONTAL DATUM MAINE STATE COORDINATE SYSTEM EAST ZONE, NAD 83. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. VERTICAL DATUM: NAVD 1929.
3. ADDITIONAL DITCH TOPOGRAPHY ALONG THE TOE OF DOLBY III LANDFILL BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 10/7/2015.
4. BORINGS AND TEST PITS PERFORMED BY MAINE TEST BORING. FIELD LOCATION AND LOGS BY SEVEE & MAHER ENGINEERS, SEE DWG C-102.
5. CATCH BASIN DATA AS SHOWN ON HISTORICAL DRAWINGS FOR SITE DEVELOPMENT PLAN CELL 2, CELL 9 AND CELL 14 CONSTRUCTION AND CELL 12 CLOSURE.
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9. CONTRACTOR SHALL PRESERVE THE EXISTING TOE DRAIN. EXISTING TOE DRAIN SHALL REMAIN TO COLLECT LEACHATE AND GAS BELOW THE COVER SYSTEM.

FINAL COVER TIE-IN/TERMINATION LEGEND

- 1 — TYPE 1 FINAL COVER TERMINATION
- 4 — TYPE 4 FINAL COVER SYSTEM TIE-IN
- 5 — TYPE 5 FINAL COVER TERMINATION

NOTE: FOR DETAILS SEE DWG C-300

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE — BRIAN D. PIERCE — 9809 — LICENSED PROFESSIONAL ENGINEER — 12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SITE PLAN - PHASE 3

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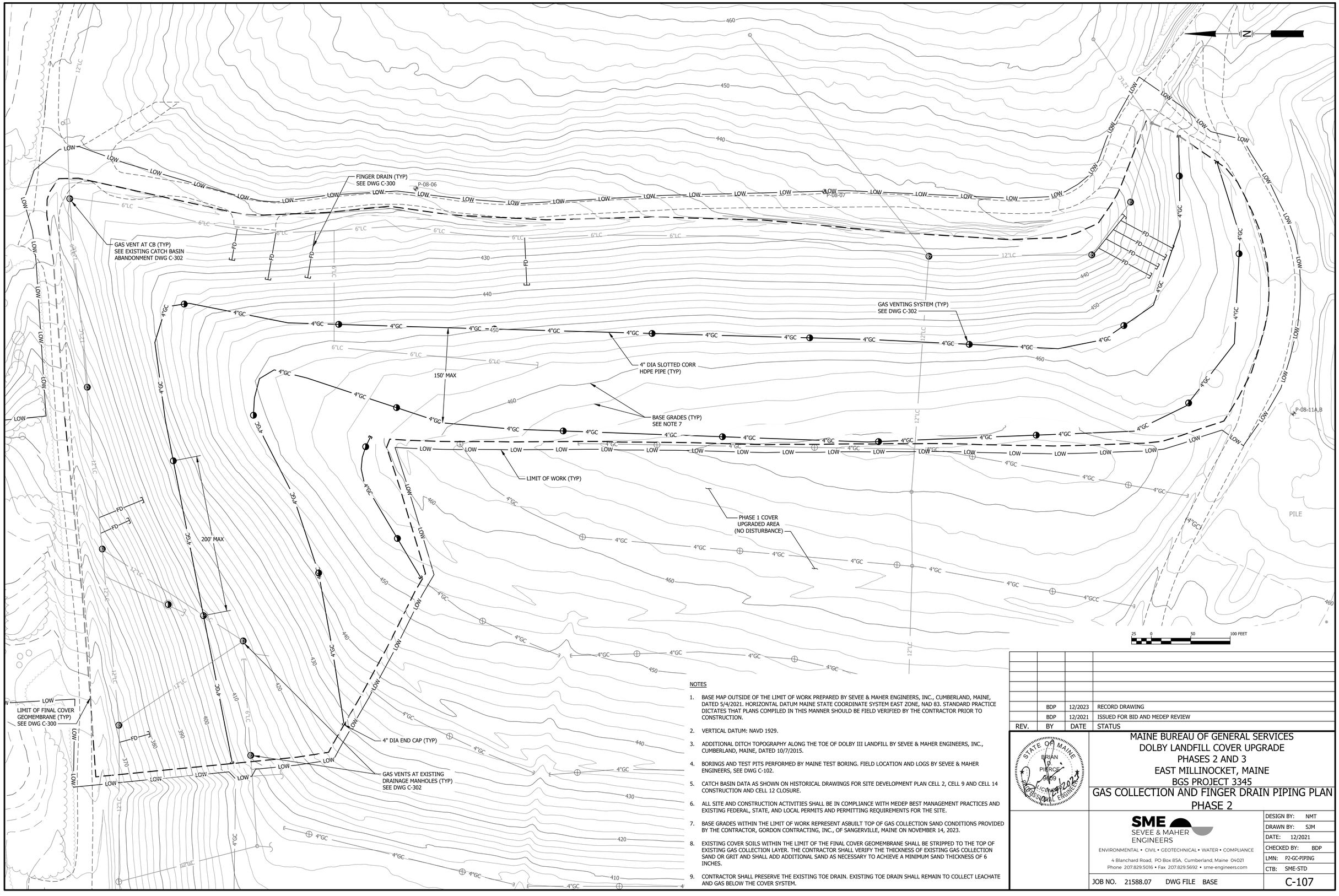
CHECKED BY:	BDP
LMN:	P3-SITE
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-106

\\Server\dfs\projects\21588\CIVIL\PLOTS\2021 Phase 3 Backfill\backfillPhase3ASE.dwg 12/08, 12/22/2023 1:57:31 PM, bwh



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STATE OF MAINE
BRIAN P. PIERCE
3809
LICENSED PROFESSIONAL ENGINEER
12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

GAS COLLECTION AND FINGER DRAIN PIPING PLAN PHASE 2

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SEVEE & MAHER ENGINEERS
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DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	P2-GC-PIPING
CTB:	SME-STD
JOB NO. 21588.07	DWG FILE BASE
	C-107

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NOTES

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30 0 60 120 FEET

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	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN D. PIERCE
21589
LICENSED PROFESSIONAL ENGINEER
12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

GAS COLLECTION AND FINGER DRAIN PIPING PLAN PHASE 3

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DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	P3-GCPIPING
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-108

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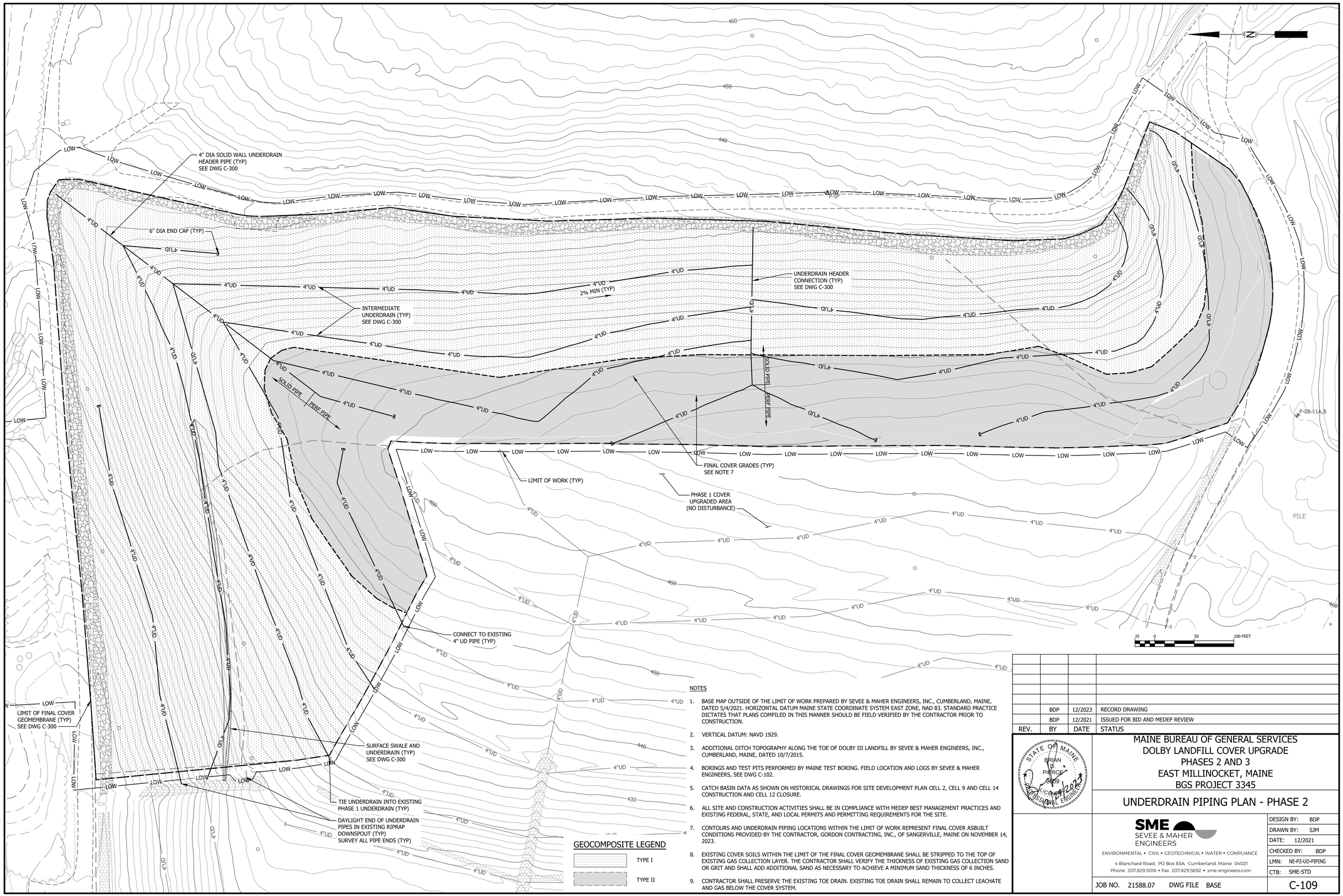

GEOCOMPOSITE LEGEND

TYPE I

TYPE II

NOTES

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STATE OF MAINE
BRIAN D. PIERCE
9809
LICENSED PROFESSIONAL ENGINEER
12/14/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

UNDERDRAIN PIPING PLAN - PHASE 2

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4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
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DESIGN BY:	BDP
DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	NE-P2-UD-PIPING
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-109

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NOTES

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GEOCOMPOSITE LEGEND

TYPE I

TYPE II

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ADDENDUM #1
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN J. PIERCE
3809
LICENSED PROFESSIONAL ENGINEER
12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

UNDERDRAIN PIPING PLAN - PHASE 3

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
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DESIGN BY:	BDP
DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	P3-UDPIPING
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-110

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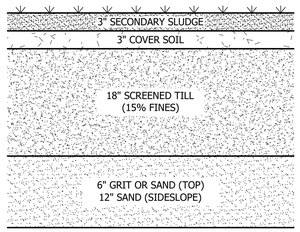
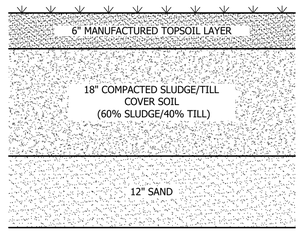


DOLBY III - EXISTING COVER 1
NTS



DOLBY III - EXISTING COVER 2
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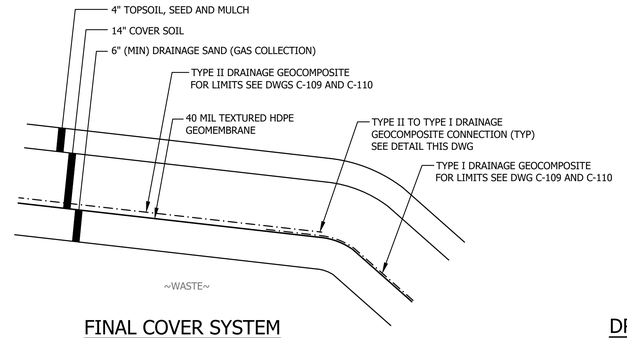

FINAL COVER SYSTEM
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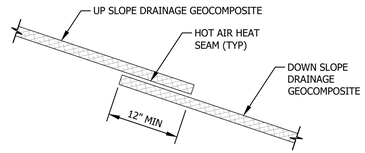
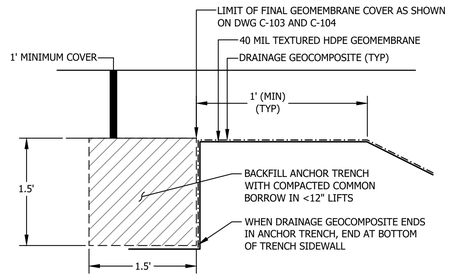


NOTE:
CONTRACTOR SHALL MAKE CONNECTION AT LOCATIONS SHOWN ON THE DRAWINGS.

TYPE II TO TYPE I
DRAINAGE GEOCOMPOSITE CONNECTION
NTS



ANCHOR TRENCH
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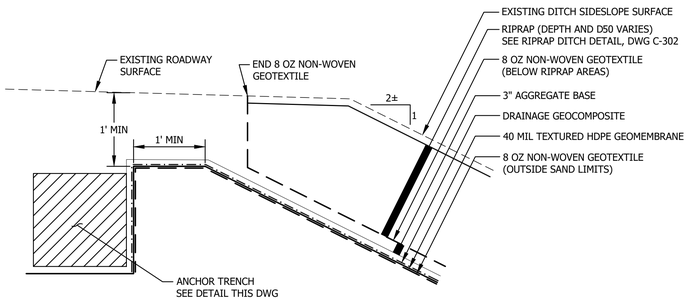

TYPE 1 FINAL COVER TERMINATION
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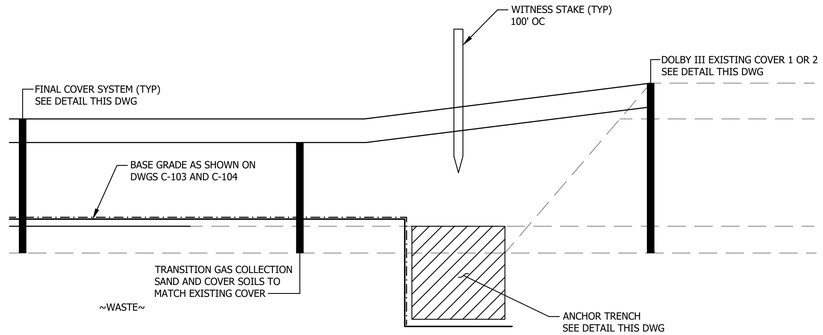

TYPE 4 FINAL COVER TERMINATION
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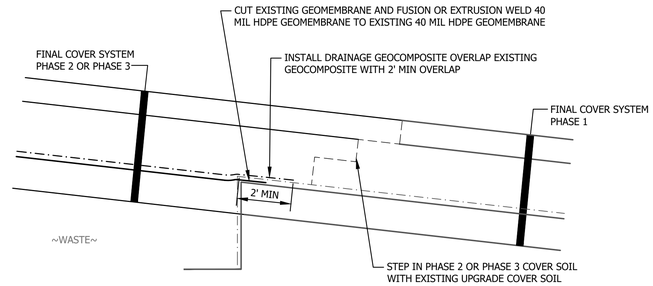

TYPE 5 FINAL COVER SYSTEM TIE-IN
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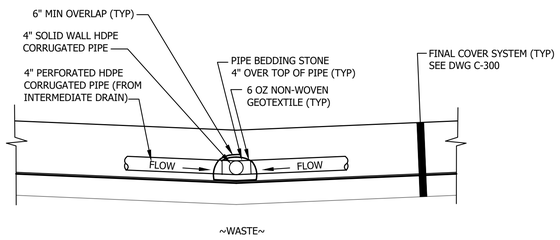
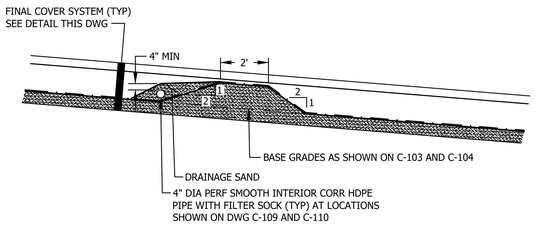
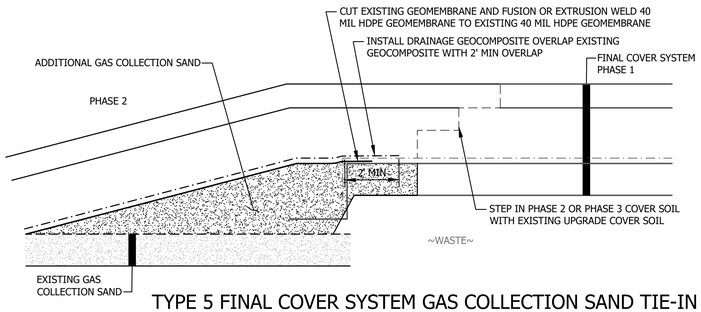


UNDERDRAIN HEADER PIPE
NTS

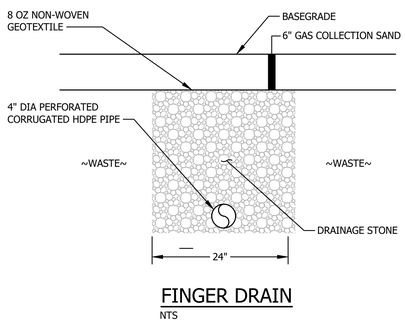


NOTE:
BERM FOR INTERMEDIATE UNDERDRAIN SHALL BE CONSTRUCTED WITH DRAINAGE SAND.

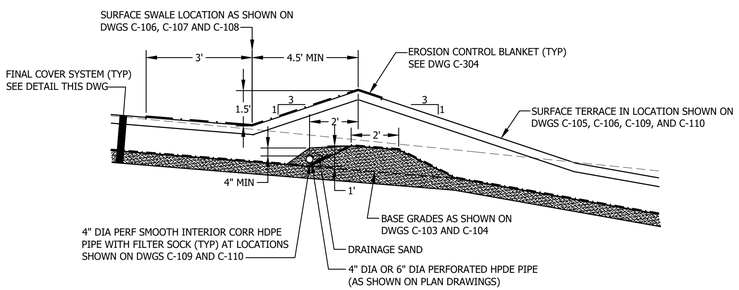
INTERMEDIATE UNDERDRAIN
NTS



TYPE 5 FINAL COVER SYSTEM GAS COLLECTION SAND TIE-IN
NTS



FINGER DRAIN
NTS



SURFACE SWALE AND UNDERDRAIN
NTS

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12/4/2023

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PHASES 2 AND 3
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SECTIONS AND DETAILS

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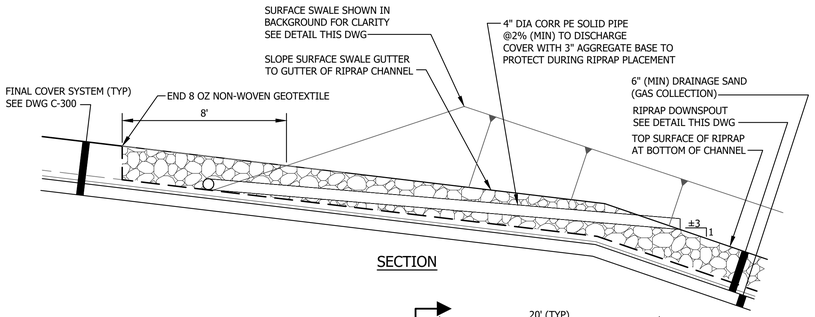
LMN:	NONE
CTB:	SME-STD

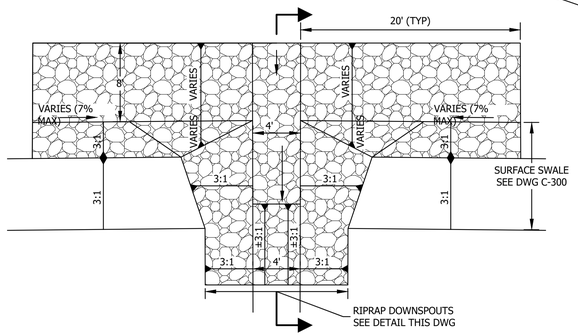
JOB NO. 21588.07 DWG FILE DETAILS

C-300

\\fsnarwhal\Projects\DOLBY\DOLBY LF\PHASE 2&3\ Phase 2-3 Dwg\Plans\Dwg\Plan Sheet\DET-FIG-E.dwg C-300, 12/7/2023 1:09:09 PM, bwh



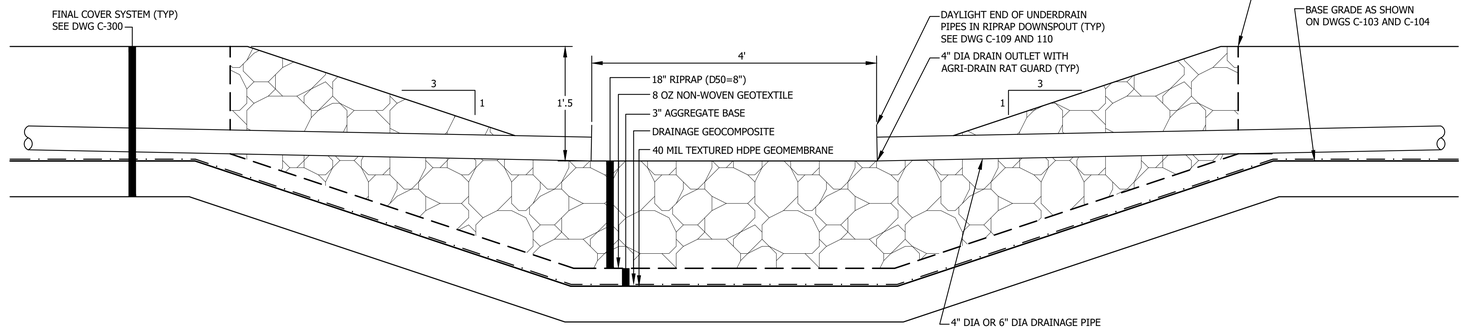
SECTION



PLAN VIEW

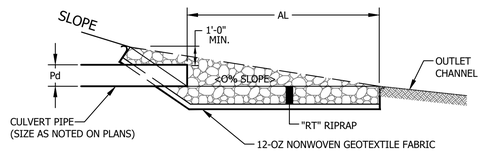
RIPRAP TRANSITION AT SURFACE SWALE

NTS

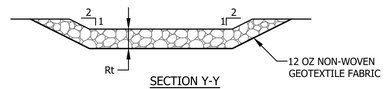


RIPRAP DOWNSPOUT

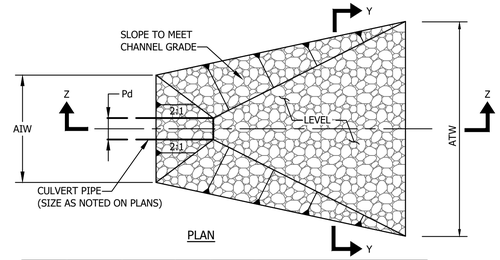
NTS



SECTION Z-Z



SECTION Y-Y

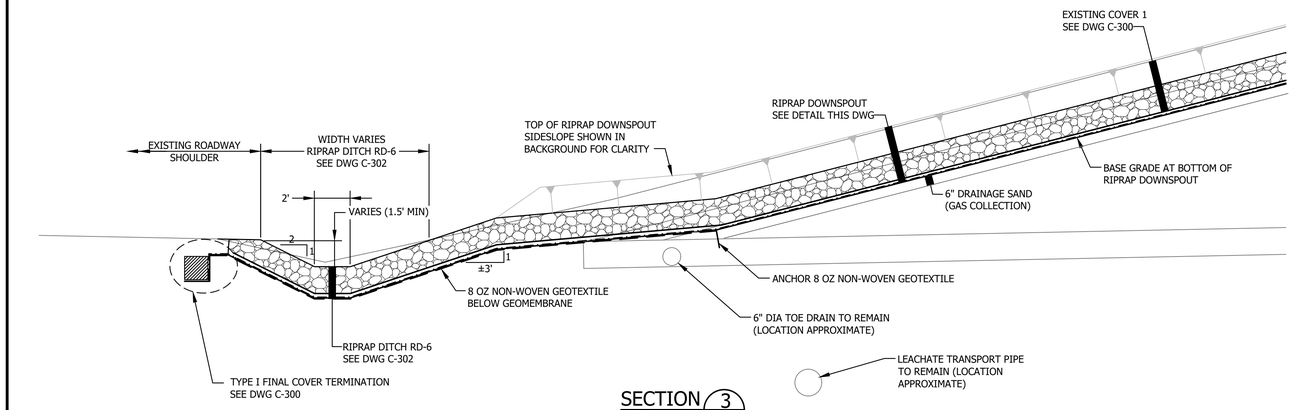


PLAN

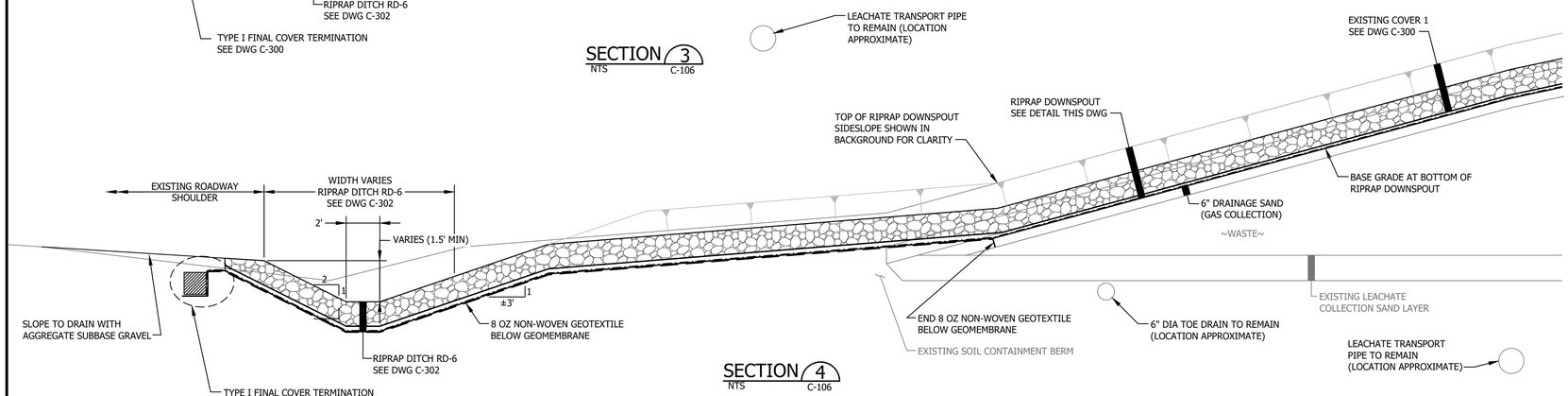
OUTLET NO.	PIPE DIA. Pd (IN)	D50	THICK RT (IN)	LENGTH AL (FT)	INITIAL WIDTH AIW (FT)	TERMINAL WIDTH ATW (FT)
P1j	18	6	14	20	6	22
P2a	18	18	27	20	6	22

RIPRAP APRON AT PIPE INLET/OUTLET

NTS



SECTION 3
NTS C-106



SECTION 4
NTS C-106

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE — BRIAN D. PIERCE — 9809 — LICENSED PROFESSIONAL ENGINEER — 12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SECTIONS AND DETAILS

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
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DESIGN BY: NMT
DRAWN BY: SJM
DATE: 12/2021
CHECKED BY: BDP
LMN: NONE
CTB: SME-STD

JOB NO. 21588.07 DWG FILE DETAILS

C-301

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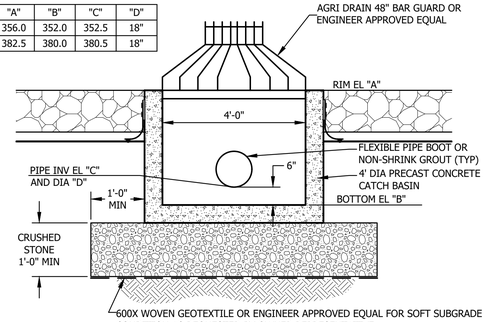
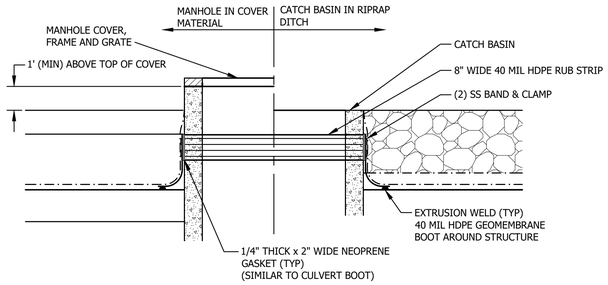
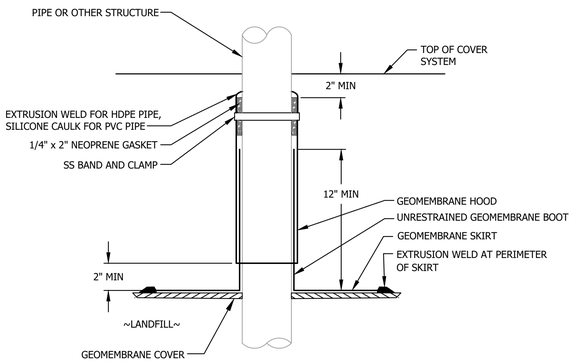
CB	"A"	"B"	"C"	"D"
CB-2c	356.0	352.0	352.5	18"
CB-1i	382.5	380.0	380.5	18"



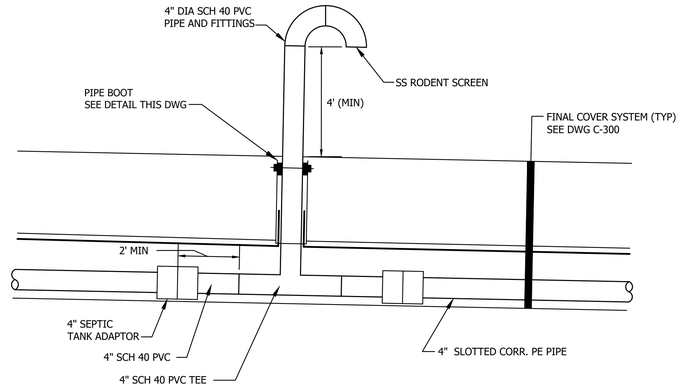
CATCH BASIN
NTS



MH/CB STRUCTURE BOOT
NTS

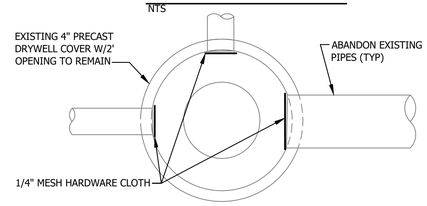


PIPE BOOT
NTS

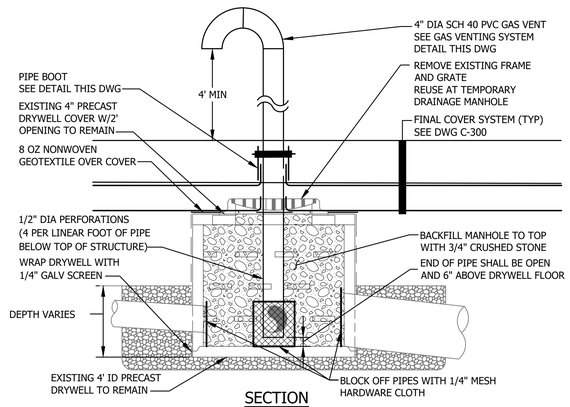


NOTE:
ALL PVC TO PVC CONNECTIONS SHALL BE GLUED.

GAS VENTING SYSTEM
NTS

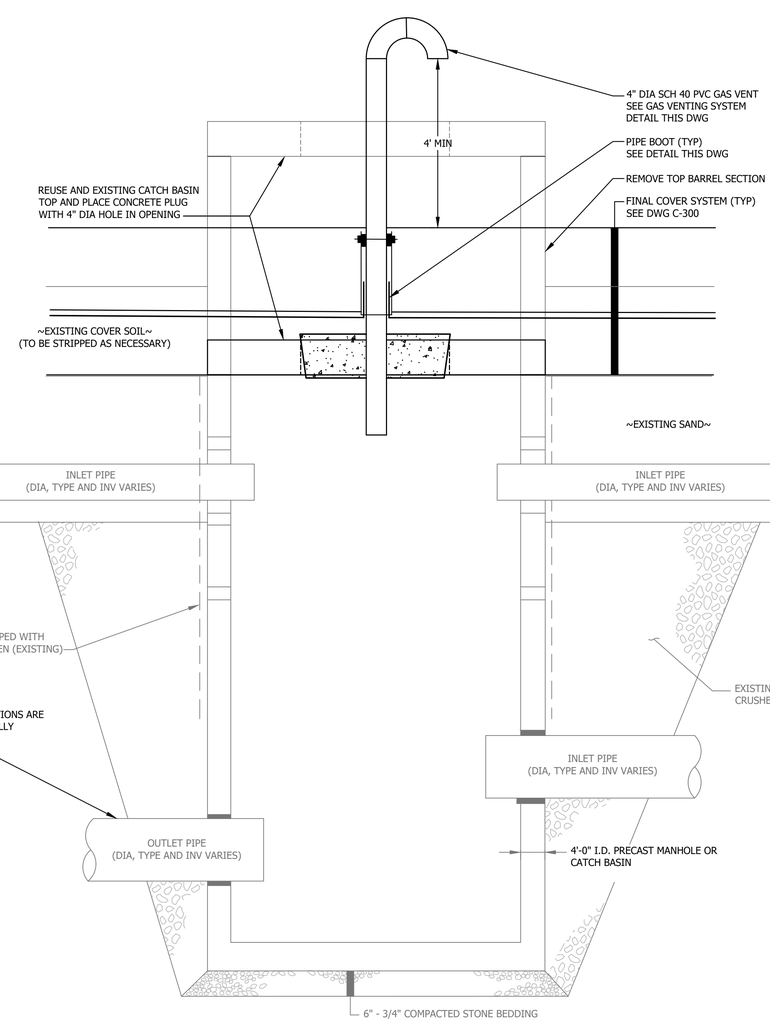


PLAN



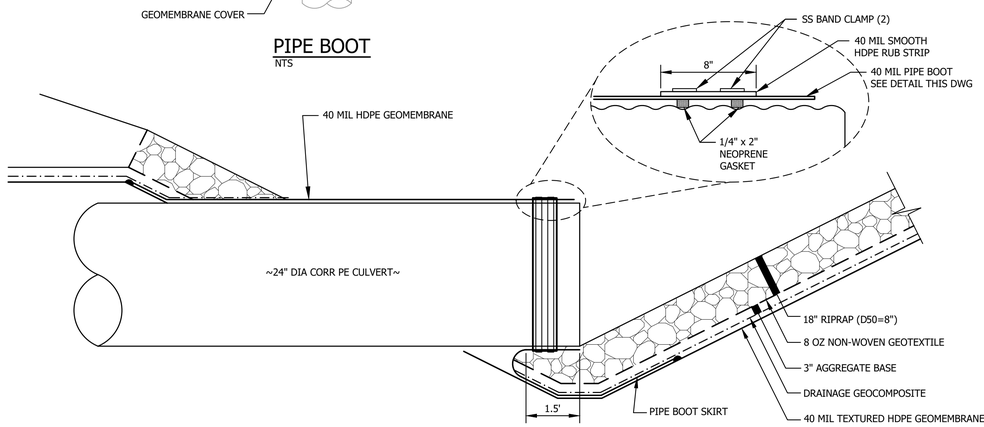
SECTION

DRAINAGE MANHOLE ABANDONMENT
NTS

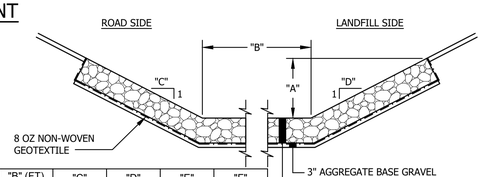


NOTE:
CONTRACTOR SHALL FIELD VERIFY PIPE LOCATIONS AND OTHER EXISTING CONDITIONS PRIOR TO ABANDONMENT.

EXISTING CATCH BASIN ABANDONMENT
NTS

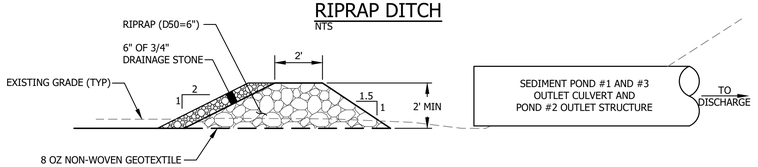


CULVERT PIPE BOOT
NTS



DITCH	"A" (FT)	"B" (FT)	"C"	"D"	"E"	"F"
RD-4	2	2	2	3	14"	6"
RD-5	1.5	4	2	3	27"	12"
RD-6	1.5	2'	2	3	18"	8"
RD-7	1.5	0	2	3	14"	6"
RD-8	1.5	2'	2	3	14"	6"
RD-9	1.5	2'	3	3	14"	6"
RD-1i1	1.5	2'	3	3	18"	8"
RD-1i2	1.5	4'	3	3	18"	8"

RIPRAP DITCH
NTS



POND OUTLET PROTECTION
NTS

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN P. PIERCE
5809
LICENSED PROFESSIONAL ENGINEER
12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
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SECTIONS AND DETAILS

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DESIGN BY:	NMT
DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	NONE
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE DETAILS

C-302

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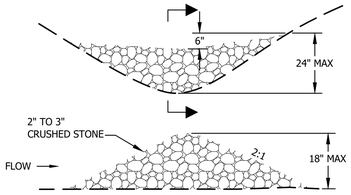
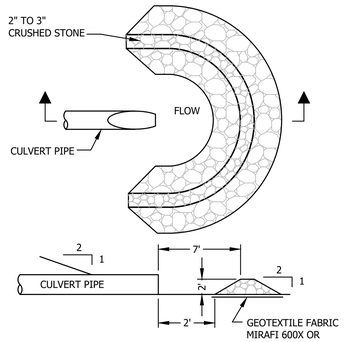


SECTION

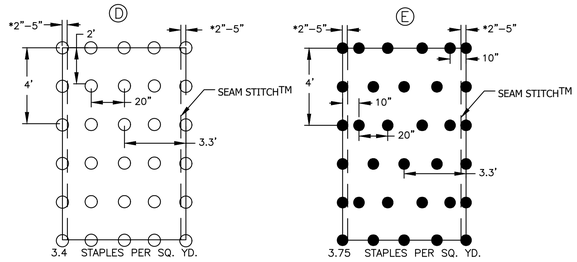
STONE CHECK DAM

NTS



RIPRAP CULVERT INLET PROTECTION (TEMPORARY)

NTS

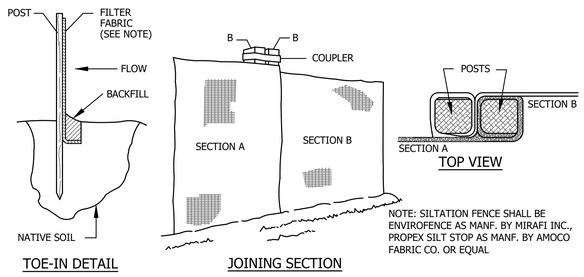


*LOCATION OF SEAM STITCH WILL VARY DEPENDING ON NORTH AMERICAN GREEN PRODUCT TYPE

FOR BLANKETS WITH THE NORTH AMERICAN GREEN DOT SYSTEM™ PLACE STAPLES THROUGH EACH OF THE DOTS.

ECB STAPLE PATTERN GUIDE

NTS

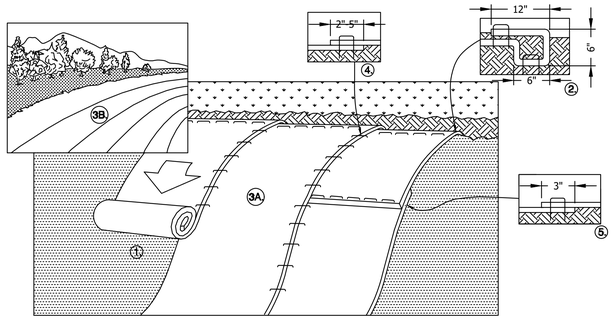


TOE-IN DETAIL JOINING SECTION TOP VIEW

NOTE: SILTATION FENCE SHALL BE ENVIROFENCE AS MANF. BY MIRAFI INC., PROPEX SILT STOP AS MANF. BY AMOCO FABRIC CO. OR EQUAL

SILTATION FENCE

NTS

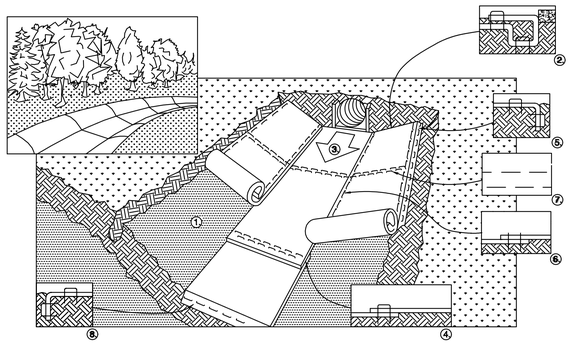


1. PREPARE BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S). INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6"DEEPx6"WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.

*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

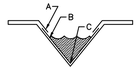
SLOPE INSTALLATION

NTS



1. PREPARE BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S). INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6"DEEPx6"WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL CENTER RECP'S IN THE DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP'S END OVER END (SHINGLE STYLE) WITH A 4" TO 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECP'S.
5. FULL LENGTH EDGE OF RECP'S AT OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2" TO 5" (DEPENDING ON RECP'S TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF STAPLES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.



CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

CHANNEL INSTALLATION

NTS

TEMPORARY AND PERMANENT
EROSION AND SEDIMENTATION CONTROL

A. GENERAL

1. All soil erosion and sediment control will be done in accordance with the Maine Erosion and Sediment Control Best Management Practices, Maine Department of Environmental Protection, October 2016, and as currently revised.
2. The contractor will be responsible for the repair/replacement/ maintenance of all erosion control measures until all disturbed areas are stabilized. Contractor shall be responsible for plan preparation, documentation and inspection in accordance with Maine Construction General Permit obtained for this project.
3. Disturbed areas will be permanently stabilized within 7 days of final grading. Disturbed areas not to be worked upon within 14 days of disturbance, shall be temporarily stabilized within 7 days of the disturbance.
4. In all areas, removal of trees, bushes and other vegetation, as well as disturbance of topsoil will be kept to a minimum while allowing proper site operations.
5. Any suitable topsoil will be stripped and stockpiled for reuse in final grading. Topsoil will be stockpiled in a manner such that natural drainage is not obstructed and no off-site sediment damage will result. If a stockpile is necessary, the side slopes of the topsoil stockpile will not exceed 2:1. Silt fence will be installed around the perimeter of all topsoil stockpiles. Topsoil stockpiles will be surrounded with siltation fencing and will be temporarily seeded with aroostook rye, annual or perennial ryegrass, within 7 days of formation, or temporarily mulched if seeding cannot be done within the recommended seeding dates. Recommended seeding dates and application rates are as follows:

Aroostook Rye: Recommended Seeding Dates: 9/10 - 11/1
Application Rate: 112 lbs/acre

Perennial Ryegrass: Recommended Seeding Dates: 4/1 - 9/10
Application Rate: 85 lbs/acre

Mulch: o Hay or Straw
Application Rate: 2 - 3 tons/acre.
Anchor with tack or 300 lbs/acre fiber mulch

o Wood Fiber Cellulose (Up to August)
Application Rate: 4,000 lbs/acre.
Anchoring not required

B. TEMPORARY MEASURES

1. Silt Fence

(a) Silt fence will be installed prior to and downgradient of all construction activity where soil disturbance may result in erosion.

(b) The height of a silt fence will not exceed 36 inches.

(c) The filter fabric will be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth will be spliced together only at a support post, with a minimum 6-inch overlap, and securely sealed.

(d) Posts will be spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12 inches). When extra strength fabric is used without the wire support fence, post spacing will not exceed 6 feet.

(e) A trench will be excavated approximately 4 inches wide and 4 inches deep along the line of posts and upgradient from the barrier.

(f) The standard strength of filter fabric will be stapled or wired to the fence, and 8 inches of the fabric will be extended into the trench. The fabric will not extend more than 36 inches above the original ground surface. Filter fabric will not be stapled to existing trees.

(g) When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric will be stapled or wired directly to the posts with all other provisions of item (f) applying.

(h) The trench will be backfilled and the soil compacted over the filter fabric.

(i) Silt fences will be removed when they have served their useful purpose, but not before the upgradient areas have been permanently stabilized.

(j) Silt fences will be inspected immediately after each rainfall and at least daily during prolonged rainfall. They will be inspected if there are any signs of erosion or sedimentation below them. Any required repairs will be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, they will be replaced with a temporary crushed stone check dam.

(k) Should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life, and the barrier still be necessary, the fabric will be replaced promptly.

(l) Sediment deposits should be removed after each storm event if significant buildup has occurred or if deposits exceed 15 inches in depth.

2. Stone Check Dams

(a) Stone check dams should be constructed of 2 to 3-inch stone. The stone should be placed according to the configuration shown on the drawing. Hand or mechanical placement will be necessary to achieve complete coverage of the ditch or swale and to ensure that the center of the dam is lower than the edges.

(b) Check dams should be installed as the swale is being constructed.

(c) Sediment will be removed from behind the check dams when it has accumulated to one half of the original height of the dam.

(d) Check dams will be removed when the grass has matured sufficiently to protect the ditch or swale. The area beneath the check dams will be seeded and mulched immediately after they are removed.

(e) Regular inspections will be made to ensure that the center of the dam is lower than the edges. Erosion caused by high flows around the edges of the dam will be corrected. If evidence of siltation in the water is apparent downstream from the check dam, the check dam will be inspected and adjusted. Check dams will be checked for sediment accumulation after each significant rainfall.

3. Wood Waste Compost/Bark Filter Berms

(a) The filter berm shall consist of an approved wood waste compost/bark mulch mix or recycled composted bark flume grit and fragmented wood generated from water-flume log handling systems or small shredding of stumpage (6 inches long x 1/2" dia.). The mixture needs to be a well-graded blend of organic and mineral substance. The composition is usually manufactured on or off site and by blending it with a well graded sand and gravel. The objective is a tight, heavy, non-erodible mixture that is not composed of one uniform material, i.e. just bark mulch will not suffice. Comparable composted mixes can be used upon approval of the Department of Environmental Protection, Bureau of Land and Water Quality.

(b) The mix shall conform to the following standards:
* Moisture Content 30 - 60%
* PH-5.0-8.0
* Screen Size - 100% less than 6-inch max; 70% less than 0.75 inch.
* No less than 80% organic material (dry weight) by loss of ignition.
* No stones larger than 4 inch diameter.
* Silts, clays or sugar sands are not acceptable in the mix.

(c) Installation and Size of Berm: The dimensions of the berm are more a function of the strength of the material than the flows (forces) it will encounter. At a minimum the berm shall be 4 feet wide and 18 inches high. The berm shall be placed, uncompacted along a relatively level contour. Wherever possible the existing surface must be scoured and the mixture keyed in like any other sediment control measure.

(d) Maintenance: All deficiencies shall be immediately corrected with additional material place on top of the berm to reach the desired height. When the berm is decomposed, clogged with sediment, eroded, or becomes ineffective, it shall be replaced.

(e) Clean up and Retrieval: At the end of the job, an erosion control berm shall be removed or spread out so that the native earth can be seen below.

B. TEMPORARY MEASURES (Cont)

4. Erosion Control Mats

(a) During the growing season (April 1 to September 10) use mats indicated on drawings on channel bottoms and steep slopes >3H:1V.

(b) During the fall and winter (September 11 to March 31) use heavy grade mats as recommended by the engineer on all channel bottoms and slopes >4h:1V.

(c) Install mats in accordance with the manufacturer's recommendations.

5. Erosion Control Measures

(a) The smallest practical area of land shall be exposed to construction at any one time.

(b) The temporary erosion control measures shall be maintained until the permanent erosion control measures are present.

(c) All areas disturbed by construction shall have available loam placed before seeding (or an acceptable alternative).

(d) After construction is terminated, all temporary erosion control measures shall be removed and accumulated sediment disposed of in a secure location.

(e) Mulch shall be mowings of acceptable herbaceous growth, free from noxious weeds or woody stems, and shall be dry.

C. Permanent Measures

1. Riprapped Ditches, Aprons and Plunge Pools

(a) Construct riprapped ditches, aprons and plunge pools in accordance with the details shown on the Drawings.

(b) Stone for riprap will consist of sub-angular field stone or rough unhewn quarry stone. The stone will be hard and of such quality that it will not disintegrate on exposure to water or weathering, be chemically stable and suitable in all other respects for the purpose intended. The bulk specific gravity (saturated surface-dry basis) of the individual stones will be at least 2.5.

(c) The riprap should be placed so that it produces a dense well-graded mass of stone with a minimum of voids. The desired distribution of stones throughout the mass may be obtained by selective loading at the quarry, controlled clumping of successive loads during final placing, or by combination of these methods. The riprap should be placed to its full thickness on one operation. The riprap should not be placed in layers. The riprap should not be placed by dumping into chutes or similar methods which are likely to cause segregation of the various stone sizes. Care should be taken not to dislodge the underlying material when placing the stones.

The finished slope should be free of pockets of small stone or clusters of large stones. Hand placing may be necessary to achieve the required grades and a good distribution of stone sizes. Final thickness of the riprap blanket should be within plus or minus 1/4 of the specified thickness.

(d) Riprap will be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone. If repairs are needed, they should be accomplished immediately.

2. Topsoil, Seed, Mulch

(a) Topsoil: Use stockpiled materials spread to the depths shown on the plans, if available. Approved topsoil substitutes may be used (refer to Section C-2-2 of Best Management Practices Handbook, see Note 2).

(b) Seeding should be completed by September 15 of each year. Areas not seeded or which do not obtain satisfactory growth by October 1, will be seeded with Aroostook Rye or mulched at rates previously specified herein. After November 1, or the first killing frost, disturbed areas should be treated as indicated in C below:

SEEDING SPECIFICATIONS

Seed	Permanent Seeding (180 lbs/acre)	Temporary Seeding (120 lbs/acre)
Red Fescue	50% by weight	Winter Rye
Red Top	2% by weight	100% by weight
White Cover	5% by weight	
Annual Ryegrass	25% by weight	
Birdsfoot Trefoil	3% by weight	
Kentucky Bluegrass	15% by weight	

Fertilizer: Apply 2 pounds per unit (87 lbs/acre) of nitrogen, phosphoric acid, and potash, or 413 lbs/acre of 19-19-19 fertilizer.

Lime: Apply liquid limestone at a rate of 3 tons per acre (138 lbs/1,000 sq ft).

Mulch: Mulch with weed-free hay or straw at 3.0 tons per acre with tack or 260 lbs/acre fiber mulch.

(c) If permanent vegetated stabilization cannot be established due to the season of the year, all exposed and disturbed areas not to undergo further disturbance are to have dormant seeding applied and be temporarily mulched to protect the site. The following methods may be used to perform a dormant seeding:

(1) Prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After the first killing frost and before snow fall, broadcast or hydroseed the selected seed mixture. Double the regular seeding rates for this type seeding.

(2) When soil conditions permit, between the first killing frost and before snow fall, prepare the seedbed, lime and fertilize, apply the selected seed mixture, and mulch and anchor. Double the regular seeding rates for this type of seeding.

Dormant seedings need to be anchored extremely well on slopes, ditch bases and areas of concentrated flows.

Dormant seeding requires inspection and reseeding as needed in the spring. All areas where cover is inadequate must be immediately reseeded and mulched as soon as possible.

(3) Erosion Control Mats
(a) Install mats as indicated on drawings and in accordance with manufacturers' recommendations

D. MAINTENANCE PLAN

1. Routine Maintenance Inspection shall be performed annually by a qualified person during wet weather to ensure that the facility performs as intended. Inspection priorities shall include checking erosion controls for accumulation of sediments.

2. Grassed Areas

(a) Lime according to a soil test or at a minimum of every five years using a rate of 2 tons per acre (100 pounds per 1,000 sq ft)

(b) Topdress with fertilizer in the early spring (before May 15) one year after planting with a balanced fertilizer, applying 50 pounds of nitrogen/acre (500 pounds of 10-20-20 per acre). Thereafter, fertilize according to a soil test or broadcast biennially, 300 pounds of 10-10-10 or equivalent per acre (7.5 pounds per 1,000 sq ft).

E. INSPECTIONS

1. Inspections will be undertaken by qualified personnel to ensure that temporary and permanent erosion and sedimentation controls are properly installed and correctly functioning, and that additional erosion control measures are installed if needed. Such inspections will occur weekly and before and after each significant rainfall event (1 inch or more within a 24 hour period) during construction until permanent erosion control measures have been properly installed and the site is stabilized.

2. A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and the major observations relating to the operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include: BMP's that need to be maintained; location(s) of BMP's that failed to operate as designed or proved inadequate for a particular location; and location(s) of where additional BMP's area needed that did not exist at the time of inspection. Follow-up to correct deficiencies or enhance controls must also be indicated in the log and dated, including what action was taken and when.

F. HOUSEKEEPING

1. Spill prevention. Controls must be used to prevent pollutants from being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.
2. Groundwater protection. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.
3. Fugitive sediment and dust. Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.
4. Debris and other materials. Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.
5. Trench or foundation de-watering. Trench de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the department.
6. Non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges.
7. Additional requirements. Additional requirements may be applied on a site-specific basis.

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN D. PIERCE
8409
LICENSED
PROFESSIONAL ENGINEER
12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SECTIONS AND DETAILS

SME
SEVEE & MAHER ENGINEERS
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Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY: NMT
DRAWN BY: SJM
DATE: 12/2021
CHECKED BY: BDP
LMN: NONE
CTB: SME-STD

JOB NO. 21588.07 DWG FILE DETAILS

C-303

N:\Current Jobs\21xx\21588.07 DOLBY LANDFILL COVER UPGRADE\2021 Phase 3 Design\Dwg\Plan\21588.07 FALL Dwg C-303, 12/21/2023 1:08:02 PM, bwh

APPENDIX E

DOLBY MAINTENANCE IN 2023

SME
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ENGINEERS

SME
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ENGINEERS

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Cumberland, ME 04021
Tel: 207.829.5016 • Fax: 207.829.5692
info@sme-engineers.com
sme-engineers.com

MEMO TO: Matthew Muzzy, SME

FROM: Trevor Michaud, SME

DATE: October 17, 2023

SUBJECT: **DOLBY SOIL STOCKPILE TEST PITS**

On May 3, 2023, exploratory test pits were done on a potential soil stockpile located at the Dolby Landfill. The soil stockpile is located between Monitoring Wells MW305A, B and Sediment Pond #1 on the south side of Dolby III. The stockpile was discovered while SME personnel was trying to identify potential onsite sources of cover soil material to aid in the completion of Phase 3 and Phase 4 cover upgrades to Dolby III. On May 3, 2023, approximately five test pits were excavated across the soil stockpile to see if the material would be suitable for use. Gordon Contracting performed the test pits with a Volvo ECR 355 excavator. On May 8, 2023, an additional ten test pits were excavated by Gordon to further identify the extent of use for the soil stockpile.

The test pits ranged in depth from five to fifteen feet and were roughly six feet wide. The test pits were done across the entire top portion of the stockpile and on the west side closest to Sediment Pond #1. Topsoil thickness ranged from six to ten inches with cover soil being below that. The cover soil below the topsoil had a light brown coloration while some test pits had cover soil with a dark grey color. The cover soil contained rocks ranging in size from two inches up to twelve inches. As the excavation of the test pits got deeper, (more than twelve feet), boulders began to be discovered. The cover soil had a moisture content between 11 and 12.5 percent and is classified as a brown silty sand with some gravel with a fines content higher than 20 percent. A composite sample of the cover soil was sent to TRI Environmental – California for interface friction and the results passed project specifications.



Photo 1 – One of the test pits excavated. Topsoil depth approximately six inches and cover soil below that.



Photo 2 – Material excavated from one of the test pits. Material excavated was similar to cover soil being stripped from the Phase 3 cover upgrade.



Photo 3 – Change in coloration of the cover soil with light brown coloration at first 3 feet and dark grey below that.



Photo 4 – As test pits got deeper, larger rocks were more prevalent.



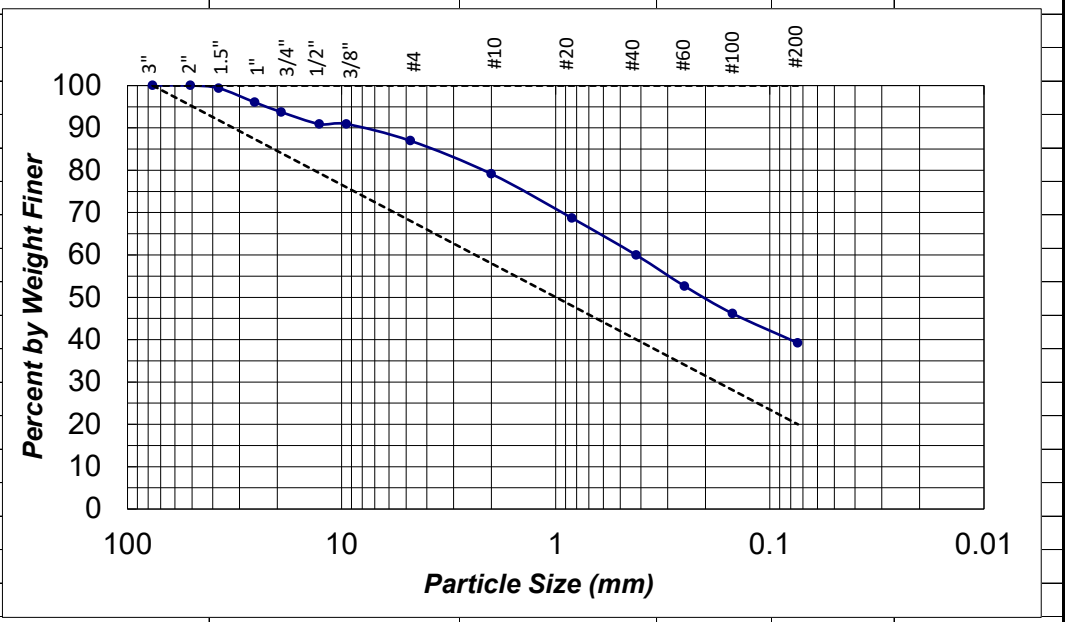
Photo 5 – Different layers of the test pits.



Photo 6 – Test pit with dark grey cover soil closer to the surface.

Grain Size Analysis - ASTM D421

PROJECT NAME:	MEDECD Phase III		PROJECT No:		220265.01
	Dolby Cover Upgrade		DATE:		16-May-23
SAMPLE SOURCE:	Borrow Source Cover Soil		SAMPLE No:		TP-1
SAMPLE DESCRIP:	Brown silty SAND, little gravel				
		DATA			
			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**	100	100	**P**
2	50.8	**100.0**			
1.5	37.5	**99.4**			
1	25.4	**96.0**			
3/4	19.1	**93.7**			
1/2	12.7	**90.9**			
3/8	9.5	**90.9**			
#4	4.76	**86.9**			
#10	2.0	**79.1**			
#20	0.84	**68.7**			
#40	0.42	**59.9**			
#60	0.25	**52.6**			
#100	0.149	**46.1**			
#200	0.074	**39.2**	20	100	**P**



Water Content (%) =	11.1

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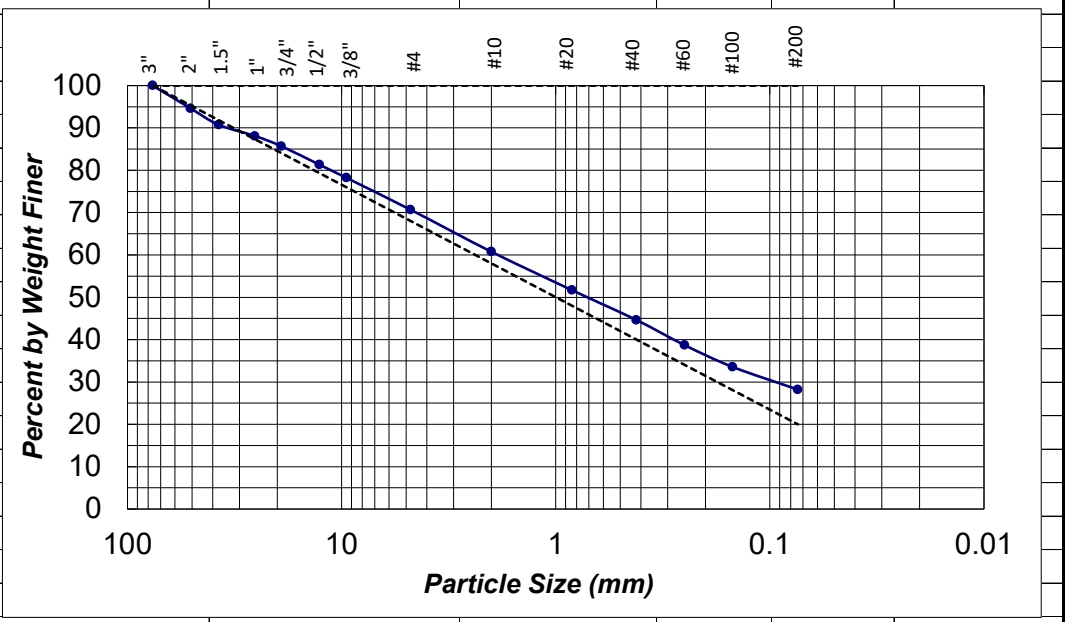
Grain Size Analysis - ASTM D421

PROJECT NAME:	MEDECD Phase III		PROJECT No:		220265.01
	Dolby Cover Upgrade		DATE:		16-May-23
SAMPLE SOURCE:	Borrow Source Cover Soil		SAMPLE No:		TP-2
SAMPLE DESCRIP:	Brown gravelly SAND, some silt				
		DATA			
			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**	100	100	**P**
2	50.8	**94.6**			
1.5	37.5	**90.7**			
1	25.4	**88.1**			
3/4	19.1	**85.7**			
1/2	12.7	**81.3**			
3/8	9.5	**78.2**			
#4	4.76	**70.7**			
#10	2.0	**60.8**			
#20	0.84	**51.7**			
#40	0.42	**44.6**			
#60	0.25	**38.7**			
#100	0.149	**33.5**			
#200	0.074	**28.2**	20	100	**P**

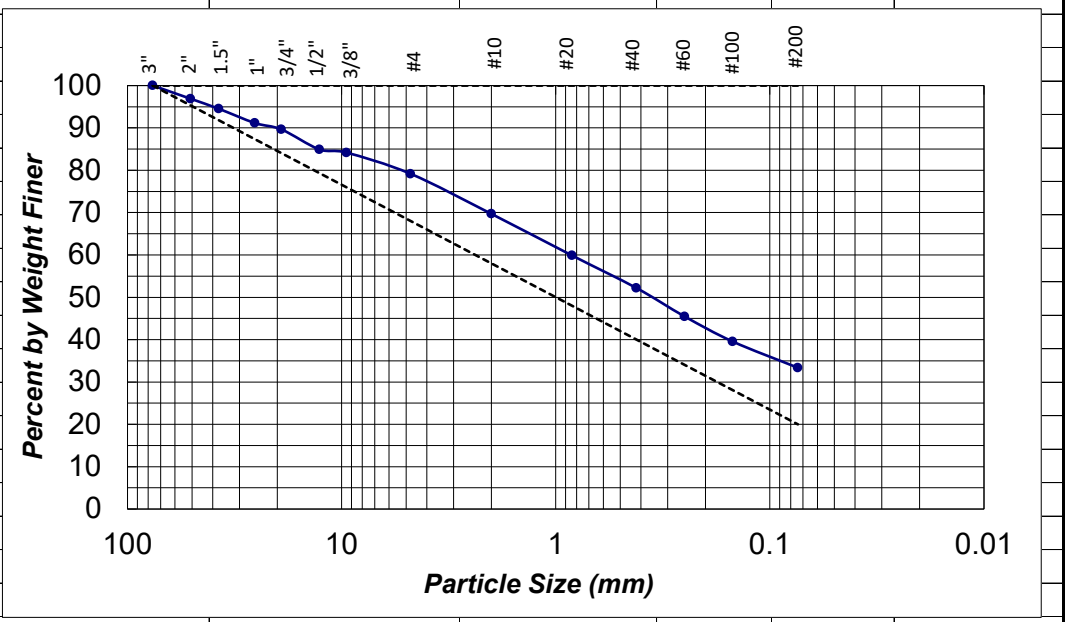


Water Content (%) =	11.3

SME
Sevee & Maher Engineers, Inc.

Grain Size Analysis - ASTM D421

PROJECT NAME:	MEDECD Phase III		PROJECT No:		220265.01
	Dolby Cover Upgrade		DATE:		16-May-23
SAMPLE SOURCE:	Borrow Source Cover Soil		SAMPLE No:		TP-3
SAMPLE DESCRIP:	Brown silty SAND, some gravel				
		DATA			
			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**	100	100	**P**
2	50.8	**96.9**			
1.5	37.5	**94.5**			
1	25.4	**91.2**			
3/4	19.1	**89.6**			
1/2	12.7	**84.9**			
3/8	9.5	**84.2**			
#4	4.76	**79.2**			
#10	2.0	**69.7**			
#20	0.84	**59.9**			
#40	0.42	**52.2**			
#60	0.25	**45.5**			
#100	0.149	**39.5**			
#200	0.074	**33.4**	20	100	**P**



	Water Content (%) =	11.0		

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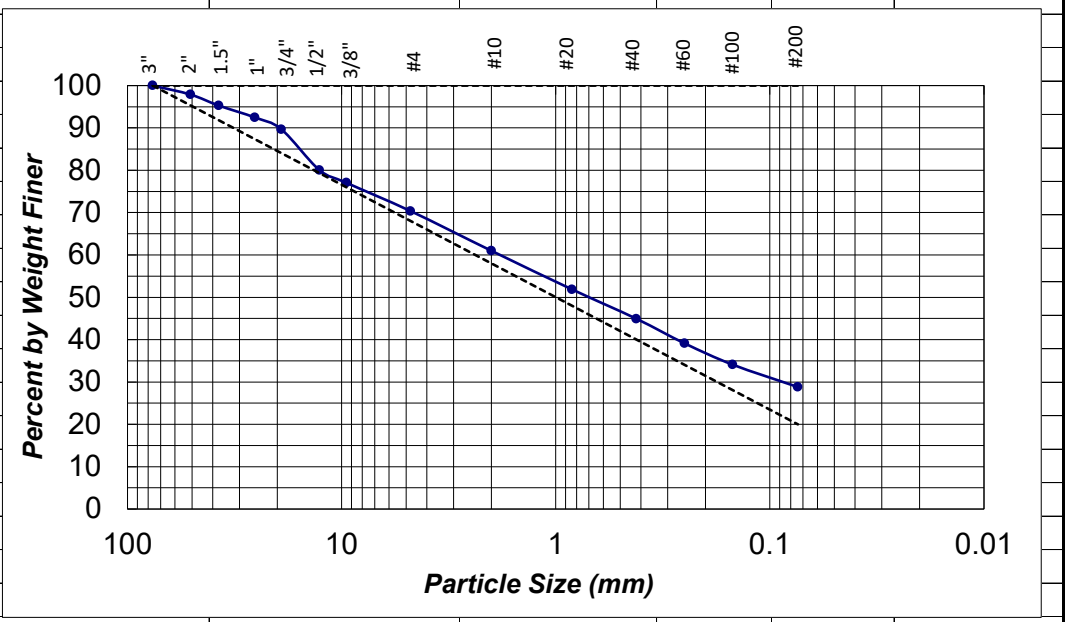
Grain Size Analysis - ASTM D421

PROJECT NAME:	MEDECD Phase III		PROJECT No:		220265.01
	Dolby Cover Upgrade		DATE:		16-May-23
SAMPLE SOURCE:	Borrow Source Cover Soil		SAMPLE No:		TP-4
SAMPLE DESCRIP:	Brown silty SAND, some gravel				
		DATA			
			SPECIFICATION (%)		
U.S Std SIEVE (in.)	PARTICLE SIZE (mm)	% by WT. FINER	MIN	MAX	PASS/FAIL
3	76.2	**100.0**	100	100	**P**
2	50.8	**97.9**			
1.5	37.5	**95.3**			
1	25.4	**92.5**			
3/4	19.1	**89.7**			
1/2	12.7	**80.0**			
3/8	9.5	**77.0**			
#4	4.76	**70.4**			
#10	2.0	**61.0**			
#20	0.84	**51.9**			
#40	0.42	**44.9**			
#60	0.25	**39.1**			
#100	0.149	**34.1**			
#200	0.074	**28.8**	20	100	**P**



Water Content (%) =	12.5

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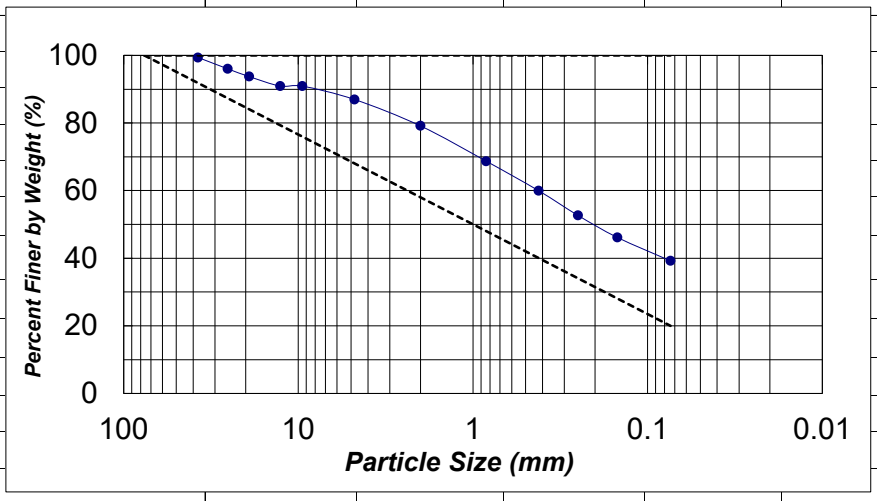
Grain Size Analysis and Moisture/Density

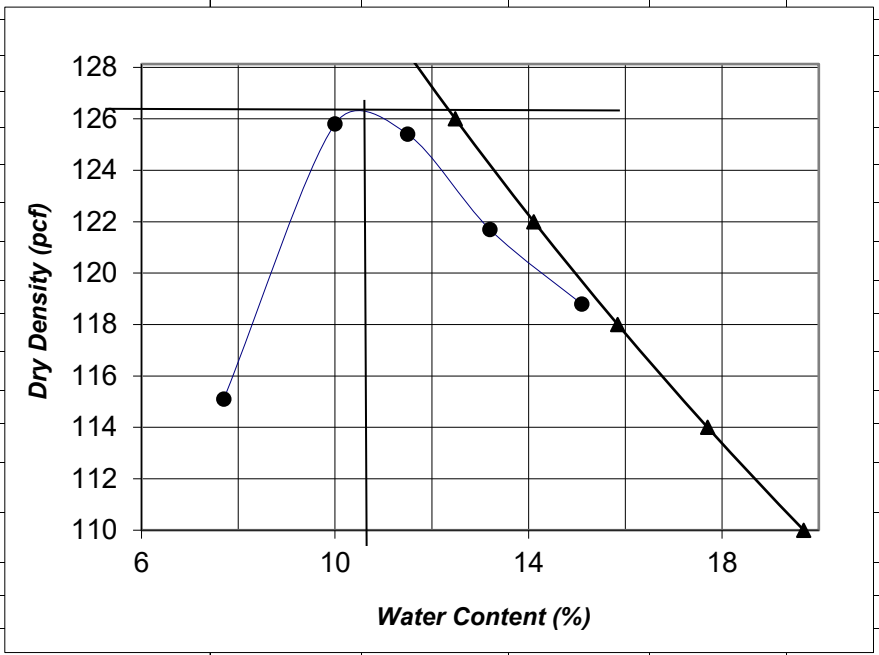
PROJECT NAME:	MEDECD Phase III	PROJECT No:	220265.01
	Dolby Cover Upgrade	DATE:	16-May-23
SAMPLE SOURCE:	Borrow Source Cover Soil	SAMPLE No:	TP-1
SAMPLE DESCRIP:	Brown silty SAND, little gravel		composite

GRAIN SIZE ANALYSIS ASTM D 6913



ATTER. LIMITS (%)	
W_L =	
W_P =	
I_P =	
W_N =	11.1

MOISTURE-DENSITY ASTM D 698 B



MAXIMUM DRY DENSITY (pcf)	**126.3**
OPTIMUM W.C. (%)	**10.5**
CORRECTED	
$D.D._{max}$	**128.5**
$W.C._{opt}$	**9.6**

correction made for 9.1% oversize material

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MEMO TO: Matthew Muzzy, SME

FROM: Trevor Michaud, SME

DATE: March 31, 2024

SUBJECT: **DOLBY SEDIMENT POND #3 OUTLET CULVERT REPAIR**

As part of the yearly maintenance of the Dolby Landfill, SME recommended replacing the outlet culvert for Sediment Pond #3 due to its poor condition. During one of the major rain events last summer, the inlet end of the culvert had become disconnected at a joint in the pipe and the soil around the pipe was beginning to erode. On May 25, 2023, SME received approval from Maine Bureau of General Services (BGS) to replace the existing outlet culvert for Sediment Pond #3. Adam Qualey of East Millinocket, Maine was contracted to perform the work. On June 7, 2023, Adam Qualey was onsite at Dolby Landfill to replace the outlet culvert. The inlet side of the existing 36-inch corrugated metal pipe (CMP) was removed, and a new 36-inch CMP was installed. Two loads or riprap was then placed all around the culvert to prevent any future uplift. All disturbed area was then seeded, and hay mulch applied. Trevor Michaud of Sevee and Maher Engineers was onsite to oversee the construction. Below are photos of the work completed.



Photo 1 – Outlet culvert from Sediment Pond #3 prior to getting fixed. Photo taken looking south.



Photo 2 – Inlet to Sediment Pond #3 being replace. Photo taken looking west.



Photo 3 – Riprap installed around pipe inlet to Sediment Pond #3 outlet culvert. Photo taken looking southeast.



Photo 4 – Disturbed area around Sediment Pond #3 outlet pipe seeded and mulch. Photo taken looking northwest.

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MEMO TO: Matthew Muzzy, SME

FROM: Trevor Michaud, SME

DATE: October 16, 2023

SUBJECT: **DOLBY LEACHATE POND LINER REPAIR**

During the week of September 25, 2023, the leachate pond at Dolby Landfill located in East Millinocket, Maine was cleaned, and the primary liner was inspected. During the cleaning, an indentation was discovered by SME in the southwest corner of the leachate pond. The indentation was located above the white line (normal leachate pond high level). On Friday September 29, 2023, SME personnel met with the Maine Department of Environmental Protection (MEDEP) to inspect the exposed geomembrane, and SME indicated to MEDEP that the indentation would be fixed the following week by Integrity Lining Systems, LLC. (Liner subcontractor for Dolby Phase 3 Cover Upgrade). On October 3, 2023, Integrity welded a small bead over the indentation and tested the area with a vacuum box to ensure there were no leaks. SME observed all welding and testing.



Photo 1 – Indentation filled with extrudate at the southwest corner of the Dolby Leachate Pond.

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sme-engineers.com

MEMO TO: Matthew Muzzy, SME

FROM: Trevor Michaud, SME

DATE: October 16, 2023

SUBJECT: **DOLBY II EXISTING COVER REPAIR**

In the fall of 2022 the third annual landfill inspection at the Dolby Landfill in East Millinocket, Maine was conducted. During this annual inspection approximately six areas on the Dolby II landfill showed signs of ponding water and gas. Sevee & Maher Engineers (SME) personnel identified the areas of most concern. Adam Qualey Incorporated of Millinocket, Maine (Adam Qualey) was contacted to provide a quote to perform the work in the summer of 2023. The scope of work included placing additional cover soil and topsoil over the low-lying areas and regrading to allow for positive drainage and applying grass seed and mulch to all disturbed areas.

On October 4,2023 Adam Qualey mobilized onsite and began work on Dolby II to repair the six low lying areas. Adam Qualey used a loader to haul the material from various cover soil stockpiles around the perimeter to the specified locations. Once enough material was brought to each location, the area was graded with a bulldozer and any large rocks or sticks were removed. Work on Dolby II concluded on October 6, 2023. A site visit by SME was performed on October 10th to ensure that the areas had been stabilized and that no significant erosion took place during the rain event over the weekend of October 7th.

In addition to placing cover soil on low lying areas the existing surface on the southeast corner of Dolby II was extremely uneven which made it difficult for mowing/maintenance. As part of this scope of work Adam was asked to grade over the area using as much existing material as possible and importing the remainder. When Adam started smoothing the area, he noticed waste just below the surface, approximately 6-inches. Given this development and the time of year it was determined that the waste should be covered over, and that soil would need to be imported to perform the work, existing soil could not be used to smooth the area. Therefore, SME decided to perform the work in early 2024 prior to any mowing on Dolby II.



Photo 1 – Cover soil being placed over an area where landfill gas odor was present. Photo taken looking west.



Photo 2 – Cover soil being graded to allow for positive drainage. Photo taken looking south.



Photo 3 – Cover soil being brought over to one of the low spots on Dolby II. Photo taken looking northwest.



Photo 4 – Cover soil graded to allow for positive drainage. Photo taken looking north.



Photo 5 – Cover soil graded to allow for positive drainage at top of Dolby II. Photo taken looking south.



Photo 6 – Repaired area has been seeded and mulched. Photo taken looking east.



Photo 7 – Repaired area has been seeded and mulched. Photo taken looking north.



Photo 8 – Repaired area has been seeded and mulched. Photo taken looking north.

APPENDIX F

MANHOLE 2 REPAIRS

SME
SEVEE & MAHER
ENGINEERS

Trevor Michaud

From: Matt Muzzy
Sent: Friday, December 29, 2023 8:34 AM
To: Maheu, Vera A
Cc: Longfellow, William; Gould, Lane; Brian Pierce; Nicholas Thompson; James Goodwin; Trevor Michaud
Subject: RE: Dolby - Manhole #2

Republic Services plans to dispatch a crew today to pump down MH#2 and diagnose the problem. Repair today will be made if possible.

Matt M

From: Maheu, Vera A <Vera.A.Maheu@maine.gov>
Sent: Friday, December 29, 2023 8:30 AM
To: Matt Muzzy <mmuzzy@smemaine.com>
Cc: Longfellow, William <William.Longfellow@maine.gov>; Gould, Lane <Lane.Gould@maine.gov>; Brian Pierce <bdp@smemaine.com>; Nicholas Thompson <nmt@smemaine.com>; James Goodwin <James.Goodwin@mseco.com>; Trevor Michaud <tjm@smemaine.com>
Subject: RE: Dolby - Manhole #2

Hi Matt,

Thanks for the update.

Vera A. Maheu
Environmental Specialist III
Bureau of Remediation and Waste Management
Maine Department of Environmental Protection
Cell 207-451-2294
vera.a.maheu@maine.gov

From: Matt Muzzy <mmuzzy@smemaine.com>
Sent: Friday, December 29, 2023 8:16 AM
To: Maheu, Vera A <Vera.A.Maheu@maine.gov>
Cc: Longfellow, William <William.Longfellow@maine.gov>; Gould, Lane <Lane.Gould@maine.gov>; Brian Pierce <bdp@smemaine.com>; Nicholas Thompson <nmt@smemaine.com>; James Goodwin <James.Goodwin@mseco.com>; Trevor Michaud <tjm@smemaine.com>
Subject: Dolby - Manhole #2

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.
Good morning.

Jim Goodwin noted earlier today that Manhole #2 is leaking again around the cover.

ACV Enviro (henceforth called Republic Services) has been contacted and a repair team/schedule is being put together.

Currently the leachate pond level is approximately 2.5 feet below the white line, which indicates several days of available storage… so the pumps have been turned off. After today, the weather forecast is generally dry through the end of next week, so pond storage should not be an issue.

Will keep you advised of repair schedule.

Happy New Year ????

Matt M

Matthew W. Muzzy, P.E.
Sevee & Maher Engineers, Inc.
4 Blanchard Road, PO Box 85A
Cumberland Center, ME 04021
Tel: 207-829-5016
Fax: 207-829-5692
Cell: 207-400-6550
www.smemaine.com

Trevor Michaud

From: Matt Muzzy
Sent: Monday, January 1, 2024 3:19 PM
To: William.Longfellow@maine.gov; Gould, Lane; Vera A. Maheu (vera.a.maheu@maine.gov)
Cc: Brian Pierce; Trevor Michaud; James Goodwin
Subject: Update on Manhole #2 - Dolby

On Saturday (12/30) MH#2 was pumped down and the couplings for the force main were adjusted as best as possible. When Republic Services left the site, the couplings were holding and no leak into MH#2 was observed. As part of Republic's visit both check valves at the beginning of the force main were removed. The idea behind this was to allow water in the force main to flow back to the leachate pond after the pumping is stopped. With the check valves in place, the force main stays pressurized and consequently the leachate leaks into MH #2.

The consensus at the site was that the cast iron couplings used to connect the force main together in MH#2 have become so warn (at the bolt connection location) that the clamps can no longer be tightened adequately. The bolts used to connect the clamp halves together are "carriage" style bolts that rely on the head end of the bolt fitting into the clamp's casting such that the bolt can be tightened using only one wrench…while the head end of the bolt binds within a depression purposely in a made in the clamp casting. Observations by Republic Services indicate that the depressed openings in the clamps have become so warn that the head of the carriage bolt no longer fits snugly into the depression, but rather the bolt head now slips in the depression keeping the bolt from becoming fully tightened.

First thing Tuesday morning SME will contact EJ Prescot to inquire about replacing the couplings. There are four couplings used in MH#2 as the leachate main makes a corner at the MH#2 location. As soon as the new couplings are available Republic Services will return to the site and make the repairs necessary to restore the function of MH#2.

In the meantime, if the leachate level in the leachate pond needs to be lowered the leachate pumps will be hand operated and if leakage of leachate into MH#2 overflows the manhole lid measures will be taken to pump the contents of MH#2 back to the leachate pond. As of 1300 hours Sunday, Jim Goodwin had operated the leachate pumps for approximately 2 hours to get the pond level to approximately 2.5 feet below the white line, which indicates plenty of leachate storage in the leachate pond given the weather forecast for the Dolby area is dry and mild for the next several days.

Please call me if any questions,

Thank you,

Matt M


8"
STYLE 2095
VICTAULIC
51M
PLAIN END
HDPE

Trevor Michaud

From: Maheu, Vera A <Vera.A.Maheu@maine.gov>
Sent: Wednesday, January 3, 2024 2:06 PM
To: Matt Muzzy; Longfellow, William; Gould, Lane
Cc: dcrosby@republicservices.com; Brian Pierce; Trevor Michaud; James Goodwin
Subject: RE: Dolby pipeline update

Hi Matt,

Thank you for the update. Looks like pond hockey season up there!

Vera A. Maheu
Environmental Specialist III
Bureau of Remediation and Waste Management
Maine Department of Environmental Protection
Cell 207-451-2294
vera.a.maheu@maine.gov

From: Matt Muzzy <mmuzzy@smemaine.com>
Sent: Wednesday, January 3, 2024 1:40 PM
To: Maheu, Vera A <Vera.A.Maheu@maine.gov>; Longfellow, William <William.Longfellow@maine.gov>; Gould, Lane <Lane.Gould@maine.gov>
Cc: dcrosby@republicservices.com; Brian Pierce <bdp@smemaine.com>; Trevor Michaud <tjm@smemaine.com>; James Goodwin <goodjimi1955@yahoo.com>
Subject: Dolby pipeline update

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.
The latest on the leachate pipeline.

The pipeline is anticipated to be repaired Friday or Saturday (this week) depending on Republic's availability. Two new pipe clamps have been ordered from supplier (Pennsylvania) and are expected to be delivered to Dolby when Republic mobilizes to the site. Trevor Michaud (SME) is planning to deliver the couplings and observe the repair. Jim Goodwin (SME) will also be onsite to provide access to the pump station etc. as needed.

Since Monday the pond has been pumped until the pipeline leak in MH#2 almost fills the manhole. the pumping was then stopped and the leachate in the manhole would drain back to the leachate pond through the leak in the pipeline. During this time the pond level has not exceeded the white line as shown in the photo below. (The photo was taken around noon today [1/3/24]).

Will keep you informed as more information become available.

Matt M



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Trevor Michaud

From: Matt Muzzy
Sent: Friday, January 5, 2024 9:03 AM
To: William.Longfellow@maine.gov; Gould, Lane; Vera A. Maheu (vera.a.maheu@maine.gov)
Cc: Brian Pierce; Nicholas Thompson; Trevor Michaud; James Goodwin
Subject: Doby Update
Attachments: IMG_0001.mov

Good morning … several items were addressed at Dolby yesterday.

Pipeline leak…UPS tracking shows couplings for MH#2 are expected to be delivered to SME today. Plans are for Republic to mobilize to Dolby Monday morning to install/test the new clamps. The attached video shows the leak as of 1/4/24.

As of noon 1/4/24, the level in the leachate pond remained a few inches below the white line. Since the leak in MH#2 was detected last week the pond operation has consisted of the leachate leaked into MH#2 slowly draining back to the leachate pond and then pumping for approximately 30 minutes (or until MH#2 is approaching a full condition…and then the process is repeated). The pond level is slowly increasing and will likely exceed the white line before Monday. Operation of the landfill facility calls for removing any leachate above the white line by truck-trailer tanks. The white line requirement was written around when high spring inflows occur and the leachate pond lever can rise more than a foot per day. For this current condition we plan to monitor the leachate level and pump as practical over the weekend (note the weather forecast is favorable). In the event the leachate level in the pond becomes unacceptable we are prepared to use a subcontractor to pump leakage into MH#2 over ground back to the leachate pond so that the pumps can be run full time to lower the pond level. We do not anticipate the need to do this but can do if it becomes necessary to avoid overflow of the leachate pond.

Phase 3 ditch washout….Gordon contracting will mobilize to Dolby Monday to make the ditch/washout repair. Gordon estimates the repair will take 5 days. I am not sure how weather will affect that schedule. Trevor Michaud from SME will be on site to observe/document Gordon's work.

Transition Station level control module….

As you might recall the level control module in the transition station failed several months ago. Due to the age of the level control parts have become difficult to locate/obtain. The repair part consists of an electronic module that communicates via phone line from the transition station to the leachate pond pump station. By way of a float switch in the transition station the module overrides activation of the leachate pond pumps if the leachate level in the transition station becomes too high. High levels in the transition station are an indicator of a downstream problem in the gravity main that connects to the East Millinocket WWTP. An undetected high level in the transition station would result in a leachate overflow at that location, which could go unchecked for an unknown amount of time. The site electrician was not able to repair the communication system on 1/4/24 and suspects either the phone line connecting the transition station to the pump station is damaged or the float switch in the transition station needs repair. Owing to the recent storms/power outages Consolidated Communications has been contacted to check the telephone line. If that is not the problem we will contact Stevens Electric to investigate the float switch. In the meantime there will be no auto shut off of the leachate pumps at the transition station, which is a risk, though a small risk based on operation history. We have dealt with this risk recently by visiting the transition station while the pumps were running (no problems observed), however this practice will become more cumbersome with snow starting to accumulate and may require

periodic plowing of a portion of the pipeline road (estimated 1500 feet) to allow the transition station to be checked when leachate pumping is occurring.

Please contact me if you have any questions….thank you.

Matt M

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Trevor Michaud

From: Matt Muzzy
Sent: Monday, January 8, 2024 3:45 PM
To: Vera A. Maheu (vera.a.maheu@maine.gov); Emerson, Daniel; William.Longfellow@maine.gov; Gould, Lane
Cc: Brian Pierce; Nicholas Thompson; Trevor Michaud
Subject: MH-2 and Phase 3 repair status - Dolby

All

As of 1500 hours the leachate pipeline had been repaired and is holding pressure. The Phase 3 washout repair is underway and expectations are to complete that work tomorrow. If Dolby gets rain Wednesday we will likely return to the site to check performance of the repair. Dolby currently has very little snow on it.

Fingers crossed for both…

Matt M

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Trevor Michaud

From: Matt Muzzy
Sent: Tuesday, January 9, 2024 11:43 AM
To: Vera A. Maheu (vera.a.maheu@maine.gov); Emerson, Daniel; William.Longfellow@maine.gov; Gould, Lane
Cc: James Goodwin; Brian Pierce; Nicholas Thompson; Trevor Michaud
Subject: Dolby update

Good morning….as of today….

The leachate pumps have been running steady and no leak in MH#2 has been observed. The pond level has been lowered well below the white line. Pumping will continue until winter levels are achieved and then pumps will go into automatic.

The washout on Phase 3 has been repaired. If the upcoming weather is rain we will return to look at how the repair stood up. A report will be prepared and delivered in the following days.

Stevens Electric has been contacted to visit the pipeline transition station and check the floats that communicate with the pump station. Weather permitting, Stevens may be there tomorrow.



Please let me know if any questions.

Thanks

Matt M

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info@sme-engineers.com
sme-engineers.com

MEMO TO: Matthew Muzzy, SME

FROM: Trevor Michaud, SME

DATE: February 14, 2024

SUBJECT: **MH-2 Repair Update**

On January 8, 2024, Republic Services arrived onsite to repair the leachate force main pipeline in MH-2. The coupling and pipe section within MH-2 was repaired and tested and no leaks were apparent during the testing. During a site visit made on January 12, 2024, SME personnel noted approximately 8 inches of water inside MH-2 measured from the rim that was not previously noted when MH-2 was repaired on January 8. A time-elevation table was created to monitor the slow leak. On February 8, 2024, SME personnel noted approximately 32 inches of water inside MH-2 measured from the rim. The water level inside MH-2 will continue to be monitored.



Photo 1 – Repaired forcemain coupling at MH-2. Photo taken on 1/8/2024.



Photo 2 – Approximately 32 inches of water measured inside MH-2. Photo taken on 2/8/2024.

Trevor Michaud

From: Matt Muzzy
Sent: Monday, February 26, 2024 8:06 AM
To: Maheu, Vera A; Brian Pierce; Longfellow, William; Gould, Lane
Cc: Nicholas Thompson; Trevor Michaud; James Goodwin
Subject: RE: Another Dolby Leak

Brian just filled me in (I have been on vacation)….sounds like he may have a plan to make a couple of modifications.

Hope to get something out in the next week or two for consideration … then implement this summer (when flows are down).

From: Maheu, Vera A <Vera.A.Maheu@maine.gov>
Sent: Monday, February 26, 2024 8:03 AM
To: Brian Pierce <bdp@smemaine.com>; Matt Muzzy <mmuzzy@smemaine.com>; Longfellow, William <William.Longfellow@maine.gov>; Gould, Lane <Lane.Gould@maine.gov>
Cc: Nicholas Thompson <nmt@smemaine.com>; Trevor Michaud <tjm@smemaine.com>; James Goodwin <James.Goodwin@mseco.com>
Subject: RE: Another Dolby Leak

Thanks Brian.

Vera A. Maheu
Environmental Specialist III
Bureau of Remediation and Waste Management
Maine Department of Environmental Protection
Cell 207-451-2294
vera.a.maheu@maine.gov

From: Brian Pierce <bdp@smemaine.com>
Sent: Thursday, February 22, 2024 11:51 AM
To: Maheu, Vera A <Vera.A.Maheu@maine.gov>; Matt Muzzy <mmuzzy@smemaine.com>; Longfellow, William <William.Longfellow@maine.gov>; Gould, Lane <Lane.Gould@maine.gov>
Cc: Nicholas Thompson <nmt@smemaine.com>; Trevor Michaud <tjm@smemaine.com>; James Goodwin <James.Goodwin@mseco.com>
Subject: RE: Another Dolby Leak

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.
Good Morning All,

Republic Services and SME were at Dolby today and repaired the leakage in MH-2.

The repair included replacing one of the “spool pieces” of pipe that was in the manhole as the old spool may have been too short.

The leachate pumping system is currently running with no signs of leakage. Mid-South engineering will check the manhole during site visits to monitor the repair.

Regards,

Brian D. Pierce, PE
Principal / Chief Engineer

SME
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ENGINEERS
Sevee & Maher Engineers, Inc.
4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Office: 207.829.5016
Cell: 207.807.1882
Fax: 207.829.5692

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From: Brian Pierce
Sent: Wednesday, February 21, 2024 9:22 AM
To: Maheu, Vera A <Vera.A.Maheu@maine.gov>; Matt Muzzy <mmuzzy@smemaine.com>; Longfellow, William <William.Longfellow@maine.gov>; Gould, Lane <Lane.Gould@maine.gov>
Cc: Nicholas Thompson <nmt@smemaine.com>; Trevor Michaud <tjm@smemaine.com>
Subject: RE: Another Dolby Leak

Good Morning All,

Republic services is still scheduled to visit the Dolby landfill tomorrow to fix the leakage in MH-2.

James Goodwin of Mid-South indicates that the water level in the leachate pond is still well below the white line and has only increased by .2 feet in the past two days. This should be sufficient volume for the next several days given the weather that is anticipated.

We will keep everyone posted as we know more.

Regards,

Brian D. Pierce, PE
Principal / Chief Engineer

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Cumberland, ME 04021
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From: Brian Pierce
Sent: Tuesday, February 20, 2024 7:34 AM
To: Maheu, Vera A <Vera.A.Maheu@maine.gov>; Matt Muzzy <mmuzzy@smemaine.com>; Longfellow, William <William.Longfellow@maine.gov>; Gould, Lane <Lane.Gould@maine.gov>
Cc: Gould, Lane <Lane.Gould@maine.gov>
Subject: RE: Another Dolby Leak

Good Morning All,

Republic Services can not make it to the site until Thursday.

As of yesterday the leachate level in the pond was at 2.5 feet below the white line indicating we should have sufficient storage volume for several days given the weather anticiapted.

James Goodwin of Mid-South will check the leachate pond daily to confirm that pond storage is sufficient.

Will keep everyone posted as we know more.

Regards,

Brian D. Pierce, PE
Principal / Chief Engineer

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From: Maheu, Vera A <Vera.A.Maheu@maine.gov>
Sent: Tuesday, February 20, 2024 6:58 AM
To: Matt Muzzy <mmuzzy@smemaine.com>; Longfellow, William <William.Longfellow@maine.gov>; Gould, Lane <Lane.Gould@maine.gov>; Brian Pierce <bdp@smemaine.com>
Cc: Gould, Lane <Lane.Gould@maine.gov>
Subject: RE: Another Dolby Leak

Thank you for the update. Please keep us advised of the progress made today.

Vera A. Maheu
Environmental Specialist III

Bureau of Remediation and Waste Management
Maine Department of Environmental Protection
Cell 207-451-2294
vera.a.maheu@maine.gov

From: Matt Muzzy <mmuzzy@smemaine.com>
Sent: Monday, February 19, 2024 1:53 PM
To: Longfellow, William <William.Longfellow@maine.gov>; Maheu, Vera A <Vera.A.Maheu@maine.gov>; Gould, Lane <Lane.Gould@maine.gov>; Brian Pierce <bdp@smemaine.com>
Cc: Gould, Lane <Lane.Gould@maine.gov>
Subject: Fwd: Another Dolby Leak

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FYI…..

I am on vacation this week… republic will give it another try.

We need to resolve this summer somehow

Sent from my iPhone

Begin forwarded message:

> **From:** Brian Pierce <bdp@smemaine.com>
> **Date:** February 19, 2024 at 8:42:45 AM EST
> **To:** Nicholas Thompson <nmt@smemaine.com>, Trevor Michaud <tjm@smemaine.com>, Matt Muzzy <mmuzzy@smemaine.com>
> **Subject: Another Dolby Leak**
>
> Good Morning Everyone,
>
> Jim Goodwin called a half hour ago to tell me that MH2 is leaking again and he has shut the pumps off. He still has 2.5 feet to the white line.
>
> I contacted Republic Services and they will be on site at 8:00 am tomorrow morning to repair. Trevor (who is at Millinocket sampling sludge anyway.) will be there to oversee the repairs.
>
> I Will keep everyone updated as things progress.
>
> I have not contacted BGS or MEDEP.
>
> Regards,
>
> Brian P
>
> Sent from my iPhone

Trevor Michaud

From: Matt Muzzy
Sent: Tuesday, February 27, 2024 10:33 AM
To: William.Longfellow@maine.gov; Lane Gould (Lane.Gould@maine.gov); Vera A. Maheu (vera.a.maheu@maine.gov)
Cc: Brian Pierce; Nicholas Thompson; Trevor Michaud
Subject: status of Manhole #2 leak

Jim Goodwin checked MH#2 today and say no signs of leakage….apparently last week's repair is working for the present.

Will keep you advise for any changes.

Thanks

Matt M

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MEMO TO: Matthew Muzzy, SME

FROM: Trevor Michaud, SME

DATE: March 14, 2024

SUBJECT: **MH-2 Repair Update**

On March 13, 2024, SME personnel (Trevor Michaud) was onsite to observe MH-2. At the time of arrival, MH-2 had leachate leaving the manhole and going onto the roadway headed towards the pumphouse. Trevor Michaud (SME) turned the leachate pond pumps off to prevent additional leachate from leaving MH-2. SME contacted Maine Bureau of General Services (BGS) and received approval to set up a temporary pump inside MH-2 to maintain a low leachate level within the manhole while allowing the leachate pond pumps to continue to operate until a more permanent solution can be identified.

Adam Qualey of East Millinocket, Maine was contacted to obtain a pump with a float attachment that could be placed inside the manhole. On March 14, 2024, Adam Qualey and Trevor Michaud set up the pump inside MH-2 and ran a discharge hose across the road into the leachate pond. Once the leachate level inside the manhole was reduced to where the pump would automatically shut off, the leachate pond pumps were turned on so the leak inside MH-2 could be observed. After the leachate pond pumps were turned on, SME observed the leachate level rise inside the manhole long enough to see the pump automatically turn on. The pump was able to keep up with the leak inflow. Adam Qualey and Jim Goodwin of Mid-South Engineers will continue to monitor MH-2 daily.



Photo 1 – Leachate overflowing from MH-2 on March 13, 2024.



Photo 2 – Leachate level within MH-2 on the morning of March 14, 2024. Leachate in MH-2 leaks back into pipeline to leachate pond when pumps are not running.



Photo 3 – Leak at coupling connection.



Photo 4 – Pump with float attachment placed within MH-2.



Photo 5 – Hose from pump within MH-2 headed towards leachate pond.



Photo 6 – Hose from pump within MH-2 outlet at leachate pond.

Trevor Michaud

From: Matt Muzzy
Sent: Tuesday, March 19, 2024 9:35 AM
To: William.Longfellow@maine.gov; Lane Gould (Lane.Gould@maine.gov); Vera A. Maheu (vera.a.maheu@maine.gov); Emerson, Daniel
Cc: Nicholas Thompson; Brian Pierce; Trevor Michaud; James Goodwin
Subject: Update on Dolby spring leachate.

Good morning,

As of 0900 hrs on 3/19/24 all appears to be going well regarding spring leachate flows at Dolby.

The leachate pond level is being maintained below the white line.

The temporary pump in MH-2 is keeping up with the leaky clamp connection.

Flow into CB#3 is much lower than typically observed this time of year. In previous year's the pipes flowing into in CB#3 would typically be below water and a muffled roar would be coming from the catch basin opening.

Plan is to keep the leachate pumps running in automatic mode (which alternates the pumps daily).

So far so good….

Matt M

Leachate pond on 3/19/2024



CB#3 on 3/18/24



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APPENDIX G

POST-CLOSURE MONITORING AND MAINTENANCE PLAN

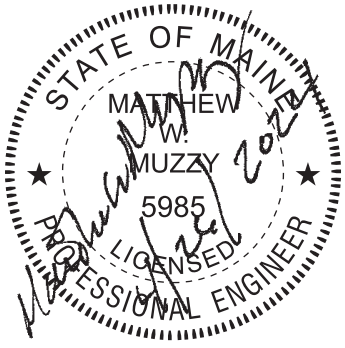
SME
SEVEE & MAHER
ENGINEERS

POST-CLOSURE MONITORING AND MAINTENANCE PLAN DOLBY LANDFILL FACILITY EAST MILLINOCKET, MAINE

Prepared for

MAINE BUREAU OF GENERAL SERVICES

Augusta, Maine



April 2022
Revised April 2024

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P.O. Box 85A
Cumberland, Maine 04021
Phone: 207.829.5016 smemaine.com

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

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SEVEE & MAHER ENGINEERS

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POST-CLOSURE MONITORING AND MAINTENANCE PLAN
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

1.0 INTRODUCTION AND PURPOSE

This Post-Closure Monitoring and Maintenance Plan (PCMMP and/or Plan) was prepared for the Dolby Landfill Facility (Facility) in general accordance with Chapter 401, Section 6 of the Maine Department of Environmental Protection's (MEDEP) Solid Waste Management Rules. This Plan is intended for use by the Maine State Department of Administrative and Financial Services (DAFS) - Bureau of General Services (BGS), BGS' post-closure landfill operator (i.e., the landfill operator), and MEDEP for the post-closure care of the Facility. Given that the Dolby Landfill Facility is closed to waste placement, this Plan also serves as the Facility's Operations Manual.

DAFS owns Dolby Landfill Facility and BGS is responsible for the facility's overall operation. The Facility is located approximately 2-1/2 miles northwest of East Millinocket, Maine on Route 157. The Facility consists of three landfills: Dolby I, Dolby II, and Dolby III. Each landfill contains non-hazardous solid wastes generated from pulp and papermaking activities, woodland operations, biomass burning, and general mill and municipal trash collection. A copy of the MEDEP Board Order approved Solid Waste License - Final Closure (#S-000796-WO-AO-N) for the Facility is provided in Appendix A.

The Dolby II and Dolby III Landfills are contiguous and have a combined area of approximately 130 acres. The Dolby I Landfill has an area of approximately 20 acres and is located approximately 0.25 miles south of Dolby II and III. Figure 1-1 shows the location of the Facility and the landfill areas relative to major local landmarks. In the summer of 2016, Phase 1 of the Dolby III cover upgrade was completed. Phase 2 of the cover upgrade was completed in 2022 and Phase 3 was completed in 2023. After completion of Phase 3, approximately 10.5 acres (i.e., Phase 4) of Dolby III remain for cover upgrade and is expected to be completed in 2024. The cover upgrade includes placement of a geomembrane over the entire Dolby III Landfill surface.

Final closure of the Dolby II Landfill occurred in 1999 by placement of a soil cover over that waste deposit. The Dolby I Landfill was closed more than 30 years ago with a soil cover and is not subject to the requirements of this Plan unless specifically stated.

The Facility is supported by a lined leachate storage pond, a leachate pump station, and a leachate transport pipeline. Leachate and groundwater discharge from the Dolby II and Dolby III Landfill areas are collected by a system of perforated pipes and connecting manholes located along the perimeter of Dolby II and Dolby III, and by a leachate collection layer beneath a portion of the Dolby III waste deposit. The collected groundwater and leachate flows to the leachate storage pond (henceforth, the leachate pond)

and from there the leachate is pumped via the pump station and leachate transport pipeline to the Town of East Millinocket's wastewater treatment facility (approximately 3.25 miles away). Figure 1-1 shows the general location of the leachate transport pipeline and the Town's wastewater treatment plant. Appendix B includes engineering drawings for the leachate management infrastructure.

A network of groundwater monitoring wells and surface water monitoring points are in place at the Facility and are routinely sampled and analyzed for water quality. The water quality monitoring and follow-up reporting is performed in accordance with an existing Environmental Monitoring Plan for the Facility prepared in 2012 (i.e., the 2012 EMP). The EMP is on file with the MEDEP and BGS.

The purpose of this PCMMP is to provide the landfill owner and the landfill operator with written guidance for the monitoring and maintenance of the Dolby Landfill Facility during its post-closure life. The remainder of this Plan describes responsibilities related to: performance of inspections and maintenance of the Facility; site safety and emergency procedures; leachate management; water quality monitoring; and general management of the Facility. All persons assisting with the post-closure activities for the Dolby Landfill Facility must be familiar with the contents of this Plan and the need to maintain and monitor the Facility's environmental performance during the post-closure period.

A copy of this Plan and other relevant Plans for the Facility are on file with BGS and are available upon request. This Plan will be revised as necessary; all changes must be coordinated through BGS and no change can be implemented until approved by the MEDEP.

NOTES

1. BASE MAP FROM GOOGLE EARTH PHOTO DATED SEPTEMBER 16, 2022.
2. EXISTING PROPERTY BOUNDARY FROM PLAN ENTITLED "BOUNDARY SURVEY OF A PORTION OF THE KATAHDIN PAPER COMPANY LLC PROPERTY, EAST MILLINOCKET, MAINE, VOLUME 8702, PAGE 146 FOR KATAHDIN FOREST MANAGEMENT" PREPARED BY PLIGSA & DAY LAND SURVEYORS, DATED MAY 31, 2011.
3. MANHOLE PIPE LOCATIONS FROM SQUAW BAY CORPORATION DRAWING DATED 4/25/95. LOCATIONS ARE APPROXIMATE.

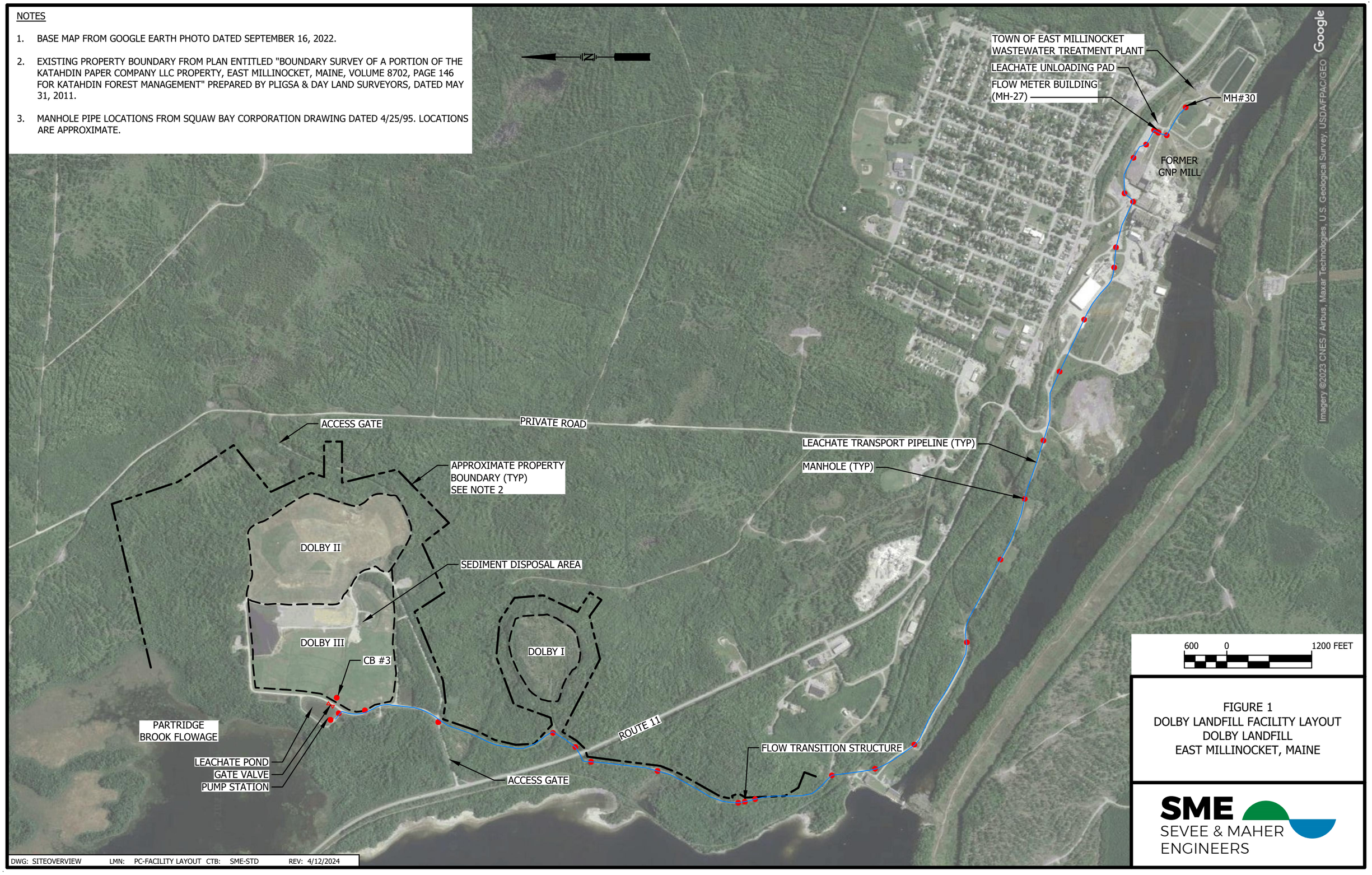


FIGURE 1
DOLBY LANDFILL FACILITY LAYOUT
DOLBY LANDFILL
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER ENGINEERS

DWG: SITEOVERVIEW LMN: PC-FACILITY LAYOUT CTB: SME-STD REV: 4/12/2024

\\Neserver\cfs\Kpc\DotAC\AD\SITEOVERVIEW.dwg, PCMMP FIG 1-1, 4/12/2024 8:57:04 AM, bwb

2.0 SITE ACCESS AND SECURITY

The Dolby Landfill Facility has two access ways for vehicles. The main access is a combination paved and gravel roadway connecting to Highway Route 157, approximately 0.3 miles away from the southwestern most point of the Dolby III Landfill. A secondary, lesser-used, access road to the Facility exists near the southeastern-most point of the Dolby II Landfill. The secondary access road consists of a 0.4-mile-long gravel roadway that connects to a network of privately owned woodland roadways. Both the main and secondary access roads are gated and locked. The main access road is plowed and sanded during the winter to provide vehicle access to the leachate pond and pump station.

The perimeter of the leachate pond is surrounded by a chain link fence and locking gate. The pump station control building (next to the leachate pond) has a locking steel door and the hatchway to the pump station's wet well is also lockable. A Conex Box was placed beside the pump station in 2022. The Conex Box is used to store various equipment for maintaining the leachate pond pump station and leachate transport line. The Conex Box replaced the office trailer that was permanently removed from the Landfill Facility in 2022. The Conex Box has a lockable door. The leachate pond, pump station, and Conex Box are within the overall limits of the gated/locked landfill Facility.

3.0 SITE SAFETY

All personnel working at the Dolby Landfill Facility will follow applicable state and federal safety and health rules and regulations. Should a medical and/or ambulance emergency occur at the Facility, first aid services are available in the nearby Town of East Millinocket and can be requested by dialing 911.

This PCMMP does not constitute a Health and Safety Plan for activities performed at the Dolby Landfill Facility. All persons performing maintenance and/or monitoring at the Facility will be responsible for having and maintaining their own health and safety plans and shall comply with all applicable state and federal safety and health rules and regulations.

3.1 Safety Equipment

Routine safety equipment at the site includes such items as first aid kits and fire extinguishers. Specialty equipment includes explosive gas meters, hydrogen sulfide (H2S) meters, and lockout – tagout equipment. All vehicles associated with construction work being performed at the Facility will be equipped with a first aid kit and fire extinguisher; in addition, a first aid kit is available at the landfill office trailer. Specialty breathing apparatus and air monitoring equipment will be used for entry into any confined space associated with the leachate management system. Confined space entry procedures and use of the associated specialty equipment will be limited to OSHA trained personnel only.

On occasion, odors can be emitted from gas vents installed in the landfill cover system and/or from the landfill surface. When such odors are detected, personnel/equipment should be moved away from the odor and the landfill operator should be notified. The landfill operator will arrange for measurement of hydrogen sulfide, explosive gas, and other potentially odorous compounds in the air so that appropriate safety action can be taken.

Cell phones and/or two-way radios may be used by all personnel working at the Facility for timely communication of emergencies.

3.2 Fire Prevention

In the closed condition, the landfill surfaces are mostly open grassland. Because locked gates control vehicular traffic to the Facility and because public access is limited, risk of an accidental grass fire is low. Common practice is to keep vehicles off the landfill surface except for mowing and cover repair. Should a fire occur, firefighting services are available from the Town of East Millinocket by dialing 911.

3.3 Emergency Notifications

Any emergency condition occurring at the Dolby Landfill Facility will be reported on a same-day basis to the landfill operator. The landfill operator will in turn notify BGS and MEDEP within 48-hours.

4.0 LANDFILL FACILITY INSPECTIONS

Post-closure inspection of the Dolby Landfill Facility will include semi-annual site visits for general inspections and periodic aerial surveys of the landfills to evaluate changes in cover settlement. The general inspections will consist mainly of visual observations of the Facility and are typically completed in the early summer and late fall. Specific items observed and evaluated as part of each general inspection include:

- Erosion and erosion control systems on and around the landfills;
- Condition of the vegetative cover;
- Condition of the drainage systems, ditches, sedimentation ponds, and other stormwater controls;
- Access roads and gates;
- Leachate storage pond, pump station, and leachate transport system;
- Visible sections of the leachate transport pipeline and manholes; and
- Safety equipment and signage.

Each general inspection will also include completion of an observation report describing the condition of items listed above. A sample observation report is included in Appendix C. Each completed observation report will be forwarded to BGS for review and subsequent submittal to MEDEP.

Every three years, one general inspection will also include an observation report describing the condition of the remaining perimeter leachate transport catch basins. A sample observation report is included in Appendix C. Each completed observation report will be forwarded to BGS for review and subsequent submittal to MEDEP and included in that year's annual report.

The periodic aerial surveys will include review of recent landfill surface topography to help detect areas of total and differential settlement that could suggest potential areas of future runoff ponding and/or later slope movement.

Each settlement evaluation will include completion of a report describing the changes observed from the aerial survey and any related comments or recommendations pertaining to the landfill's geotechnical performance. The settlement evaluation report will be forwarded to BGS for review and subsequent submittal to MEDEP and included in the annual report.

The semi-annual general site inspections will occur three times per year while the Dolby III cover upgrade is being implemented and until the permanent vegetative cover for Dolby III is established.

5.0 STORMWATER INSPECTIONS AND MONITORING

Formal stormwater inspections are no longer performed at the Dolby Landfill Facility. In 2019, MEDEP issued a Notice of Termination to BGS in 2017 indicating the then in-place Multi-Sector General Permit for the Dolby Landfill was no longer needed (MEDEP to BGS letter dated September 20, 2019). Informal stormwater inspections are conducted weekly by landfill personnel operating the leachate pond pump station and as part of the general inspections conducted for the Dolby Landfill Facility each year.

6.0 LEACHATE MANAGEMENT

The Dolby Landfill Facility includes buried piping that collects leachate and groundwater from the perimeter of the Dolby II and Dolby III Landfills, as well as piping that collects leachate and groundwater from a portion of the Dolby III base area. Leachate (including groundwater) collected by the piping system flows to the on-site, lined, leachate storage pond. Leachate is pumped from the leachate pond through a transport pipeline to the Town of East Millinocket's wastewater treatment plant. The leachate pumping is measured on an ongoing basis. The leachate quality is monitored three times per year as described in Section 7.0 of this Plan.

6.1 Leachate Pond, Pump Station, and Transport Pipeline

The leachate pond was constructed in 2007 and includes primary and secondary High-Density Polyethylene (HDPE) liners with a geocomposite leak detection layer between them. A geosynthetic clay liner (GCL) underlies the secondary HDPE liner and is in turn underlain by a 12-inch-thick compacted clay liner. There is an underdrain system for control of potential groundwater uplift pressures below the compacted clay liner. Leachate flows into the leachate pond through a 24-inch HDPE inlet pipe and leachate flows out of the pond (to the pump station wet well) through a 12-inch HDPE outlet pipe. Engineering drawings for the leachate pond and associated infrastructure are provided in Appendix B.

The following tables present the leachate pond's volume as related to various water depths and features of the pond. The maximum capacity of the leachate pond can be achieved by damming the pond's emergency spillway with sandbags.

TABLE 6-1

LEACHATE POND VOLUME

Leachate Depth Relative to Pond Bottom (ft)	Leachate Surface Elevation (ft)	Approximate Leachate Volume in Pond (gallons)
1	345.0	198,000
2	346.0	619,000
3	347.0	1,081,000
4	348.0	1,578,000
5	349.0	2,109,000
5.5	349.5	2,389,000
6.5	350.5 (Emergency Spillway Invert)	2,978,000
7.5	351.5 (Top of Pond Liner)	3,616,000

TABLE 6-2

LEACHATE POND FEATURE AND CORRESPONDING LEACHATE POND VOLUME

Pond Feature	Approximate Leachate Volume in Pond (gallons)	Volume Remaining Relative to Emergency Spillway Invert (gallons)
Bottom of 24-inch pond inlet pipe	178,000	2,800,000
24-inch pond inlet pipe flowing half full	576,000	2,403,000
Top of 24-inch pond inlet pipe	1,034,000	1,944,000
Painted (white) line 2 feet below emergency spillway invert	1,838,000	1,140,000
Emergency spillway invert	2,978,000	0

During non-freezing weather, the leachate pond level is maintained as low as practical to maximize the holding capacity of the pond in the event of an extreme precipitation event. It should be noted that the leachate pond was sized to store leachate generated by the Facility when it was actively operating. At that time, runoff from the open waste areas flowed directly to the leachate pond. Leachate generation by the closed Facility is expected to be significantly less than that when the Facility was open.

A two-foot freeboard line, as measured from the invert of the emergency spillway, is painted (white color) on the leachate pond's primary liner and the leachate level in the pond should not go above the white line during normal operation. In the event the freeboard line becomes submerged, the landfill operator will contact BGS, who will in turn contact MEDEP. BGS and MEDEP will then decide if leachate trucking to the Town of East Millinocket's wastewater treatment plant is needed to avoid leachate potential pond overtopping.

During freezing weather, the leachate level in the leachate pond should be maintained approximately 6-inches above the top of the 24-inch diameter inlet pipe to help protect the pond's inlet and outlet pipes from ice damage.

6.2 Leachate Pump Station and Transport Pipeline

A leachate pump station and wet well are positioned adjacent to the leachate pond. Two pumps in the wet well convey leachate through approximately 6,500 linear feet of 8-inch diameter HDPE force main to a transition structure (i.e., high-point structure). From the transition structure, the leachate flows through approximately 13,300 linear feet of 10-inch diameter HDPE gravity main (including an inverted siphon) to the Town of East Millinocket's wastewater treatment plant. The leachate pump station includes a flow meter and mechanical chart recorder (circular paper) to document the volume of leachate pumped and the level of leachate in the wet well. Figure 1-1 shows the location of the leachate pump station and transport pipeline.

The pump station is equipped with two 600 gallons per minute (gpm) submersible pumps that operate in parallel. One pump is activated/deactivated by floats that sense the leachate pond level; the other pump serves as a standby pump that is manually operated when high leachate pond inflows are occurring. The leachate pumps are equipped with running time meters and pump discharge pressure meters. The running time and discharge pressure are also recorded by the pump station's chart recorder and are used to estimate the leachate volume pumped. In the event the measured and calculated leachate flow rates vary by more than 20 percent, the landfill operator will investigate the cause of the volume discrepancy, which, among other things, could be a sign of leakage from the leachate transport pipeline. The leachate pumps are known as Pump #1 and Pump #2; Pump #1 was rebuilt in 2022 and Pump #2 was rebuilt in 2013.

A leachate flow meter is also located in the gravity main, approximately 600 feet upstream of East Millinocket's wastewater treatment plant (approximately 3.2 miles from the landfill pump station). This flow meter also uses a circular chart recorder. The circular paper charts at both recorder locations are typically changed by the landfill operator at 3- to 4-day intervals. Data from the completed charts are reduced and tabulated by the landfill operator.

The flow meter near the East Millinocket wastewater treatment plant is contained in a wooden storage shed. The shed is heated during the cold weather and needs to be checked routinely for freezing interior temperatures. The shed has a lower level that requires confined space entry if accessed. A leachate dumping pad is located adjacent to the south and west sides of the shed. The leachate dumping pad is connected by a gravity pipeline to the leachate transport line. The leachate dumping pad is used to empty tank-trucks when leachate hauling from the Dolby Facility is necessary.

6.3 Leachate Pond Leak Detection Monitoring

A leak detection layer exists between the primary and secondary leachate pond liners. A stone-filled collection sump is positioned at the south (i.e., low) end of the leak detection layer. All liquid collected in the leak detection layer drains to the sump. A 6-inch pipe connects the sump to the pump station. The 6-inch pipe contains a small submersible pump that is activated by an electronic water level sensor in the sump. Flow from the submersible pump (i.e., flow from the leak detection layer sump) is recorded before being discharged to the wet well. The flow rate from the leak detection pump, flow total, sump water level, and pump running time are stored by a programmable control panel housed in the pump station. The stone thickness in the leak detection sump is 12 inches. The leak detection pump activates when the water level in the sump is at 10 inches. The pump turns off when the sump water level reaches zero.

The leak detection sump level and pump activity are reviewed and recorded by the landfill operator each time the pump station chart recorder is changed. Should the leak detection pump activate, BGS will be

notified. The landfill operator will record flow measurements from the leak detection layer and determine if the Action Leakage Rate (ALR) (i.e., 20 gallons per acre per day [gpad]), for the leachate pond has been exceeded. Small diameter tubing is also connected to the leak detection sump to allow sampling and analysis of the leak detection water, if desired.

In the event the leakage into the leak detection layer exceeds the Action Leakage Rate (ALR), BGS will notify MEDEP. As soon as weather conditions allow, the landfill operator will drain the leachate pond and visually inspect the surface of the primary liner and repair any damaged areas that could have contributed to the leak.

The ALR represents the rate of leakage into the leak detection layer that will trigger interaction between BGS and the MEDEP to determine the appropriate response action. An Action Leakage Rate/Response Action Plan for the leachate pond is provided in Appendix D to this Plan. In the event an ALR response action occurs, a follow-up report will be prepared for submission to the MEDEP; the report will summarize the results of the response action and will include recommendations relative to future leak detection monitoring.

In 2021, the ALR for the leachate pond was exceeded. As follow-up to the exceedance, the leachate pond primary liner was cleaned and inspected, the pipe penetrations into and out of the leachate pond were inspected, re-caulked, and re-banded. Subsequent leak detection monitoring indicated the ALR continued to be exceeded and MEDEP was alerted to that condition. The ALR exceedance continued in 2022 and MEDEP was advised of the condition. As of 2012, water collected in the leachate pond underdrain system was (and continues to be) pumped to the leachate pond pump station for subsequent treatment as leachate. In 2021, water quality monitoring of the underdrain system was initiated using the underdrain manhole as the sampling point. Water quality monitoring of the underdrain in 2023 showed presence of several constituents common to leachate.

6.4 Leachate Pond Leak Detection Monitoring

The leachate pond liner system is underlain by an underdrain layer that discharges to a manhole located west of the leachate pond's perimeter. A float actuateor pump is positioned in the manhole and pumps the underdrain water to the leachate pond's pump station as needed to maintain low water levels in the underdrain layer. The underdrain is important to limit occurrence of water pressures below the liner system. The underdrain should be operational at all times. Typically, a replacement underdrain pump is stored in the Conex box beside the leachate pond pump station. It is historical that the underdrain pump be operational when leachate levels in the pond are purposely lowered (e.g. for non-freezing weather and for leachate pond cleaning).

6.5 Leachate Pond Level Increase Above Two-foot Freeboard Line

The following procedures will be taken to control the leachate level in the leachate pond if the two-foot freeboard line (i.e., the white line) is exceeded. It should be noted that these procedures are an adaptation of similar procedures set forth in the 2012 Operating Manual for the Dolby III Landfill on file with BGS (SME, 2012). These procedures consider that during the post-closure period, it is very unlikely that a weather event will occur to cause the two-foot freeboard line to be exceeded. The leachate pond was originally sized to contain runoff from multiple acres of active waste area, which is not the case during post-closure.

- In preparation for forecasted heavy rain or snowmelt, the landfill operator will clear all debris from the leachate pond's outlet pipe rack/screen and operate the leachate pumps manually until the pond is dropped to an acceptable level. Care will be taken to avoid the running the leachate pumps dry and risking possible pump damage.
- The landfill operator will contract a tank-truck operator to mobilize sufficient tank-trucks and pumps to remove excess leachate from the leachate pond and haul the leachate to the Town of East Millinocket's wastewater treatment plant. As of 2017, Thornton Construction of Milford, Maine is on call for leachate hauling. Thornton Construction can be reached via cell at 207.827.0352. Standard practice is to contact Thornton Construction (or similar) annually before the spring thaw and confirm that leachate hauling assistance is available. The Town of East Millinocket's wastewater treatment plant operator is also contacted before the spring runoff to verify the procedures necessary for unloading the leachate tank-trucks. The contact phone number for the wastewater treatment plant is 207.447.1452.
- If potential exceedance of the two-foot freeboard line becomes apparent, the landfill operator will monitor the leachate pond level at least four times per day to determine if leachate hauling is necessary. As part of the monitoring, sandbags can be placed in the emergency spillway to block potential overflows. Closing the emergency spillway with sandbags should be a last resort to prevent the leachate pond from overtopping and should not be used to avoid leachate hauling.
- As soon as the leachate level reaches the painted freeboard line (located two feet below the invert of the emergency spillway), the landfill operator will contact BGS to request initiation of leachate hauling. BGS and the landfill operator will collectively decide if mobilization of leachate hauling equipment is necessary. Once initiated the leachate hauling will continue as long as necessary to reach the end of the runoff event and will not be terminated until the leachate level in the pond is at least 6 inches below the invert of the emergency spillway and falling.
- If the leachate pond level increase cannot be controlled by pumping and hauling, measures will be implemented to also pump leachate into the #3 sediment pond. For this action to occur, the outlet for the #3 sediment pond will first be blocked in order to retain as much leachate as possible in the #3 sediment pond before overtopping occurs. Once the leachate level in the leachate pond

is at least 6 inches below the invert of the emergency spillway, and falling, the water in the #3 sediment pond will be pumped back to the leachate pond. BGS and MEDEP will identify any mitigation necessary for the #3 sediment pond once all leachate has been removed from it.

6.6 Leachate Pond Overflow

In the event of a leachate pond overflow and/or when an overflow of the #3 sediment pond occurs (when that pond is being used to temporarily hold leachate), the following measures can be taken to hasten the stoppage of overflow:

- Increase the number of hauling vehicles and the haul frequency

  The leachate pumping via the transport pipeline and leachate hauling can be performed on an around-the-clock schedule if necessary. Additional tank-trucks for hauling leachate may need to be mobilized. The expanded hauling schedule will be initiated prior to any leachate pond overflow or #3 sediment pond overtopping.

- Visual inspections and specific conductivity monitoring

  All areas overtopped by leachate (i.e., the emergency spillway and #3 sediment pond) will be routinely inspected during and after the overtopping to identify areas of potentially immediate erosion threats and/or structural deficiencies. If an immediate threat is noted, corrective measures will be taken. If leachate is released to the environment, frequent specific conductivity measurements of the outflow will be recorded to assist with evaluation of any potential impact.

- Shut-off the inflow to the leachate pond via the gate valve located between the leachate pond and catch basin CB #3.

  This measure will provide some temporary storage of leachate within the landfill's leachate collection piping but will cause a potential risk to slope stability of the Dolby III Landfill's cover system, especially along the Landfill's western toe. This measure should be the last to be implemented.

6.7 Pump Station Failure

In the event of a pump station failure, leachate can be stored in the leachate pond. If the pump station failure will be for an extended period of time or, if the pond level exceeds the two-foot freeboard line, portable pumps and leachate hauling trucks can be mobilized to maintain the leachate pond level below the two-foot freeboard line.

6.8 Leachate Pond Cleaning and Pump Station Maintenance

Sediment collected in the leachate pond will be periodically removed and the pond liner will be visually inspected. Pending completion of the cover upgrade for the Dolby III Landfill it is expected that sediment accumulation in the leachate pond will become minimal, thereby making the need for frequent cleaning and sediment removal unnecessary. When leachate pond cleaning is necessary, the activities will include wash down of the leachate pond's primary liner and close visual inspection of the primary liner's surface for possible points of leakage. Care will be taken during the leachate pond cleaning to avoid causing any damage to the liner. The leachate pond liner inspection will also include the inlet and outlet pipe penetrations.

The leachate pump station wet well will be cleaned and inspected at the same time as the leachate pond. A report of the leachate pond and wet well cleaning, with photographs and recommendations, will be prepared and submitted to BGS.

Periods of low leachate generation and leachate pond cleaning often provide good opportunities to perform pump station maintenance. At those times, the leachate pumps and their associated equipment will be inspected for wear and necessary parts replaced. As of April 2022, the leachate pumps are Flygt Model CP-3170-MT submersible pumps. The #2 pump was rebuilt in 2013 and the #1 pump was rebuilt in 2022. The #1 pump is located closest to the pump station control house. Each pump has an output of approximately 600 gallons per minute (gpm) and when operated simultaneously have a combined of approximately 700 gpm.

CAUTION: Anyone working in the pump station wet well must follow confined space entry procedures.

6.9 Leachate Transport Pipeline Cleaning

The leachate transport pipeline from the leachate pond to the East Millinocket wastewater treatment plant will be cleaned when the combined pumping flow rate in the pipeline drops below 450 gpm. A report of the pipeline cleaning will be prepared and submitted to BGS. Engineering drawings for the leachate transport pipeline are presented in Appendix B.

7.0 ENVIRONMENTAL MONITORING

Environmental Monitoring for the Dolby Landfill Facility during the post-closure period will consist of sampling and analysis of groundwater, surface water, leachate, and landfill gas at a number of existing monitoring points. The environmental monitoring is used to evaluate performance of the Facility relative to potential threats to public health and safety as well as threats to the environment. The Environmental Monitoring Plan (2012 EMP) for the Dolby Landfill Facility was revised in March 2023 and is on file at MEDEP and BGS. Any changes to the EMP will be approved by MEDEP before implementation.

7.1 Groundwater, Surface Water, and Leachate Monitoring

Twenty-one groundwater monitoring locations, six surface water locations, three leachate monitoring locations, and the leachate pond underdrain are routinely sampled and analyzed at the Dolby Landfill Facility. The monitoring points are listed by identification code in Table 7-1 and their site locations are shown on Figure 7-1. The EMP describes the frequency, methods, materials, chemical parameters, analyses, and reporting associated with sampling and analysis of the monitoring points. The underdrain sampling point (i.e., UDLP) was added in 2021 and follows the same monitoring schedule and parameter list as the monitoring wells.

TABLE 7-1

WATER QUALITY MONITORING LOCATIONS

GROUNDWATER MONITORING WELLS

DOLBY III

MW-107A	MW-304A	MW-402A
MW-301	MW-304B	MW-402B
MW-302B	MW-401A	
MW-302C	MW-401B	

DOLBY II

MW-104B	MW-205B	MW-303B
MW-202AR	MW-206A	
MW-202B	MW-206B	
MW-205A	MW-303A	

DOLBY I

MW-103	MW-113

SURFACE WATER SAMPLING LOCATIONS

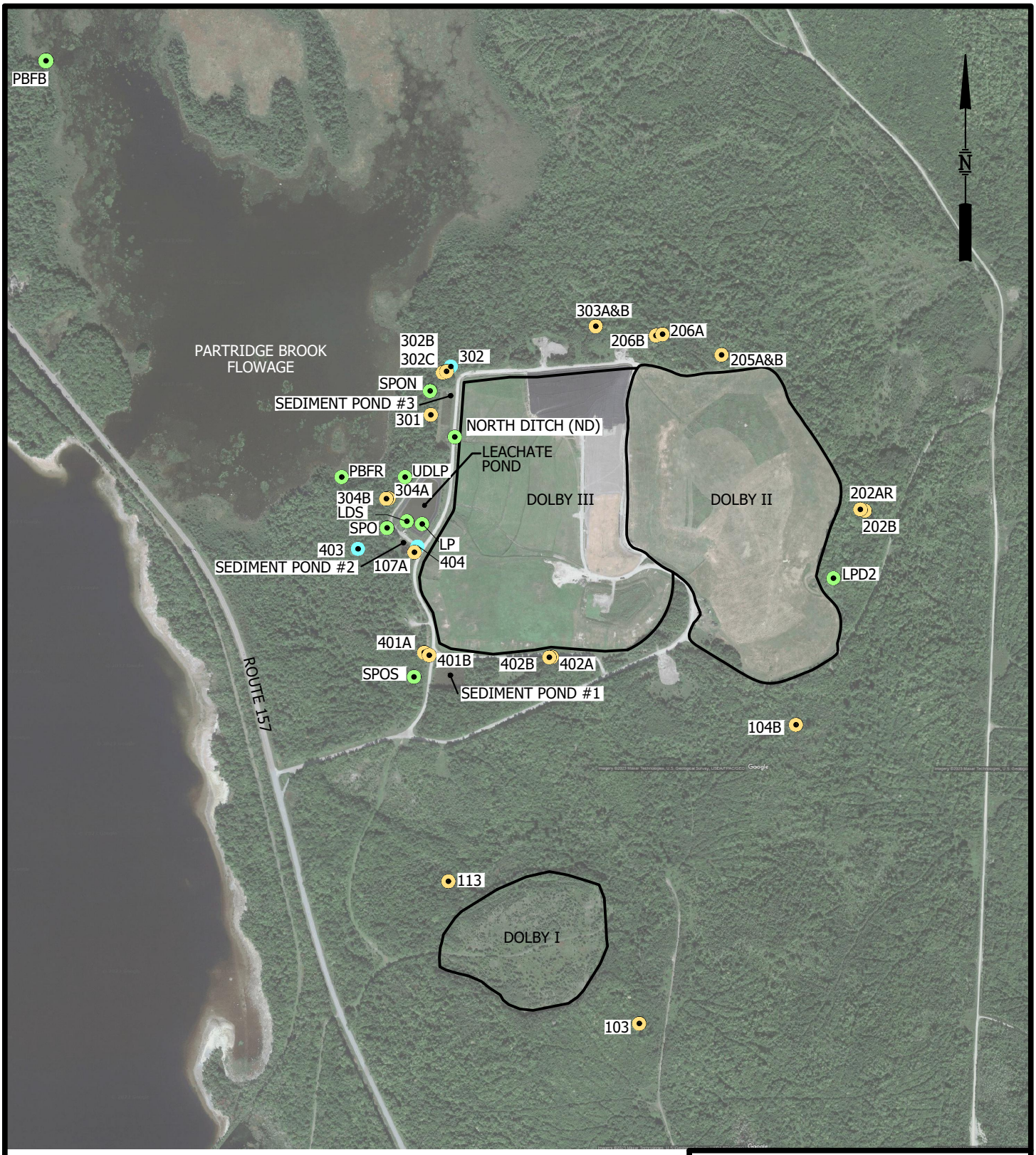
PBFB Partridge Brook Flowage – Background
PBFR Partridge Brook Flowage – Revised location beginning 2012
ND North Ditch
SPO Siltation Pond Outlet
SPON Siltation Pond North
SPOS Siltation Pond South

UDLP – Underdrain for leachate pond (collected from manhole on the western side of the leachate pond).

FIELD PARAMETERS from MW – 103 and MW – 113, which are monitoring wells associated with Dolby I

LEACHATE SAMPLING LOCATIONS

LP Leachate Pond South of Dolby III
LPD2 Leachate Pond East of Dolby II
LDS Leachate Pond Leak Detection Sump



AERIAL PHOTO DATED SEPTEMBER 16, 2022

LEGEND

- GROUNDWATER WELLS
- SURFACE WATER SITES
- PIEZOMETER

500 0 1000 FEET

DWG: AERIAL-2008 LMN: PC-WAT SAMPL SITES CTB: SME-STD.CTB REV: 4/12/2024

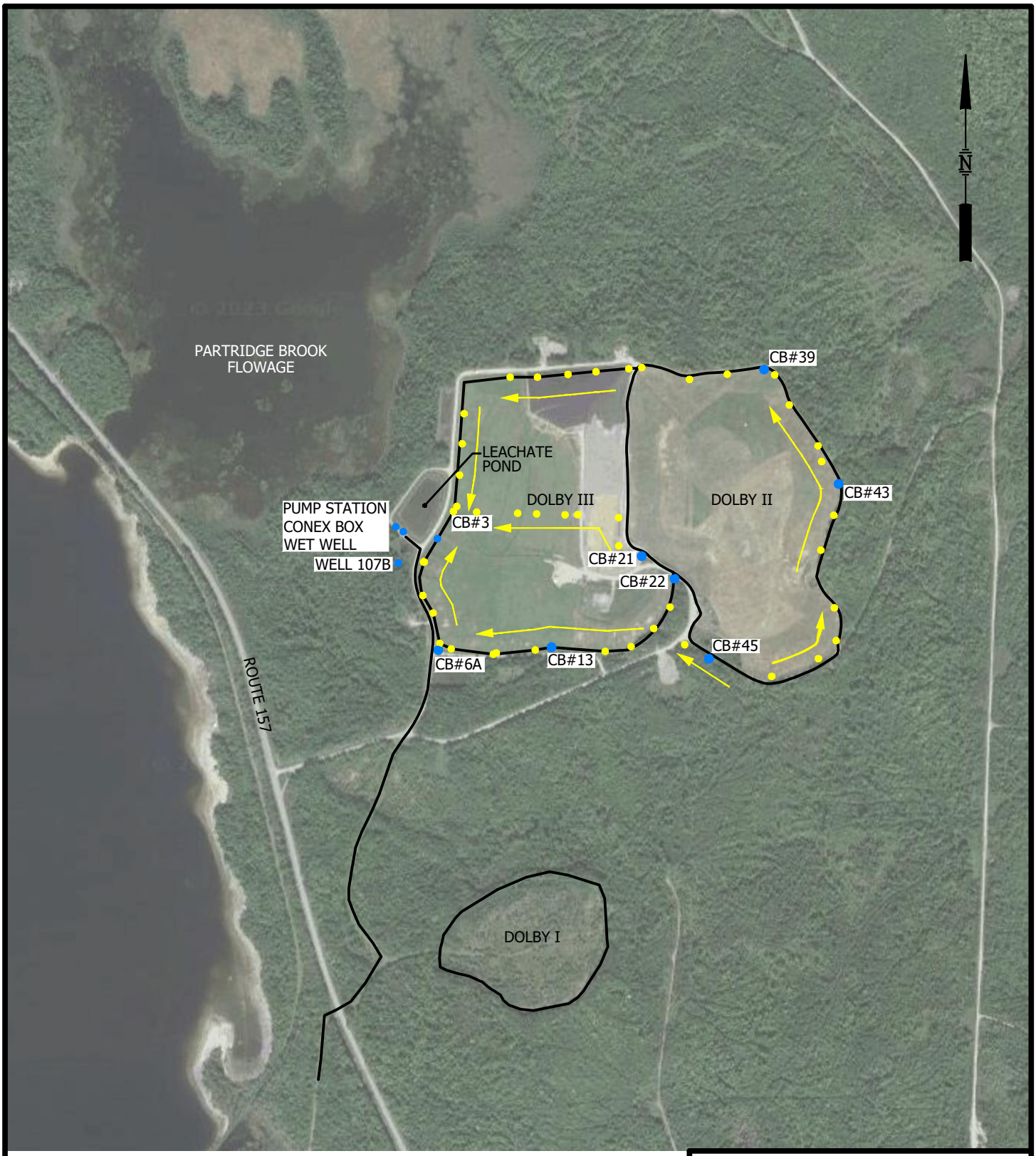
FIGURE 7-1
WATER QUALITY MONITORING LOCATIONS
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER ENGINEERS

\\Nserver\cfs\Kpci\Dol\ACAD\WaterSampleSites\Aerial-2008.dwg, PCMMP FIG 7-1, 4/12/2024 8:53:57 AM, bwb

7.2 Landfill Gas Monitoring

Manhole, enclosed surface structures, and a former groundwater monitoring well are routinely monitored for the presence of landfill gas (i.e., hydrogen sulfide and explosive gas) at the Dolby Landfill Facility. The locations consist of several manholes spaced along the perimeter of the landfill (i.e., CB#3, CB#6A, CB#13, CB#21, CB#22, CB#35, CB#39, CB#43, and CB#45), one former groundwater monitoring well (107B), the Conex Box, the leachate pond pump station, and the associated wet well. The gas monitoring locations are shown on Figure 7-2. Several of the gas monitoring locations will be eliminated as a result of the Dolby III cover upgrade. The eliminated locations consist of leachate catch basins that will be permanently removed from access due to the Dolby III Landfill cover upgrade. After construction Phase 3 and Phase 4 of the cover upgrade, it is expected that only groundwater monitoring well (107B), the Conex Box, the pump station, pump station wet well, and catch basins (CB#3, CB#39, CB#43, and CB#45) will remain available for gas monitoring. The revised 2023 EMP describes the frequency, methods, monitoring equipment, and reporting associated with sampling and analysis of the gas locations.



AERIAL IMAGE FROM GOOGLE EARTH,
DATED SEPTEMBER 16, 2022

LEGEND

- SAMPLE LOCATIONS
- EXISTING MANHOLE/CATCH BASIN
- FLOW DIRECTION OF LEACHATE COLLECTION SYSTEM

500 0 1000 FEET

DWG: AERIAL-2008 LMN: CB GAS MONITOR-PC CTB: SME-STD.CTB REV: 4/12/2024

FIGURE 7-2
GAS MONITORING LOCATIONS
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

SME
SEVEE & MAHER
ENGINEERS

\\Nserver\cfs\Kpc\Dol\ACAD\WaterSampleSites\Aerial-2008.dwg, PCMMP FIG 7-2, 4/12/2024 8:42:58 AM, bwb

8.0 LANDFILL COVER MONITORING AND MAINTENANCE

The final cover systems for the Dolby II and Dolby III Landfills are visually monitored as part of the semi-annual general inspections (see Section 4.0). Common elements of these inspections are to identify landfill surface areas where: ponding of water on the landfill cover is occurring; cover soil erosion is occurring; stress of the vegetative layer is observed; animal burrows are present; and where any other features are visible that could affect the cover integrity.

The Landfill cover is mowed every other year to prevent growth of deep rooted, woody plant species. Starting in 2020, the surface of both Dolby II and Dolby III have been mowed annually. The annual mowing is an experiment to understand if annual mowing will reduce winter snow accumulation (i.e., drifting) on the landfill surfaces, which could reduce spring leachate flows when leachate trucking is sometimes necessary to supplement the leachate pump station capacity at the leachate pond. At such time that the Dolby III cover upgrade is complete, the biannual mowing schedule may be resumed.

9.0 RECORD KEEPING AND REPORTING

Records maintained for the Dolby Landfill Facility pertain mainly to the volume of leachate pumped (and hauled) to treatment, leachate pumping flow and pressure statistics, the results of precipitation event monitoring as discussed in the SWPPP, inspection reports, and documentation of physical maintenance and repair of the Facility. Water quality and gas measurement results will be submitted to MEDEP following each monitoring episode as described in the EMP. An annual report for the Facility will be prepared and submitted to MEDEP that includes the leachate pumping records, inspections, and documentation of maintenance and repair. The water quality results will also be included in the annual report along with an interpretation of those results as related to MEDEP standards and site trends.

10.0 POST-CLOSURE MONITORING AND MAINTENANCE COST ESTIMATE.

The following table of estimated post-closure monitoring and maintenance costs was provided by BGS. The table includes estimated costs during seven years of landfill closure activity (i.e., 2017 through 2024) and thirty years of landfill post-closure life (i.e., 2024 through 2054). Included in Appendix E is the post-closure cost estimate.

TABLE 10-1

ESTIMATED ANNUAL POST-CLOSURE MONITORING AND MAINTENANCE COSTS

Years	Water Quality [1]	General Inspections [2]	Leachate Control [3]	Maintenance [4]	Engineering Design Support [5]	Cover Settlement Evaluation [6]	Annual Average Cost
Years 1-7 Implementation of Closure 2017-2024	$60,000	$66,000	$167,600	$32,900	$87,700	$5,200	$419,400
Years 1-15 Post-Closure 2024-2039	$30,000	$32,000	$167,600	$30,900 Year 15 $47,800	$12,400	$2,100	$275,000
Years 16-30 Post-Closure 2039-2054	$30,000	$32,000	$167,600	$30,900 Year 15 $47,800	$12,400	$2,100	$275,000
Total Closure and Post-Closure Monitoring and Maintenance Cost (2024 – 2054) $6,690,500							

Notes:

1. Includes Groundwater Sampling, Reporting, and Annual Groundwater Report Preparation. Assumes that decreased sampling and reporting (# of sample sites and/or # of rounds) is allowed after cover upgrade is completed (i.e., 2024 or after).
2. Assumes "local" Inspections performed three times a week during 7-year closure period then once per week thereafter. All options include three annual site visits by an independent engineering firm.
3. Includes performing inspection and repair/replacement of air release valves, pipeline cleaning, pond cleaning, and pump rebuilding/maintenance every other year during the closure period and every third year during post closure period. This annual cost is expected to become lower as leachate flow from landfill diminishes and the need for pipeline and pump capacity are reduced.
4. Includes snow removal every year, road/culvert maintenance every year, alternate year mowing of Dolby II and III, and trimming trees along the leachate transport pipeline every 5 years.
5. Includes oversight of subcontractors, interaction with owner and regulatory agencies, quality control, project management, and administration.
6. Includes biannual aerial survey of Dolby II and Dolby III for 7-year closure implementation period for evaluation of cover settlement. Includes aerial survey every fifth year for 30-year post-closure to evaluate landfill settlement.
7. All values are in 2023 dollars. Does not include electrical costs for the leachate transport pipeline and leachate treatment at new municipally owned wastewater treatment plant in East Millinocket. All costs are estimated average annual costs.
8. Actual annual costs may vary.

REFERENCES

Sevee & Maher Engineers, Inc., 2012. Environmental Monitoring Plan, Dolby Landfill, April 2012. (Revised March 2023)

Sevee & Maher Engineers, Inc., 2012. Operating Manual, Dolby III Landfill, April 2012.

APPENDIX A

MEDEP LICENSE FOR DOLBY FACILITY

SME
SEVEE & MAHER
ENGINEERS

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

BOARD ORDER

IN THE MATTER OF

STATE OF MAINE, ACTING THROUGH THE	)	SOLID WASTE
DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL	)	LICENSE
SERVICES, BUREAU OF GENERAL SERVICES	)	
EAST MILLINOCKET, PENOBSCOT COUNTY, MAINE	)	
DOLBY LANDFILL FACILITY	)	
#S-000796-WO-AO-N	)	FINAL CLOSURE
(APPROVAL WITH CONDITIONS)	)	

Pursuant to the provisions of the *Maine Hazardous Waste, Septage and Solid Waste Management Act,* 38 M.R.S. §§1301 to 1319-Y; the *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2 (last amended October 19, 2015); and the *Solid Waste Management Rules: General Provisions,* 06-096 CMR 400 (last revised April 6, 2015); *Landfill Siting, Design and Operation*, 06-096 CMR 401 (last revised April I2, 2015); and *Water Quality Monitoring, Leachate Monitoring, and Waste Characterization,* 06-096 CMR 405 (last revised April 12, 2015), the Department of Environmental Protection ("Department") has considered the application of the STATE OF MAINE, acting through the Department of Administrative and Financial Services, Bureau of General Services, with its supportive data, agency review comments, staff summary, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

A. Application: The Department of Administrative and Financial Services, Bureau of General Services ("DAFS/BGS") has applied for a license to close an existing paper mill landfill facility in East Millinocket.

B. History:

(1) On June 13, 1984, the Great Northern Paper Company ("GNP") received Department approval to construct and operate the Dolby III landfill (Department license #L-000796-07-A-N).

(2) The Dolby III landfill occupies approximately 72 acres and has been operated in stages consisting of 17 waste cells. Operations are currently in Cell 16.

(3) The originally-approved waste streams were wastewater sludges, woodroom/woodyard waste, wood ash, and general rubbish from GNP's Millinocket and East Millinocket paper mills and municipal solid waste from the local communities. The disposal of municipal solid waste was discontinued in 1993 in response to new federal solid waste regulations. The site also includes the Dolby I and Dolby II landfills, which have been filled to licensed capacity and are closed. Dolby I, II and III are hereinafter collectively referred to as the Dolby Landfill Facility.

(4) On April 28, 2003, the Department approved the transfer from GNP of all solid waste licenses, and other Department licenses, associated with the Dolby Landfill Facility to Katahdin Paper Company LLC ("KPC").

(5) On August 30, 2011, the Maine State Planning Office ("SPO") acquired the Dolby Landfill Facility and related properties from KPC. On September 28, 2011, the Department approved the transfer of all solid waste licenses (Department license #S-000796-WR-AJ-T), and other Departmental licenses, associated with the Dolby Landfill Facility to the SPO from KPC.

(6) Since the issuance of the aforementioned transfer license, the SPO has been dissolved and responsibilities for the oversight and operation of the Dolby Landfill Facility have been turned over to the DAFS/BGS.

C. Summary of Proposal: The DAFS/BGS is proposing to close the remaining open portions of Dolby III and upgrade the cover system of previously closed areas of Dolby II and Dolby III in several phases over the next few years. The entire project is hereinafter referred to as the Dolby Landfill Cover Upgrade Project. An Application for Landfill Closure entitled Dolby Landfill Cover Upgrade - Phase I (hereinafter "Application" or "Dolby Landfill Cover Upgrade Project - Phase I") was prepared by Sevee & Maher Engineers, Inc. and is dated April 2016. The Department accepted the Application as complete for processing on April 27, 2016.

2. TITLE, RIGHT, OR INTEREST

The Dolby Landfill Facility site is approximately 436 acres in size. The DAFS/BGS has submitted an executed copy of the Acquisition Agreement, dated August 30, 2011, that conveyed the property that the Dolby Landfill Facility is located on from KPC to the SPO. The SPO was dissolved in 2011 and ownership of the Dolby Landfill Facility was

transferred to the DAFS/BGS by PL 2011, c. 655; thereby, establishing the DAFS/BGS as the owner/operator of the facility.

The Department finds that the DAFS/BGS has submitted sufficient evidence of title, right, or interest with respect to the property proposed for use.

3. NOTICE OF INTENT

The DAFS/BGS has provided documentation of the publication of a "Notice of Intent to File" and has documented notification of abutters as required by 06-096 CMR 2. The Notice of Intent to File was published in the March 19-20, 2016 edition of the Bangor Daily News.

The Department finds that the DAFS/BGS has complied with all of the public notice requirements of 06-096 CMR 2.

4. FINANCIAL ABILITY AND ASSURANCE

The DAFS/BGS has allocated approximately $12 million for the proposed closure/cover system upgrade at the Dolby Landfill Facility. The funds for the Dolby Landfill Cover Upgrade Project were included in the 2016-2017 State of Maine biennial budget (PL 2015, c. 267 Part M). The Dolby Landfill is a state-owned facility and is not subject to the financial assurance requirements of 06-096 CMR 400(11) of Maine's *Solid Waste Management Rules* ("Department Rules").

The Department finds that the DAFS/BGS has provided adequate evidence of financial ability and assurance for the proposed Dolby Landfill Cover Upgrade Project.

5. TECHNICAL ABILITY

The DAFS/BGS has retained Sevee & Maher Engineers, Inc. ("SME") of Cumberland, Maine to assist with the design, construction management and oversight of the Dolby Landfill Cover Upgrade Project. SME was formed in 1985 to provide civil and environmental services to private and public sectors. Services provided by SME include siting, design, permitting, and operation of solid waste landfills. Personnel from SME have been involved with various aspects of the design and operation of the Dolby Landfill Facility since the mid 1980's. SME provided information regarding the technical ability of its personnel who will be utilized to design, manage, and oversee the construction of the Dolby Landfill Cover Upgrade Project. The DAFS/BGS and SME will also work with earthworks and geosynthetics contractors experienced in landfill cover construction to complete the project. Post-closure care and maintenance of the

facility will continue to be provided by the DAFS/BGS using personnel familiar with the site.

The Department finds that the DAFS/BGS has demonstrated technical ability for the proposed Dolby Landfill Cover Upgrade Project.

6. LIABILITY INSURANCE

The DAFS/BGS is a public entity and is exempt from the liability insurance requirements of 06-096 CMR 400(10).

The Department finds that the DAFS/BGS is exempt from the liability insurance requirements of 06-096 CMR 400(10) of the Department Rules.

7. SURFACE WATER QUALITY AND FLOODING

Stormwater from the Dolby Landfill site is managed in accordance with the facility's Stormwater Pollution Plan and is in compliance with the Maine Multi-Sector General Permit Sector L. In general, surface water from the site flows towards the Partridge Brook Flowage, which then flows into Dolby Pond. Partridge Brook Flowage is not listed as an impaired water body. Stormwater management for the facility includes 3 separate sediment/detention ponds that are positioned near the downslope perimeter of the Dolby III landfill. Runoff from the closed landfill areas and access roads enter grass and stone lined ditches that flow into the sediment/detention ponds. Discharges from each sediment/detention pond flow into level spreaders and then become sheet flow into the adjacent wooded areas.

Since the Dolby III landfill ceased operations prior to reaching its permitted final waste grade, the proposed final grading plan will have sideslopes that are flatter in some areas than previously expected. The proposed cover upgrades will also utilize existing cover material to re-establish a vegetative cover surface that will mimic the current cover conditions in terms of stormwater runoff from the site. SME proposes no changes to the site's current Stormwater Management Plan with respect to the proposed cover system upgrade. However, during each phase of the cover system upgrade, a stormwater analysis will be performed to verify the capacity requirements of the site's existing structures and to design the necessary temporary and permanent erosion control measures required for the proposed cover upgrades. Based upon the stormwater analysis for the Phase 1 cover upgrade area, the emergency spillway of Sedimentation Pond #3 will be modified. Modifications include the installation of a riprap-lined emergency spillway and outlet pipe riprap protection.

The Department finds that the proposed Dolby Landfill Cover Upgrade Project will not have an unreasonable adverse effect on surface water quality and will not unreasonably cause or increase flooding on-site or on adjacent properties nor create an unreasonable flood hazard to any structure.

8. EROSION AND SEDIMENTATION CONTROL

The proposed Dolby Landfill Cover Upgrade Project will occur within the limits of the existing landfill footprint and will minimize the disturbance of any native soils. The design and implementation of all erosion control measures associated with the proposed project will be conducted in accordance with the Maine Erosion and Sediment Control Practices Field Guide for Contractors, March 2015, or its equivalent. Suitable erosion control measures will be in-place prior to disturbance of the existing soil cover associated with the proposed project. A comprehensive Erosion and Sedimentation Control Plan has been prepared by SME and was submitted as part of the Application.

The Department finds that the DAFS/BGS has adequately addressed erosion and sediment control for the proposed Dolby Landfill Cover Upgrade Project and has demonstrated that the proposed project will not cause unreasonable sedimentation or erosion of soil.

9. FACILITY BACKGROUND AND PROJECT DESCRIPTION

The Dolby II and Dolby III landfills are non-secure landfills that collect leachate and groundwater-containing leachate. The Dolby II and Dolby III landfills have a combined size of approximately 135 acres and were permitted by the Department in 1978 and 1984, respectively. Originally, the waste streams included municipal solid wastes from the Towns of Millinocket, East Millinocket and Medway, and wastewater treatment sludge and various pulp and papermaking residuals from the GNP mills. Over the years, the Department has approved disposal of a number of different wastes streams, including, but not limited to, the following: wood waste; boiler ash; wood ash; coal ash; demolition debris ash; asbestos-containing materials; oil-contaminated soils; lime grit; waste sulfur; ink sludge; and solid waste from Baxter State Park and GNP Woodland Operations.

Cover materials have been previously placed on all of Dolby II and a majority of Dolby III. In an effort to significantly reduce the volume of leachate generated at the Dolby Landfill Facility, the DAFS/BGS plans to close the remainder of Dolby III and upgrade the cover system of previously closed areas of Dolby III and portions of previously closed areas of Dolby II. The proposed cover system upgrades will significantly limit precipitation infiltration into the waste; thereby, reducing leachate generated at the site. The objective of reducing the leachate generated at the site is to minimize future costs

associated with the transportation and treatment of leachate from the facility that will be paid for by the taxpayers of Maine.

10. SITE ASSESSMENT REPORT

Consistent with Department Rules, the DAFS/BGS is exempt from conducting an additional site investigation for closure as long as the site was previously characterized and water quality monitoring is conducted in accordance with the requirements of 06-096 CMR 405. Previous site investigations including a study conducted by E.C. Jordan in 1981 have documented the hydrogeologic conditions at the Dolby Landfill Facility. In December 2015, SME conducted an investigation to better define the bedrock surface and groundwater divide in the vicinity of Dolby II. This investigation was performed to establish the proposed cover upgrade work limits on Dolby II that would provide the greatest long-term benefit in terms of reducing leachate generation and subsequent collection, conveyance and treatment costs. Results of the December 2015 investigation were submitted, along with interpretive bedrock and phreatic surface maps for this portion of the landfill site, as part of the Application.

A facility water quality monitoring program consisting of groundwater, surface water and leachate sampling and testing has been conducted triannually with the data submitted in the annual reports.

The Department finds that the DAFS/BGS has completed a site investigation for closure and site assessment report that adequately supports the design of the proposed final cover system and that the DAFS/BGS conducts water quality monitoring in accordance with Department Rules.

11. ENGINEERING DESIGN AND REPORT

A. Closure Design: The DAFS/BGS has submitted a proposed cover system design, prepared by SME and dated March 29, 2016. The proposed Dolby Landfill Cover Upgrade Project is to occur in phases of approximately 25 acres in size over a 4 to 5 year period. The first phase, Phase I, will include a majority of the remaining open areas of Dolby III (i.e., Cells 15 and 16) and other areas in the southwest portion of Dolby III. Other phases will follow sequentially as detailed on Figure 1-2, Conceptual Closure Sequence, submitted in the Application. The Application details the approximate amount of acreage to be covered in each construction season and is as follows: for Dolby III, Summer 2016 – 25 acres, Summer 2017 – 24 acres and Summer 2018 – 23 acres; and for Dolby II, Summer 2019 – 25 acres.

Approximately 38 acres of the existing Dolby II cover system will not be upgraded. The cover system upgrade design will incorporate existing topsoil, cover soil, and sand drainage material previously placed at the site to the extent possible. A soil re-use plan has been submitted to describe how existing soils will be re-used within Phase I of the proposed Dolby Landfill Cover Upgrade Project. The proposed cover system upgrade includes, from the bottom up, the following components: a minimum 6-inch gas collection system (i.e., sand and gas vent piping); a 40-mil high density polyethylene ("HDPE") textured geomembrane; a drainage geocomposite and cover system drainage pipes; a 14-inch cover soil layer; a 4-inch vegetative soil layer; and miscellaneous permanent erosion control measures (i.e., erosion control mats, rip rap, etc.).

B. Stability and Settlement Assessment and Monitoring: Slope stability of the proposed cover system was evaluated relative to the materials and material interfaces which will comprise the proposed cover system. Slope stability factors of safety ("FOS") were calculated using soil and geosynthetic material properties considered representative of the materials available to the project and which are consistent with geotechnical literature and accepted engineering practices. Soil and geosynthetic material properties utilized within the slope stability analyses will be verified during construction.

The slope stability calculations indicate that a stable cover system configuration will be maintained during the closure and post-closure periods. The FOSs for the proposed final cover system were calculated to be consistently greater than 1.3 and 1.5 for static construction/operational and post-closure conditions, respectively, and consistently greater than 1.1 and 1.5 for seismic construction/operational and post-closure conditions, respectively. All of the calculated slope stability FOSs meet or exceed the required minimum FOSs specified in 06-096 CMR 401(2)(F)(1) of the Department Rules.

Settlement of the proposed cover systems during the post-closure period was evaluated by SME. The calculations show that: 1) the as-placed cover grades are expected to change minimally during the post-closure period and the cover system drainage is not expected to be affected and 2) the HDPE geomembrane will maintain its integrity and performance at the maximum predicted settlements. The minimal amount of settlement calculated for Phase I is largely predicated on the minor regrading and filling that will be performed to construct the proposed cover system and that much of the waste in Phase I has been in place for several years. It is expected that only a small amount of settlement will occur during the post-closure period due to long-term waste degradation and waste compression.

C. Water Balance: Leachate volumes collected and treated from the Dolby Landfill Facility have averaged approximately 74.2 million gallons per year ("MGY") over the past 5 years. SME estimates that the leachate generation rate from the Dolby Landfill Facility will be reduced to less than 7 MGY with the placement of a geomembrane cover over the portions of Dolby II and Dolby III that contribute to the facility's leachate collection system. The resistance to infiltration and runoff characteristics of the proposed cover system has been evaluated using the Hydrogeologic Evaluation of Landfill Performance ("HELP") model. The HELP model evaluation shows that the proposed cover system will meet the intent of the Department Rules by minimizing the infiltration of precipitation into the landfill after closure.

D. Leachate Management Plan: The Dolby Landfill Cover Upgrade Project will not involve changes in the site's current leachate collection system, leachate storage pond, or leachate transport system. The proposed cover system construction will be performed in discrete sections that will allow stormwater runoff to be managed properly. Areas of waste which are uncovered during the construction process will be contained using temporary berms constructed from existing cover soil to isolate the open areas and manage impacted runoff from these areas to the greatest practical extent. Impacted runoff will be diverted and/or pumped to various perimeter manholes adjacent to the work area for collection and subsequent treatment.

E. Gas Management Plan: SME recognizes the potential for degradation of the landfill waste and has estimated the gas generation for the portion of the landfill that will be closed by Phase I of the Dolby Landfill Cover Upgrade Project. SME used historical as-built drawings and available annual reports to estimate the waste thickness and the types of waste placed in this area of the landfill. The Landfill Gas Emissions Model ("LandGEM") was used to predict the quantity of gas that could be generated and the emission rate of non-methane organic compounds ("NMOC") from Phase I. Gas collection pipe spacing and passive vent locations necessary to relieve gas pressures generated by the waste and maintain cover stability were determined using standard design methods. The gas calculations indicate that the NMOC emission rate from Phase I will be below the 50 megagrams per year threshold described in 06-096 CMR 401(5)(I)(6)(c) of the Department Rules. As such, SME states that no additional gas control measures for the Dolby Landfill Cover Upgrade Project - Phase I other than passive gas collection and venting are necessary.

Gas monitoring will be performed during construction when modifications to the landfill interior manholes are made to accommodate placement of the geomembrane.

The Department finds that the proposed final cover system will maintain its integrity and performance under the maximum predicted settlement, minimize infiltration of precipitation into the landfill after closure, and adequately manage landfill gas; provided that, an engineering report is submitted to the Department for review and approval at least 3 months prior to the commencement of construction activities within each subsequent phase of the Dolby Landfill Cover Upgrade Project.

12. QUALITY ASSURANCE PLAN

A Construction Quality Assurance (CQA) Plan, prepared by SME and dated April 2016, addressing the construction quality assurance for placement of final cover materials for the Dolby Landfill Cover Upgrade Project - Phase I has been developed and submitted with the Application. The CQA plan outlines the characterization of the cover system's physical properties to determine its ability to achieve the project's performance criteria; defines procedures for cover placement; defines tests and frequency of testing to assure the construction of the cover meets or exceeds design criteria; and provides a method for documenting the cover placement. Geosynthetics and soil components will be inspected, tested, and certified by qualified CQA personnel independent of the Owner and Contractor.

The Department finds that the DAFS/BGS will implement adequate construction quality assurance measures to assure that design specifications and performance requirements for all facility components are met during construction of the Dolby Landfill Cover Upgrade Project; provided that, a CQA Plan is submitted to the Department for review and approval at least 3 months prior to the commencement of construction activities within each subsequent phase of the Dolby Landfill Cover Upgrade Project.

13. CONSTRUCTION CONTRACT BID DOCUMENTS

The DAFS/BGS has submitted *Contract Documents and Construction Specifications, Dolby Landfill Cover System Upgrade – Phase 1 (Documents)*, prepared by SME and dated April 2016. The Documents include drawings, technical specifications, and contract administrative documents for the Dolby Landfill Cover Upgrade Project - Phase I. The Documents describe the proposed project and the means and methods for the installation of the final cover systems.

The Department finds that the construction contract bid documents were adequately prepared and meet the requirements of 06-096 CMR 401(5)(L); provided that, construction contract bid documents, including drawings, technical specifications, and contract administrative documents are submitted to the Department for review and approval at least 3 months prior to the commencement of construction activities within each subsequent phase of the Dolby Landfill Cover Upgrade Project.

14. POST-CLOSURE MONITORING AND MAINTENANCE

An Environmental Monitoring Plan (EMP), dated April 2011, was previously submitted and approved by the Department. The EMP meets the requirements of 06-096 CMR 405 and will be the basis for the post-closure water quality monitoring program for the Dolby Landfill Facility. Provisions for groundwater, surface water, leachate and gas monitoring are outlined in the EMP. Specific procedures for the inspection and maintenance of facility components are outlined in the facility Operating Manual, dated April 2012. Slope stability and settlement monitoring of the proposed cover systems will be routinely conducted during the post-closure period. This monitoring will consist of visual inspections of the completed cover system and periodic topographical surveys for comparison to the cover surface elevations at the time of construction completion. Post-closure slope stability and settlement monitoring will be conducted annually unless conditions are encountered that warrant more frequent monitoring. The post-closure monitoring and maintenance plan will need to be revised to reflect changes associated with the Dolby Landfill Cover Upgrade Project.

Groundwater monitoring data shows that groundwater quality at monitoring well ("MW") 301, MW-302B and MW-302C has deteriorated over time. Data shows that these wells generally began to experience increasing trends for several parameters in the year 2000. The exact cause of increasing trends is unknown; however, completion of the Dolby Landfill Cover Upgrade Project is expected to help mitigate these impacts. The EMP includes a requirement for the ongoing statistical analysis of the monitoring data, using statistical tests approved by the Department, to evaluate trends in groundwater quality. The results of the ongoing evaluation will be provided in the annual report.

SME has submitted a June 23, 2016 letter proposing to evaluate the effectiveness of the Dolby Landfill Cover Upgrade Project relative to improving groundwater quality 5 years after the substantial completion of construction activities of the Dolby Landfill Cover Upgrade Project. Completion of the Dolby Landfill Upgrade Project is scheduled to occur during 2019.

The Department finds that the DAFS/BGS has adequately addressed post-closure monitoring and maintenance for the Dolby Landfill Facility; provided that: (1) the post-

closure monitoring and maintenance plan is revised to reflect changes associated with the Dolby Landfill Cover Upgrade Project and is submitted for Department review and approval at least 30 days prior to substantial completion of construction activities within the Dolby Landfill Cover Upgrade Project - Phase I and (2) five years after the substantial completion of the Dolby Landfill Cover Upgrade Project or no later than year end of 2024, whichever is earlier, the DAFS/BGS submits to the Department, for review and approval, an evaluation of water quality data from MW-301, MW-302B and MW-302C. If there has been no improvement in the water quality at MW-301, MW-302B and MW-302C, the DAFS/BGS must submit a Corrective Action Plan within 90 days of the submittal of the evaluation of water quality data from MW-301, MW-302B and MW-302C, prepared in accordance with the applicable rules in effect at that time, to the Department for review and approval. Once the Corrective Action Plan has been approved by the Department, the plan must be implemented within one year of approval.

15. FINAL USE/PERMANENT RECORD

The DAFS/BGS proposes to maintain the property that the landfill is on as open space. Permanent buildings will not be placed within 100 feet of the landfill. Currently, there are no specific plans for final use of the Dolby Landfill Facility.

Following the completion of the Dolby Landfill Cover Upgrade Project, the DAFS/BGS will prepare and record in the Penobscot County Registry of Deeds information and necessary deed restrictions to provide notice to prospective purchasers and a public record of the location of the Dolby II and Dolby III landfills. The DAFS/BGS will also provide a copy of the record information and necessary deed restrictions to the Department as required by 06-096 CMR 401(5)(B)(4). The final cover or other components of the containment systems or the functioning of the monitoring systems may not be disturbed without the written approval of the Department.

The Department finds that the DAFS/BGS has provided for the permanent record related to the Dolby Landfill Facility.

BASED on the above Findings of Facts, and subject to the CONDITIONS listed below, the Department makes the following CONCLUSIONS:

1. The DAFS/BGS has submitted evidence of sufficient title, right, or interest with respect to the property proposed for use.

2. The DAFS/BGS has complied with all of the public notice requirements of 06-096 CMR 2 and 400.

3. The DAFS/BGS has provided adequate evidence of financial and technical ability to design, construct, operate, maintain, close and accomplish post-closure care of the solid waste facility in a manner consistent with all applicable requirements.

4. The DAFS/BGS is exempt from the liability insurance requirements of 06-096 CMR 400(10).

5. The Dolby Landfill Cover Upgrade Project will not unreasonably cause or increase flooding and will have no unreasonable effect on surface water. The DAFS/BGS has adequately addressed stormwater management for the proposed project.

6. The Dolby Landfill Cover Upgrade Project will not cause unreasonable sedimentation or erosion of soil. The DAFS/BGS has adequately addressed erosion and sedimentation control for the proposed project.

7. The DAFS/BGS has completed a site assessment report that adequately supports the design of the proposed final cover system and conducts water quality monitoring in accordance with the Department Rules.

8. The proposed final cover system will maintain its integrity and performance under the maximum predicted settlement, minimize infiltration of precipitation into the landfill after closure, and adequately manage landfill gas.

9. The DAFS/BGS has proposed a final cover system design meeting the requirements of the Department Rules; provided that, an engineering report, a CQA Plan and the construction contract bid documents, including drawings, technical specifications, and the contract administrative documents are submitted to the Department for review and approval at least 3 months prior to the commencement of construction activities within each subsequent phase of the Dolby Landfill Cover Upgrade Project.

10. The DAFS/BGS has provided for post-closure monitoring and maintenance in accordance with Department Rules; provided that: (1) the post-closure monitoring and maintenance plan is revised to reflect changes associated with the Dolby Landfill Cover Upgrade Project and is submitted for Department review and approval at least 30 days prior to substantial completion of construction activities within the Dolby Landfill Upgrade Project - Phase I and (2) five years after the substantial completion of the Dolby Landfill Cover Upgrade Project or no later than year end of 2024, whichever is earlier, an evaluation of water quality data from MW-301, MW-302B and MW-302C is submitted for Department review and approval. If there has been no improvement in the water quality at MW-301, MW-302B and MW-302C, the DAFS/BGS must submit a Corrective Action Plan within 90 days of the submittal of the evaluation of water quality from MW-

301, MW-302B and MW-302C, prepared in accordance with the applicable rules in effect at that time, to the Department for review and approval. Once the Corrective Action Plan has been approved by the Department, the plan must be implemented within one year of approval.

11. The DAFS/BGS has provided for the permanent record related to the site.

12. The Dolby Landfill Cover Upgrade Project will not pollute any waters of the State, contaminate the ambient air, constitute a hazard to health and welfare, or create a nuisance.

THEREFORE, the Department APPROVES the above noted application of the STATE OF MAINE, DEPARTMENT OF ADMINISTRATIVE and FINANCIAL SERVICES, BUREAU OF GENERAL SERVICES, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. The Standard Conditions of Approval, a copy attached as Appendix A.

2. The invalidity or unenforceability of any provision, or part thereof, of this license shall not affect the remainder of the provision or any other provisions. This license shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

3. At least 3 months prior to the commencement of construction of each subsequent phase, the DAFS/BGS shall submit an engineering report, a CQA Plan and the construction contract bid documents including drawings, technical specifications, and the contract administrative documents to the Department for review and approval.

4. At least 30 days prior to substantial completion of construction activities within the Dolby Landfill Cover Upgrade Project - Phase I, the DAFS/BGS shall submit to the Department, for review and approval, a revised post-closure monitoring and maintenance plan to reflect changes associated with the Dolby Landfill Cover Upgrade Project.

5. Five years after the substantial completion of the Dolby Landfill Cover Upgrade Project or no later than year end of 2024, whichever is earlier, the DAFS/BGS shall submit to the Department, for review and approval, an evaluation of water quality data from MW-301, MW-302B and MW-302C. If there has been no improvement in water quality at MW-301, MW-302B and MW-302C, the DAFS/BGS shall submit a Corrective Action Plan within 90 days of the submittal of the evaluation of water quality data from MW-301, MW-302B and MW-302C, prepared in accordance with the applicable rules in effect at that time, to the Department for review and approval.

STATE OF MAINE, ACTING THROUGH THE DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL SERVICES, BUREAU OF GENERAL SERVICES EAST MILLINOCKET, PENOBSCOT COUNTY, MAINE DOLBY LANDFILL FACILITY #S-000796-WO-AO-N (APPROVAL WITH CONDITIONS)	14	SOLID WASTE LICENSE FINAL CLOSURE

Once the Corrective Action Plan has been approved by the Department, the plan shall be implemented within one year of approval.

DONE AND DATED AT AUGUSTA, MAINE, THIS 30th DAY OF June, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Lisa Pohlmann for
Paul Mercer, Commissioner

Filed
JUL 06 2016
State of Maine
Board of Environmental Protection

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

Date of initial receipt of application: April 7, 2016
Date of application acceptance: April 27, 2016

Date filed with the Board of Environmental Protection:

xlp80430/lsp

STANDARD CONDITIONS
TO ALL SOLID WASTE LANDFILL LICENSES

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL. VIOLATIONS OF THE CONDITIONS UNDER WHICH A LICENSE IS ISSUED SHALL CONSTITUTE A VIOLATION OF THAT LICENSE AGAINST WHICH ENFORCEMENT ACTION MAY BE TAKEN, INCLUDING REVOCATION.

1. **Approval of Variations from Plans.** The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed by the license. Any consequential variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

2. **Compliance with All Applicable Laws.** The licensee shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

3. **Compliance with All Terms and Conditions of Approval.** The licensee shall submit all reports and information requested by the Department demonstrating that the licensee has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

4. **Transfer of License.** The licensee may not transfer the solid waste facility license or any portion thereof without approval of the Department.

5. **Initiation of Construction or Development Within Two Years.** If the construction or operation of the solid waste facility is not begun within two years of issuance of within 2 years after any administrative and judicial appeals have been resolved, the license lapses and the licensee must reapply to the Department for a new license unless otherwise approved by the Department.

6. **Approval Included in Contract Bids.** A copy of the approval must be included in or attached to all contract bid specifications for the solid waste facility.

7. **Approval Shown to Contractors.** Contractors must be shown the license by the licensee before commencing work on the solid waste facility.

8. **Background of key individuals.** A licensee may not knowingly hire as an officer, director or key solid waste facility employee, or knowingly acquire an equity interest or debt interest in, any person convicted of a felony or found to have violated a State or federal environmental law or rule without first obtaining the approval of the Department.

STANDARD CONDITIONS
TO ALL SOLID WASTE LANDFILL LICENSES

9. **Fees.** The licensee must comply with annual license and annual reporting fee requirements of the Department's rules.

10. **Recycling and Source Reduction Determination for Solid Waste Disposal Facilities.** This condition does not apply to the expansion of a commercial solid waste disposal facility that accepts only special waste for landfilling.

    The solid waste disposal facility shall only accept solid waste that is subject to recycling and source reduction programs, voluntary or otherwise, at least as effective as those imposed by 38 M.R.S. Chapter 13.

11. **Deed Requirements for Solid Waste Disposal Facilities.** Whenever any lot of land on which an active, inactive, or closed solid waste disposal facility is located is being transferred by deed, the following must be expressly stated in the deed:

    A. The type of facility located on the lot and the dates of its establishment and closure.

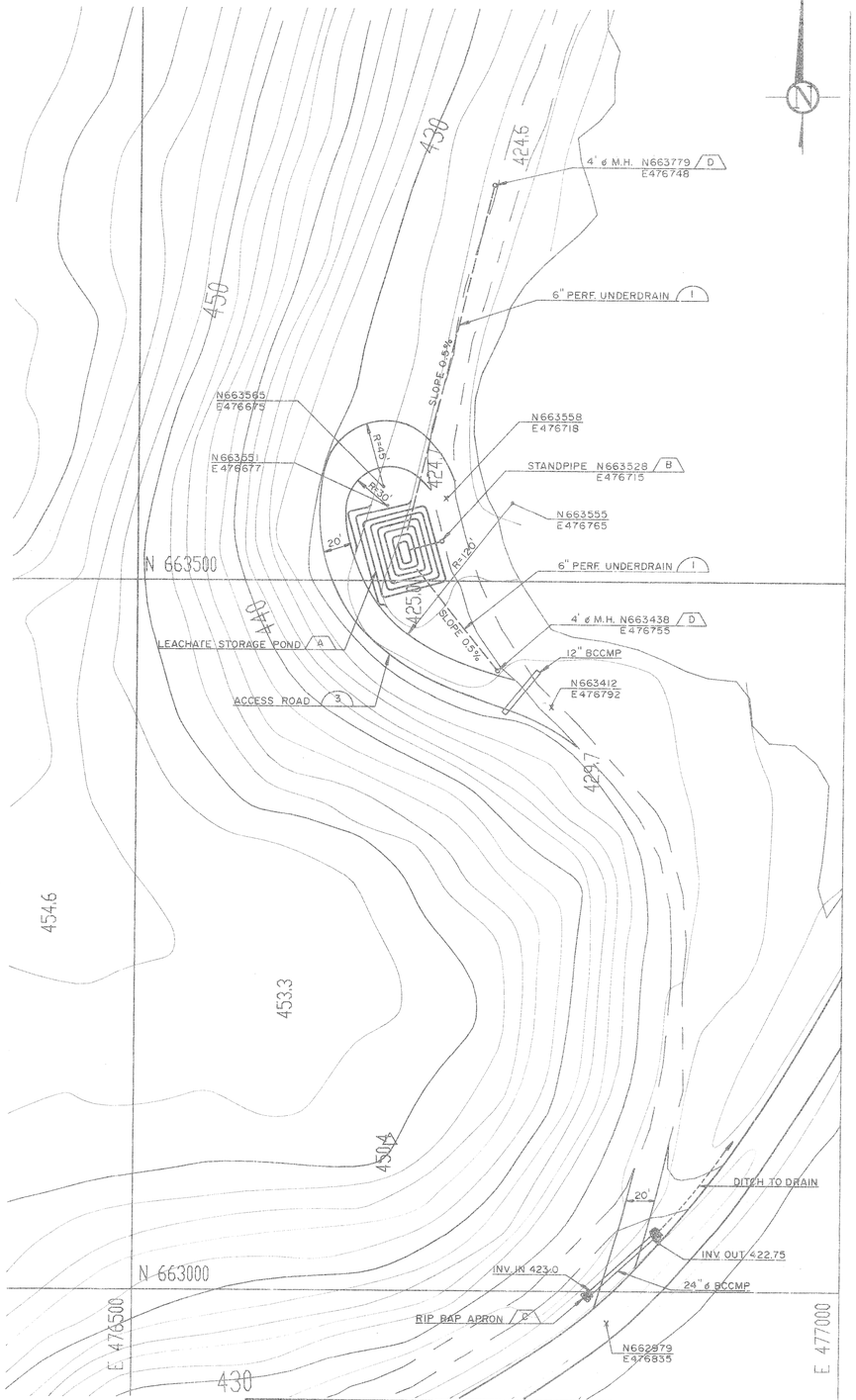
    B. A description of the location and the composition, extent, and depth of the waste deposited.

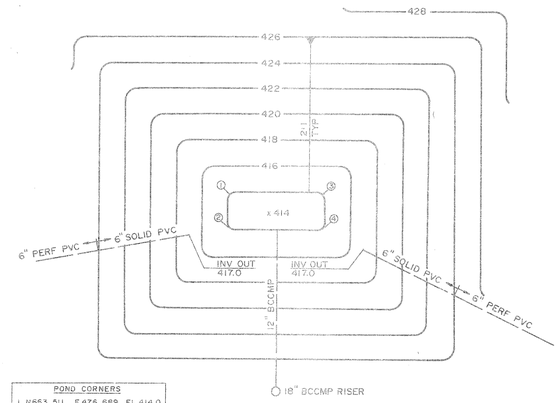
    C. The disposal location coordinates of asbestos wastes must be identified.

APPENDIX B

ENGINEERING DRAWINGS FOR DOLBY LANDFILL FACILITY

SME
SEVEE & MAHER
ENGINEERS

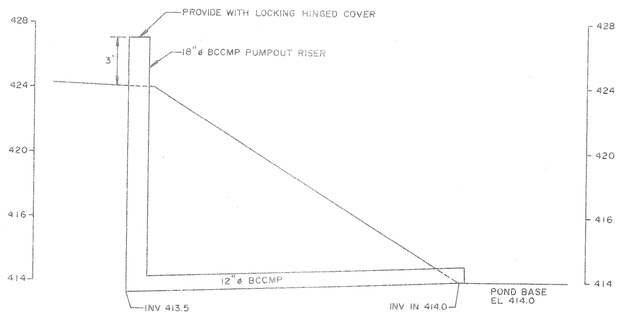




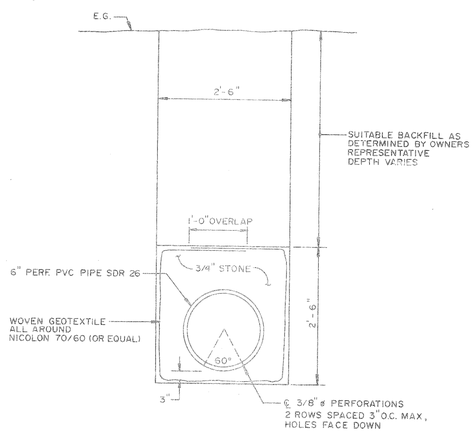
POND CORNERS

1	N663,511	E476,689	EL 414.0
2	N663,313	E476,694	EL 414.0
3	N663,525	E476,684	EL 414.0
4	N663,527	E476,689	EL 414.0

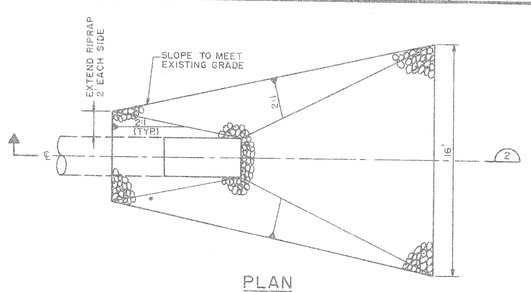
LEACHATE STORAGE POND A
N.T.S.



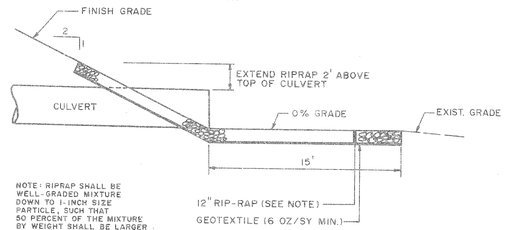
STANDPIPE B
N.T.S.



PERF. LEACHATE UNDERDRAIN 1
N.T.S.



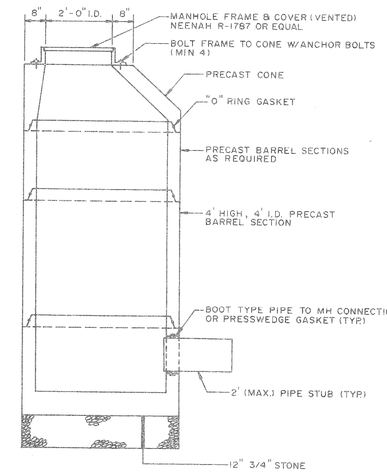
PLAN
N.T.S.



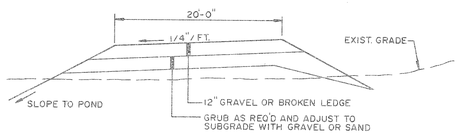
NOTE: RIPRAP SHALL BE WELL-GRADED MIXTURE DOWN TO 1-INCH SIZE PARTICLE, SUCH THAT 50 PERCENT OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN 4". THE LARGEST STONE SIZE SHALL BE 6".

SECTION 2
N.T.S.

RIP RAP APRON C



TYPICAL LEACHATE TRANSPORT MANHOLE D
N.T.S.



ACCESS ROAD 3
N.T.S.

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
				12/90	RECORD DRAWING	BHF			

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

DRN	PF	11/90
CKD	[illegible]	11/90
CKD		
CORR		
APPVD		
ISSUE CODE		
C-CONST.		
SCALE	AS SHOWN	

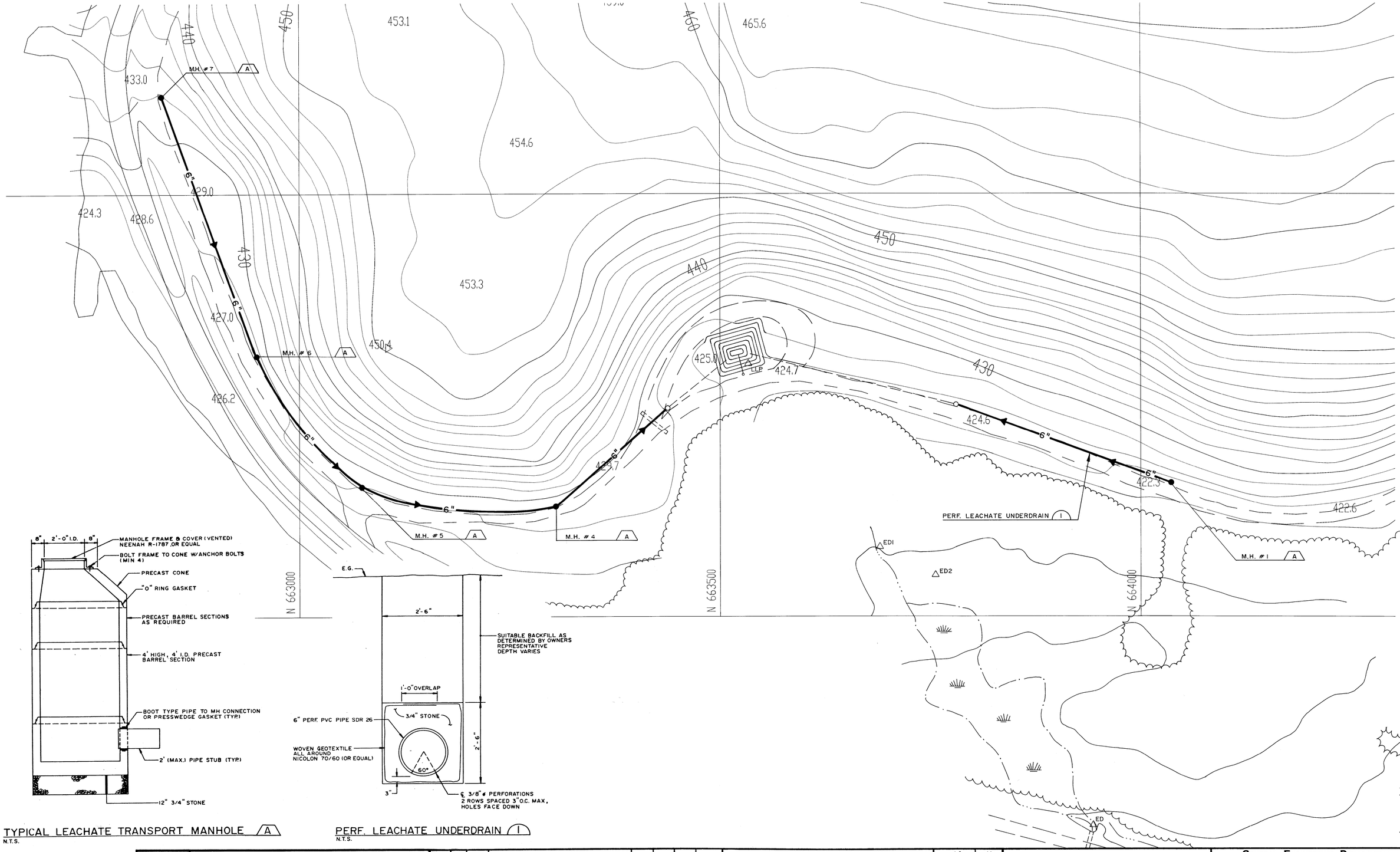
Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

TEMPORARY LEACHATE POND
DOLBY II LANDFILL

JOB NO. 94552
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

YB-19328



TYPICAL LEACHATE TRANSPORT MANHOLE (A)
N.T.S.

PERF. LEACHATE UNDERDRAIN (1)
N.T.S.

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
YB-19328	TEMPORARY LEACHATE POND, DOLBY II LANDFILL			11/91	RECORD DRAWING				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

DRN	RR	6/91
CKD	6/30/91	
CKD		
CORR		
APPVD		

ISSUE CODE
P - PRELIM | B - BIDS
M - MTL T.O. | C - CONST
SCALE 1" = 50'

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY II LANDFILL
NORTHEAST INTERCEPTOR
TRENCH EXTENSION

JOB NO. _____
ENG. REQ. NO. _____
FILE NO. 2-092-4703, 7082

YB-20021

GREAT NORTHERN PAPER, INC.
A SUBSIDIARY OF BOWATER INCORPORATED
MILLINOCKET, MAINE
DOLBY II LANDFILL REGRADING

SHT. NO.	TITLE	DWG. NO.	
1	COVER SHEET	YB-23586	
2	SYMBOLS & ABBREVIATIONS	YB-23587	
3	SITE LOCATION PLAN	YB-23588	
4	SITE DEVELOPMENT PLAN	YB-23589	
5	DOLBY II NORTH SITE DEVELOPMENT PLAN	YB-23590	
6	DOLBY II SOUTH SITE DEVELOPMENT PLAN	YB-23591	N.I.T.C.
7	FINAL GRADING PLAN	YB-23592	
8	SECTIONS & DETAILS	YB-23593	

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

1996

STATE OF MAINE
PETER L. MAHER
#4107
REGISTERED
PROFESSIONAL ENGINEER

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95068

DRN	PAF
CHK	GHC
CHK	
CORR	
APPVD	

ISSUE CODE

P - Prelim	B - Bids
M - Mtl T.O.	C - Const.

SCALE

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY II LANDFILL REGRADING
COVER SHEET

JOB NO. 67996
ENG. REQ. NO. _____
FILE NO. 2-092-4703.7082

YB-23586

C D E F G H I L M N O P Q

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (MAGNETIC)			STONE WALL	○	●	MANHOLE
		NORTH ARROW (PLAN NORTH)			DRAINAGE COURSE (WITH DIRECTION)	◎	○	CATCH BASIN
25	25	CONTOUR LINES	SHORE SIDE		EDGE OF WATER	⋈	⋈	WATER VALVE
25 x 63	25.56	SPOT ELEVATION (GRADE)			WATER ELEVATION (GROUND OR SURFACE)			HYDRANT
		EXISTING GROUND			FENCE LINE (WOOD)			UTILITY POLE
		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION PT.			FENCE LINE (WIRE)		⊘	CLEAN OUT STRUCTURE
		PROPERTY LINE OR R.O.W.			RETAINING WALL	G	G	UNDERGROUND GAS MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			GUARD RAIL	T	T	UNDERGROUND TELEPHONE LINE
	0+00 1+00	CONSTRUCTION BASELINE			BUILDING AND STRUCTURES	E	E	UNDERGROUND ELECTRICAL LINE
		BOUNDARY LINE (State, County, Municipality)		1" 2 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)	OE	OE	OVERHEAD ELECTRICAL LINE
⊡	■	SURVEY MONUMENT		TOP OF SLOPE 2%	SLOPES (WITH SLOPE RATIO)		12" ACP	SANITARY SEWER (SIZE & TYPE)
○IF	●IF	SURVEY IRON			EDGE OF TRAVELED WAY	FM	8" PVC	FORCE MAIN (SIZE & TYPE)
○	●	DRILL HOLE, PK, OR STAKE		C F	CUT OR FILL LINE	W	8" D.I.	WATER MAIN (SIZE & TYPE)
		WOODS OR BRUSH LINE		CLL	CLEARING LIMIT LINE		12" RCP	STORM DRAIN (SIZE & TYPE)
		INDIVIDUAL TREE (Deciduous)			BITUMINOUS PAVEMENT	UD	8" UD	UNDERDRAIN (SIZE & TYPE)
		INDIVIDUAL TREE (Coniferous)			CONCRETE			CULVERT
		TREE, TO BE REMOVED	B-12 MW-12 P-12	B-12 MW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER			RAILROAD
		MARSH AREA	TP-12	TP-12	TEST PIT AND NUMBER		S	SILTATION FENCE
						PD	6" PD	PERIMETER DRAIN (SIZE & TYPE)
						LT	6" LD	LEACHATE TRANSPORT (SIZE & TYPE)
						LC	6" LC	LEACHATE COLLECTION (SIZE & TYPE)
						LD	6" LD	LEAK DETECTION, SIZE & TYPE

A.C.C.M.P	ASPHALT COATED C.M.P.	D	DEGREE OF CURVE	HDPE	HIGH DENSITY POLYETHYLENE	P.C.	POINT ON CURVE
A.C.P.	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HP	HORSEPOWER	PD	PERIMETER DRAIN
AC	ACRE	DEG OR °	DIAMETER	HYD	HYDRANT	P.I.	POINT OF INTERSECTION
AGG	AGGREGATE	DEPT	DEPARTMENT			P.T.	POINT OF TANGENT
ALUM	ALUMINUM	DI	DUCTILE IRON	I.D.	INSIDE DIAMETER	PERF	PERFORATED
APPVD	APPROVED	DIA OR ø	DIAMETER	IN OR "	INCHES	PSI	POUNDS PER SQUARE INCH
APPROX	APPROXIMATE	DIM	DIMENSION	INV	INVERT	PVC	POLYVINYL CHLORIDE
ASB	ASBESTOS	DIST	DISTANCE	INV. EL	INVERT ELEVATION	PVMT	PAVEMENT
ASPH	ASPHALT	DN	DOWN				
AUTO	AUTOMATIC	DR	DRAIN	LB	POUND	QTY	QUANTITY
AUX	AUXILIARY	DWG	DRAWING	LC	LEACHATE COLLECTION		
AVE	AVENUE			LD	LEAK DETECTION	R.O.W.	RIGHT OF WAY
AZ	AZIMUTH	EA	EACH	LIN FT.	LINEAR FEET	RAD	RADIUS
		EG	EXISTING GROUND OR GRADE	LOC	LOCATION	REQD	REQUIRED
B.C.C.M.P.	BITUMINOUS COATED C.M.P.	ELEC	ELECTRIC	LT	LEACHATE TRANSPORT	RT	RIGHT
B.M.	BENCH MARK	EL	ELEVATION			RTE	ROUTE
BIT	BITUMINOUS	ELB	ELBOW	M.H.	MANHOLE		
BLDG	BUILDING	EQUIP	EQUIPMENT	M.J.	MECHANICAL JOINT	S	SLOPE
BOT	BOTTOM	EST	ESTIMATED	MATL	MATERIAL	SCH	SCHEDULE
BRG	BEARING	EXC	EXCAVATE	MAX	MAXIMUM	SF	SQUARE FEET
		EXIST	EXISTING	MFR	MANUFACTURE	SHT	SHEET
C.B.	CATCH BASIN			MIN	MINIMUM	STA	STATION
CEN	CENTER	F.G.	FINISH GRADE	MISC	MISCELLANEOUS	SY	SQUARE YARD
CEM. LIN.	CEMENT LINED	FBRGL	FIBERGLASS	MON	MONUMENT		
C.M.P.	CORRUGATED METAL PIPE	FDN	FOUNDATION			TAN	TANGENT
C.O.	CLEAN OUT	FLEX	FLEXIBLE	N.I.T.C.	NOT IN THIS CONTRACT	TDH	TOTAL DYNAMIC HEAD
CF	CUBIC FEET	FLG	FLANGE	N.T.S.	NOT TO SCALE	TEMP	TEMPORARY
CFS	CUBIC FEET PER SECOND	FLR	FLOOR	N/F	NOW OR FORMERLY	TYP	TYPICAL
CI	CAST IRON	FPS	FEET PER SECOND	NO. OR #	NUMBER		
CL	CLASS	FT OR '	FEET			V	VOLTS
CONC	CONCRETE	FTG	FOOTING	O.C.	ON CENTER		
CONST	CONSTRUCTION			O.D.	OUTSIDE DIAMETER	W/	WITH
CONTR	CONTRACTOR	GA	GAUGE			W/O	WITHOUT
CTR	CENTER	GAL	GALLON				
CY	CUBIC YARD	GALV	GALVANIZED			YD	YARD
		GPD	GALLONS PER DAY				
		GPM	GALLONS PER MINUTE				

VIEW MARKERS & IDENTIFICATION



GENERAL NOTES:

1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.
2. CONTOURS SHOWN ON PLANS MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.
3. EXCAVATIONS ENCOUNTERING WASTE MATERIALS, I.E. SLUDGE, WILL BE DISPOSED OF IN THE ACTIVE DISPOSAL AREA.

MATERIAL SPECIFICATIONS:

DIKE EMBANKMENT SOIL:

COMPACTION – THE DIKE EMBANKMENT SOIL SHALL BE COMPACTED TO A DENSITY OF 85 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR).

STONE BEDDING – THE STONE BEDDING MATERIAL SHALL BE SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL. THE BEDDING MATERIAL SHALL MEET THE FOLLOWING GRADATION:

SIEVE DESIGNATION	PERCENT PASSING BY WEIGHT
1 INCH	100
1/4 INCH	<5

GRUBBING:

ALL VEGETATION AND TOPSOIL SHALL BE STRIPPED FROM WORK AREA PRIOR TO PLACING THE EMBANKMENT MATERIAL. ANY TOPSOIL CLAIMED DURING THE GRUBBING OPERATION WILL BE STOCKPILED FOR THE OWNER'S USE. ALL OTHER GRUBBINGS WILL BE DISPOSED OF IN THE EXISTING LANDFILL.

SEED AND FERTILIZER:

AREAS DISTURBED BY CONSTRUCTION AND THE OUTBOARD SLOPES OF THE DIKE SHALL BE FERTILIZED AND SEEDED.

MATERIALS –

AGRICULTURAL GROUND LIMESTONE: 25 LBS PER UNIT (1,000 SF)

FERTILIZER: GRANULAR FERTILIZER 18.5, 18.5, 18.5 (N,P,K)

10 LBS PER UNIT

SEED:		
	TALL FESCUE	59%
	RED FESCUE	25%
	RED TOP	5%
	LADINO CLOVER	3%
	ANNUAL RYEGRASS	8%

THIS SEED MIXTURE SHALL BE APPLIED AT A RATE OF 3 LBS PER UNIT

INSTALLATION – MDOT 618.05 AND MDOT 618.06

RECOMMENDED TIME OF SEEDING IS FROM APRIL 15 TO SEPTEMBER 15.

STATE OF MAINE
PETER M. MAHER
#4107
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
				2/20/96	ISSUED FOR BID				
				2/9/96	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95068

DRN	PAF
CHK	GHC
CHK	
CORR	
APPVD	

ISSUE CODE: P – Prelim; B – Bids; M – Mtl T.O.; C – Const.

SCALE AS SHOWN

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY II LANDFILL REGRADING
SYMBOLS & ABBREVIATIONS

JOB NO. 67996
ENG. REQ. NO.
FILE NO. 2-092-4603,7082

YB-23587

E:\SME\ACAD\SYMSHT Wed Feb 12 10:48:47 1997



STATE OF MAINE
PETER M. MAHER
#4107
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE
	BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, INC.
	NORRIDGEWOCK, MAINE – PHOTO DATE 10/23/95.
	GROUND CONTROL BY PLISGA & DAY, BANGOR, MAINE
	STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS
	MANNER SHOULD BE FIELD VERIFIED BY CONTRACTOR BEFORE
	CONSTRUCTION.

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		2/20/96	ISSUED FOR BID				
		2/9/96	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95068

DRN	
CHK	
CHK	
CORR	
APPVD	
ISSUE CODE	
P – Prelim	B – Bids
M – Mtl T.O.	C – Const.
SCALE AS SHOWN	

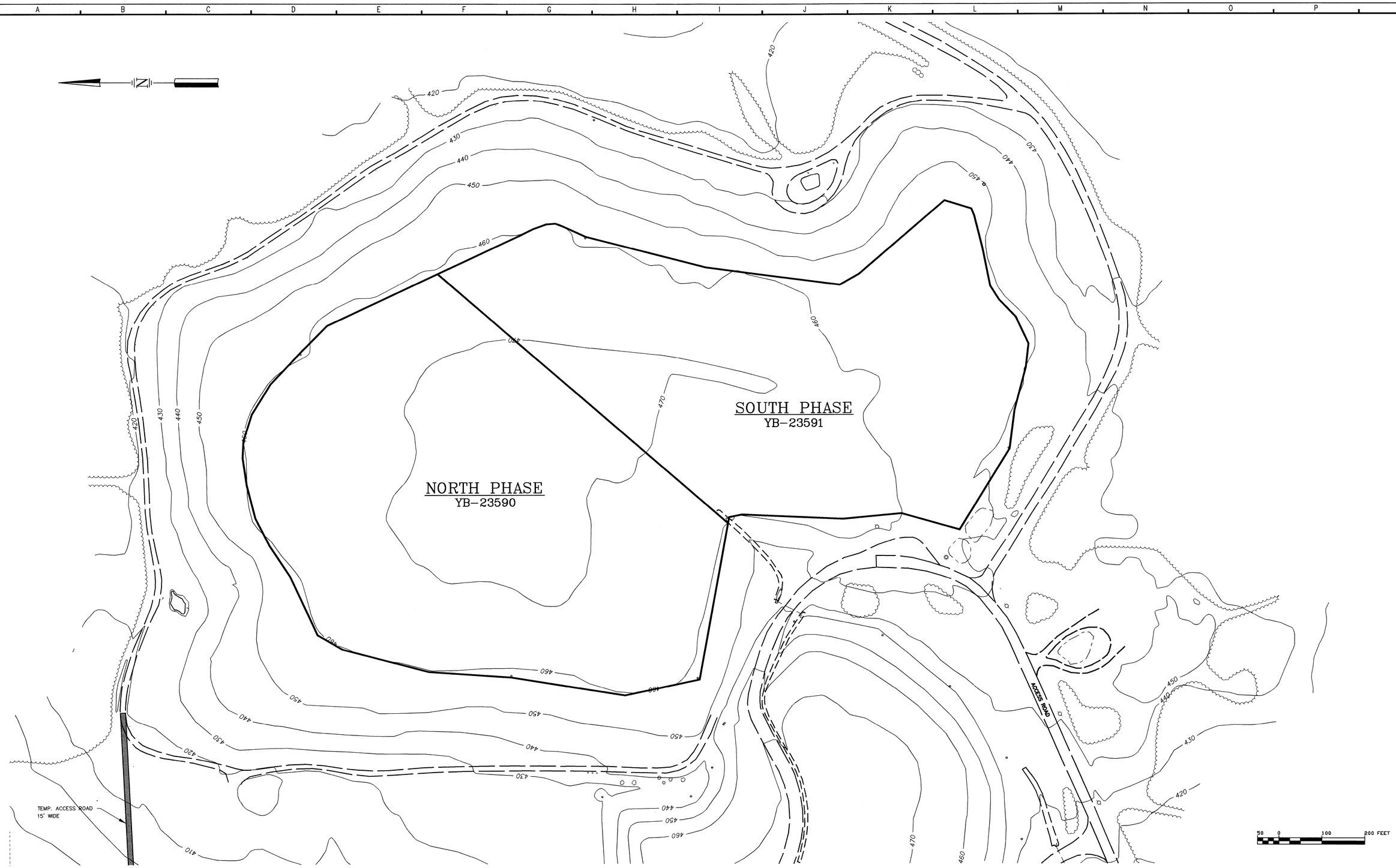
BOWATER
Great Northern Paper

EAST OPERATION

DOLBY II LANDFILL REGRADING
SITE LOCATION PLAN

JOB NO. 67996
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB–23588



BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, INC.
NORRIDGEWOCK, MAINE - PHOTO DATE 10/23/95.
GROUND CONTROL BY PLISGA & DAY, BANGOR, MAINE

STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY CONTRACTOR BEFORE CONSTRUCTION.

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		2/20/96	ISSUED FOR BID				
		2/9/96	SUBMITTED TO CLIENT				

STATE OF MAINE
PETER M. MAHER
#4107
REGISTERED PROFESSIONAL ENGINEER

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95068

DRN	
CHK	
CHK	
CORR	
APPVD	

ISSUE CODE: P - Prelim | B - Bids | M - Mtl T.O. | C - Const.

SCALE AS SHOWN

BOWATER
Great Northern Paper

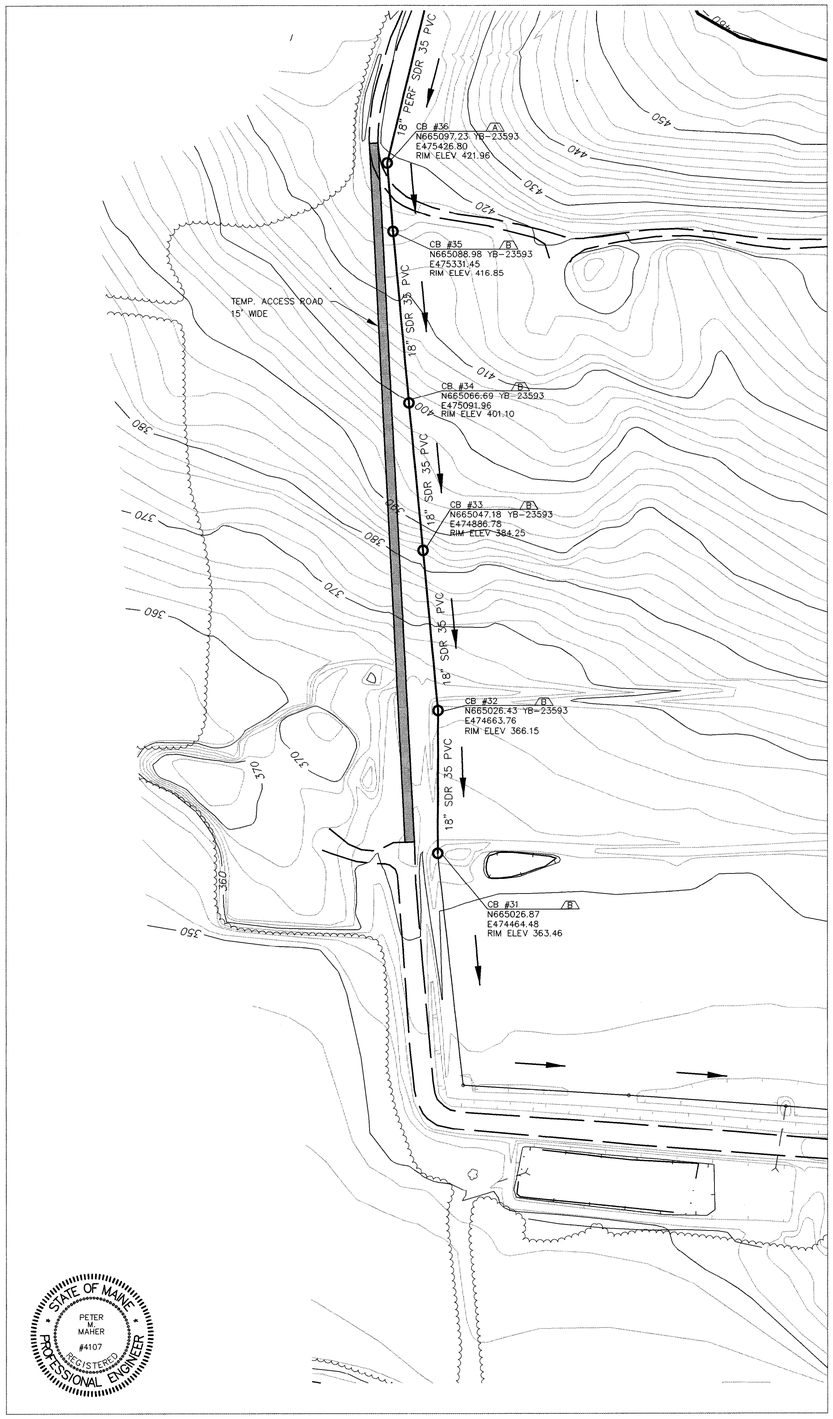
EAST OPERATION

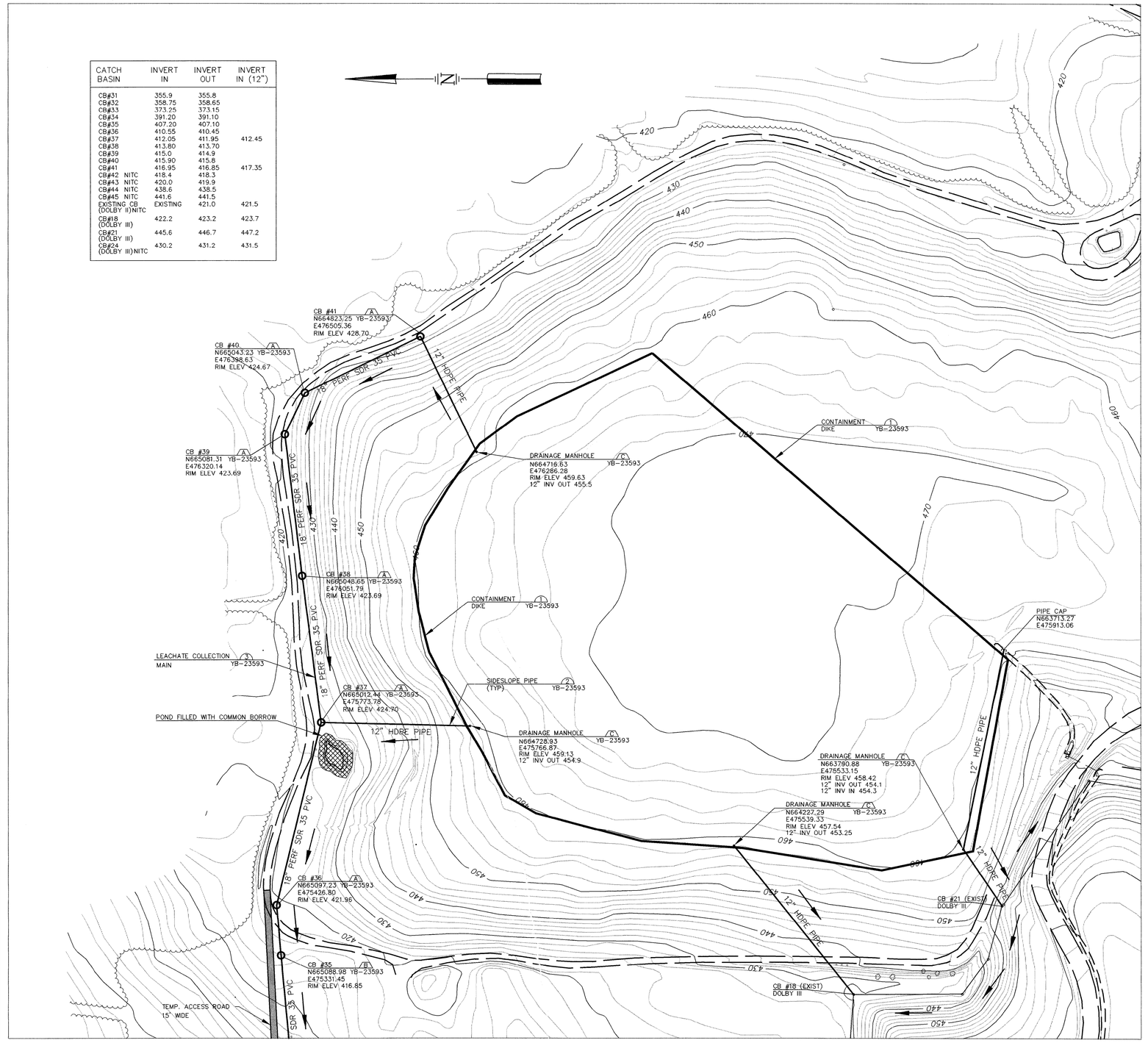
DOLBY II LANDFILL REGRADING SITE DEVELOPMENT PLAN

JOB NO. 67996
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-23589

CATCH BASIN	INVERT IN	INVERT OUT	INVERT IN (12")
CB#31	355.9	355.8	
CB#32	358.75	358.65	
CB#33	373.25	373.15	
CB#34	391.20	391.10	
CB#35	407.20	407.10	
CB#36	410.55	410.45	
CB#37	412.05	411.95	412.45
CB#38	413.80	413.70	
CB#39	415.0	414.9	
CB#40	415.90	415.8	
CB#41	416.95	416.85	417.35
CB#42 NITC	418.4	418.3	
CB#43 NITC	420.0	419.9	
CB#44 NITC	438.6	438.5	
CB#45 NITC	441.6	441.5	
EXISTING CB (DOLBY II)NITC	EXISTING	421.0	421.5
CB#18 (DOLBY III)	422.2	423.2	423.7
CB#21 (DOLBY III)	445.6	446.7	447.2
CB#24 (DOLBY III)NITC	430.2	431.2	431.5





50 0 100 200 FEET

BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, INC.
NORRIDGEWOCK, MAINE – PHOTO DATE 10/23/95.
GROUND CONTROL BY PLISGA & DAY, BANGOR, MAINE

STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY CONTRACTOR BEFORE CONSTRUCTION.

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		1/16/97	RECORD DRAWING				
		2/20/96	ISSUED FOR BID				
		2/9/96	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95068

DRN	
CHK	
CHK	
CORR	
APPVD	
ISSUE CODE	
P – Prelim	B – Bids
M – Mtl T.O.	C – Const.
SCALE AS SHOWN	

BOWATER
Great Northern Paper

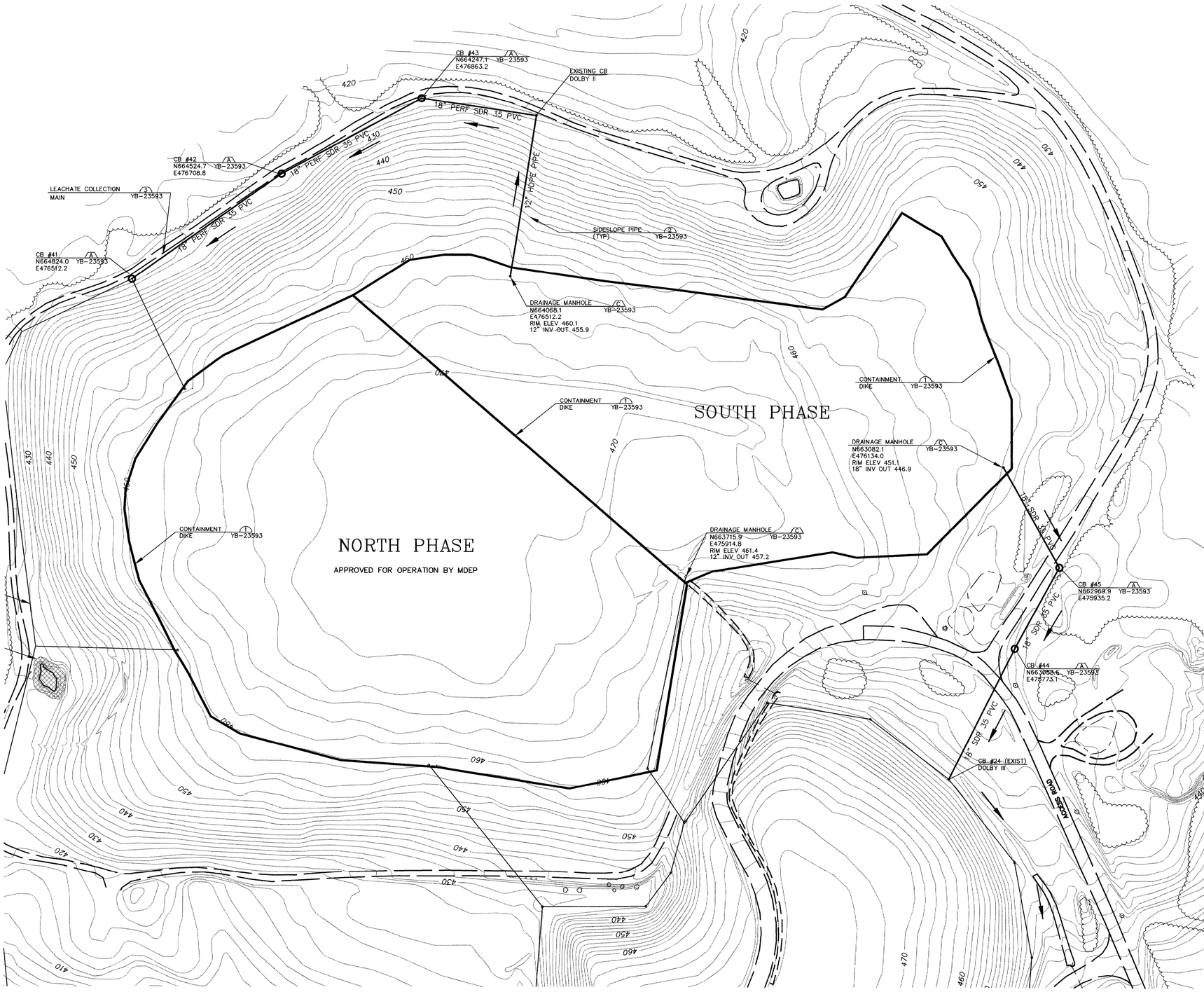
EAST OPERATION

DOLBY II LANDFILL REGRADING
DOLBY II NORTH SITE DEVELOPMENT PLAN

JOB NO. 67996
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-23590

D:\GNP\ACAD\95548 Fri Jan 31 11:14:22 1997



CATCH BASIN	INVERT IN	INVERT OUT	INVERT IN (12")
CB#31	355.6	355.5	
CB#32	358.6	358.5	
CB#33	373.1	373.0	
CB#34	391.1	391.0	
CB#35	407.1	407.0	
CB#36	410.4	410.3	
CB#37	411.9	411.8	412.3
CB#38	413.5	413.4	
CB#39	414.9	414.8	
CB#40	415.4	415.3	
CB#41	416.6	416.5	417.0
CB#42	418.7	418.6	
CB#43	419.8	419.7	
CB#44	438.8	438.6	
CB#45	441.7	441.6	
EXISTING CB (DOLBY II)	EXISTING	421.2	421.5
CB#18 (DOLBY III)	422.2	423.2	423.7
CB#21 (DOLBY III)	445.6	446.7	447.2
CB#24 (DOLBY III)	430.2	431.2	431.5

STATE OF MAINE
PETER J. MAHER
14107
REGISTERED
PROFESSIONAL ENGINEER

BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, INC.
NORRIDGEWOCK, MAINE – PHOTO DATE 10/23/95.
GROUND CONTROL BY PLISGA & DAY, BANGOR, MAINE

STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY CONTRACTOR BEFORE CONSTRUCTION.

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
				12/29/97	RECORD DRAWING				
				3/14/97	PROJECT STATUS TO MDEP	GHC			
				2/20/96	ISSUED FOR BID				
				2/9/96	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95068

DRN	
CHK	
CHK	
CORR	
APPVD	

ISSUE CODE: P – Prelim; B – Bids; M – Mtl T.O.; C – Const.

SCALE AS SHOWN

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY II LANDFILL REGRADING
DOLBY II SOUTH SITE DEVELOPMENT PLAN

JOB NO. 67996
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

YB-23591

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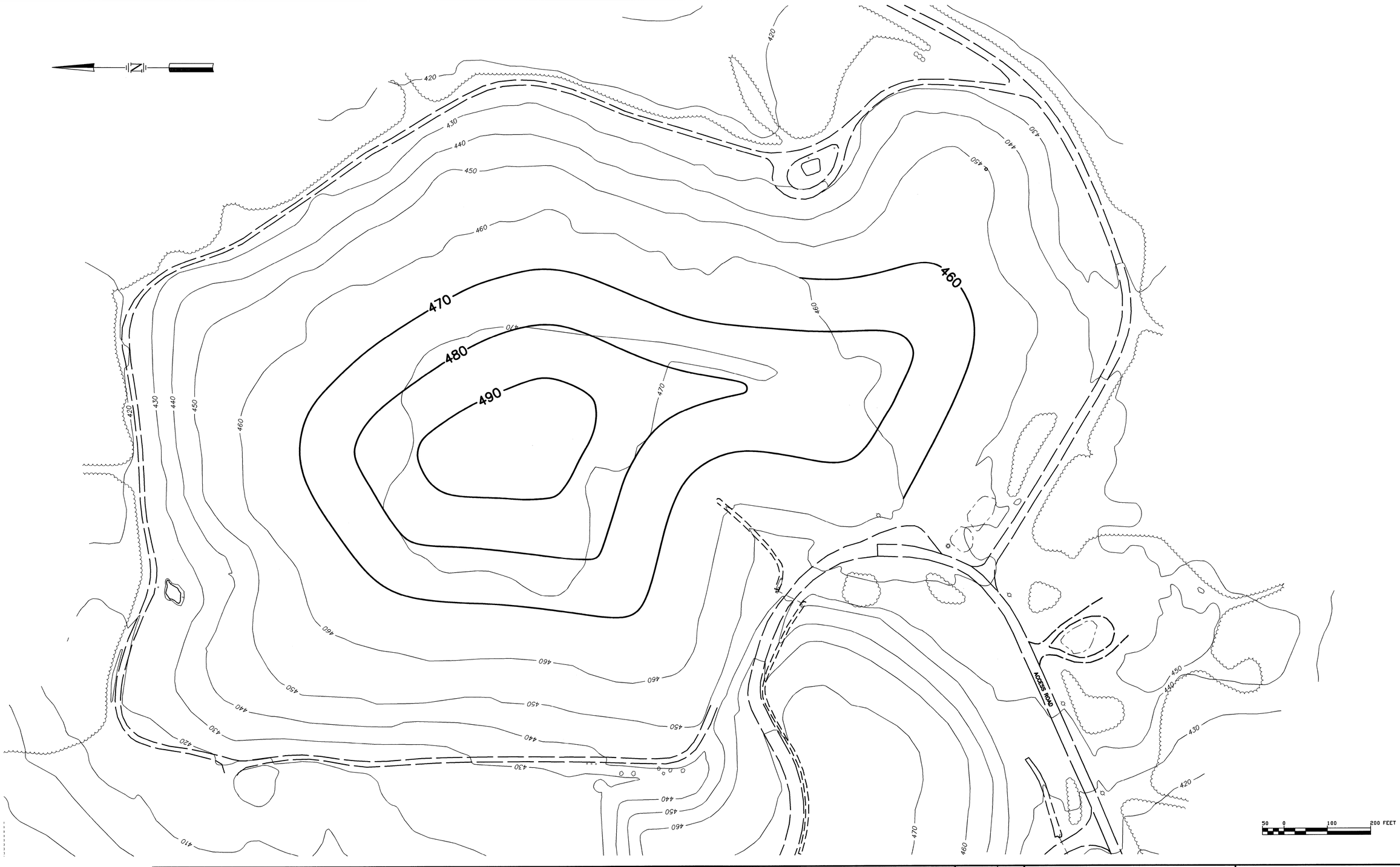


STATE OF MAINE
PETER M. MAHER
#4107
REGISTERED
PROFESSIONAL ENGINEER

BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, INC.
NORRIDGEWOCK, MAINE – PHOTO DATE 10/23/95.
GROUND CONTROL BY PLISGA & DAY, BANGOR, MAINE

STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY CONTRACTOR BEFORE CONSTRUCTION.

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
				2/20/96	ISSUED FOR BID				
				2/9/96	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95068

DRN	
CHK	
CHK	
CORR	
APPVD	
ISSUE CODE	
P – Prelim	B – Bids
M – Mtl T.O.	C – Const.
SCALE AS SHOWN	

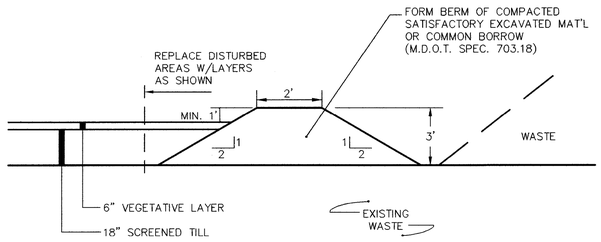
BOWATER
Great Northern Paper

EAST OPERATION

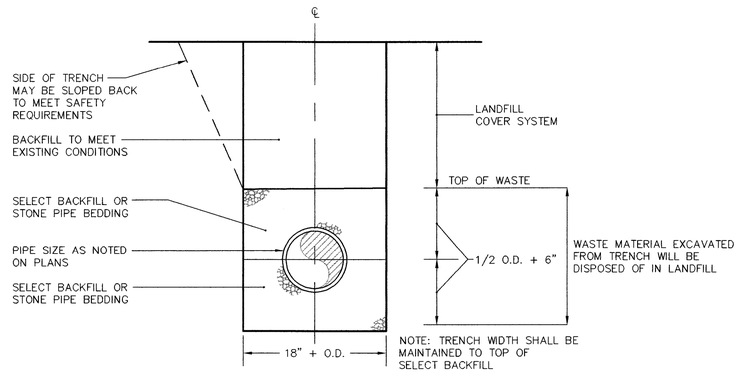
DOLBY II LANDFILL REGRADING FINAL GRADING PLAN

JOB NO. 67996
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

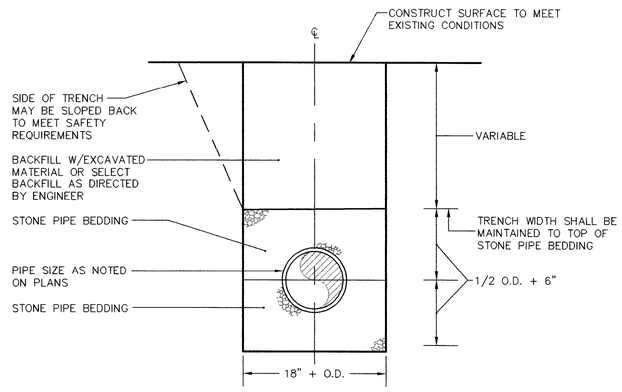
YB-23592



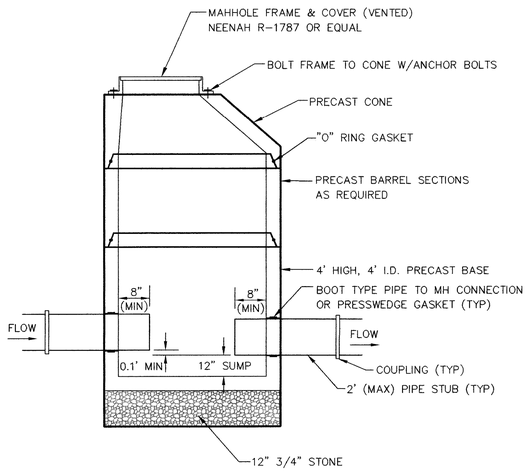
DIKE SECTION (1)
NTS
YB-23590
YB-23591



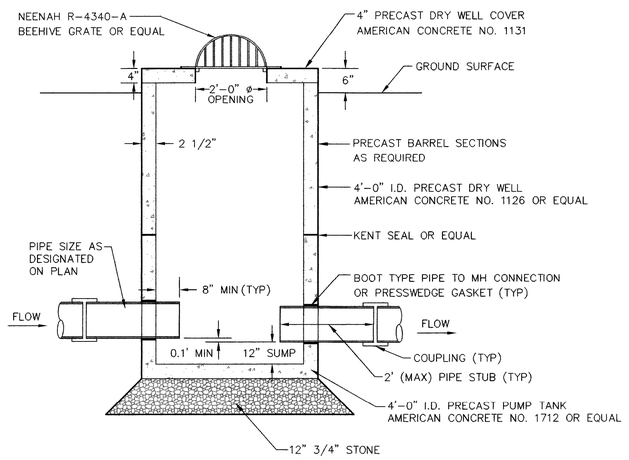
SIDESLOPE PIPE TRENCH (2)
NTS
YB-23590
YB-23591



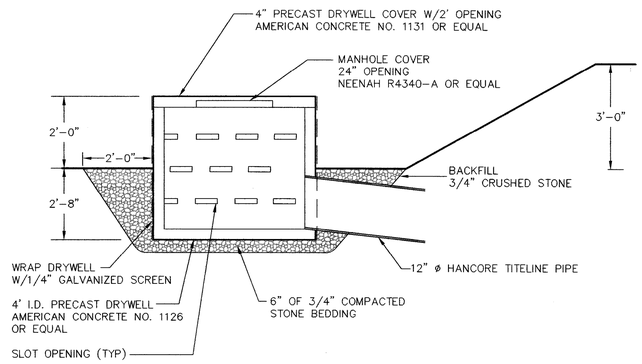
LEACHATE COLLECTION MAIN PIPE TRENCH (3)
NTS
YB-23590
YB-23591



TYPICAL MANHOLE (A)
NTS
YB-23590
YB-23591



CATCH BASIN (B)
NTS
YB-23590



DRAINAGE MANHOLE (C)
NTS
YB-23590
YB-23591

STATE OF MAINE — PETER L. MAHER — 4705 — REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
				1/16/97	RECORD DRAWING				
				2/20/96	ISSUED FOR BID				
				2/9/96	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95068

DRN	
CHK	
CHK	
CORR	
APPVD	
ISSUE CODE	
P – Prelim	B – Bids
M – Mtl T.O.	C – Const.
SCALE AS SHOWN	

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY II LANDFILL REGRADING
SECTIONS & DETAILS

JOB NO. 67996
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

YB-23593

D:\GNP\ACAD\YB11\YB11SD Mon Feb 10 14:03:57 1997



GENERAL

1. [illegible] SHEET SHALL HAVE COMPLETE [illegible] DATED 26 APRIL 1983. [illegible] SHALL BE [illegible] SQUARE HEAVY DUTY STEEL COVERS & LOCK DOWN PINS.

2. HORIZONTAL AND STEEL [illegible] NAD 1927.

3. VERTICAL DATUM BASED ON N.A.V.D. "MEAN SEA LEVEL = 0.00".

4. TEMPORARY BENCH MARKS SHALL BE [illegible] ELEVATIONS SHOWN HEREON ARE TO BE INSTALLED (302 & 303) AT DETAILED ON THE (CLASS A) PAVED [illegible].

5. [illegible] ELEVATIONS & [illegible] AND WELLS AS SHOWN [illegible] ELEVATIONS SHOWN HEREON AT [illegible] ARE TRUE, TO [illegible].

POINT NUMBER	NORTH ELEVATION	TOP CASE ELEVATION	NORTH	EAST	TYPE
MW 105A	403.2	407.23	663,773.662	474,[illegible]	[illegible]
MW 105B	403.2	407.06	663,766.521	474,[illegible]	[illegible]
MW 106A	399.7	401.09	664,090.367	473,[illegible]	[illegible]
MW 106B	400.7	400.97	664,086.628	473,[illegible]	[illegible]
MW 107A	333.3	337.30	663,705.283	473,[illegible]	[illegible]
MW 107B	333.3	337.7	663,700.547	473,[illegible]	[illegible]
MW 203	399.4	401.9	664,060.412	47[illegible]	[illegible]
MW 204A	421.9	424.44	663,404.438	47[illegible]	[illegible]
MW 204B	421.6	424.72	663,399.767	47[illegible]	[illegible]
MW 301	349.91	353.44	664,[illegible].270	473,[illegible]	[illegible]
MW 302A	350.66	353.64	664,083.941	47[illegible]	[illegible]
MW 302B	349.71	353.31	664,080.745	473,[illegible]	[illegible]
P 302	349.77	353.37	665,062.601	474,[illegible]	PIEZOMETER
MW 303A	385.46	389.06	664,384.074	47[illegible]	[illegible]
MW 303B	385.62	389.42	664,393.206	47[illegible]	[illegible]
MW 304A	347.47	350.92	664,[illegible].941	473,[illegible]	[illegible]
MW 304B	347.34	350.74	664,[illegible].577	473,[illegible]	[illegible]
MW 304C	347.64	350.93	664,[illegible].264	473,[illegible]	[illegible]
MW 305A	406.9[illegible]	410.82	662,985.[illegible]	474,[illegible]	[illegible]
MW 305B	406.63	409.26	662,981.740	474,[illegible]	[illegible]
P 306A	367.66	370.96	663,312.231	474,[illegible]	PIEZOMETER
P 306B	367.66	370.96	663,312.23[illegible]	474,[illegible]	PIEZOMETER
P 307A	365.2	368.74	663,[illegible].417	47[illegible]	PIEZOMETER
P 307B	365.2	368.74	663,[illegible].477	47[illegible]	PIEZOMETER
P 307C	362.89	365.99	663,[illegible].[illegible]	47[illegible]	PIEZOMETER
P 308	361.30	365.82	664,442.485	474,[illegible]	PIEZOMETER
P 308	361.30	365.82	664,442.485	474,[illegible]	PIEZOMETER
MW 309		426.44	664,004.451	47[illegible]	[illegible]

6. [illegible] LOCATIONS PERFORMED BY E. C. JORDAN CO. WERE RE-SURVEY BY PATTEN AND [illegible] WERROR AND ARE APPROXIMATE ONLY.

TEMPORARY BENCH MARK 302
[illegible] PAVEMENT
N [illegible] 050.969
E [illegible] .666
EL [illegible] .00

100 50 0 100 200 FEET

YB-14634 | TOPOGRAPHIC MAP PROPOSED DOLBY 3 LANDFILL AREA
DRAWING NO. | REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.

E.C. JORDAN CO.
CONSULTING ENGINEERS

JOB NO. 4187-02 | DWG. NO.

DRN LEDUC	11/20/83
CKD MAHER	12/16/83
CKD RS JR	12/16/83
CORR [illegible]	12/17/83
APPVD DJL	12/17/83

ISSUE CODE
P. PRELIM | B. BIDS
M. MTLT.O. | C. CONST
SCALE 1"=100'

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
EXISTING TOPOGRAPHY MAP

JOB NO. 2668
ENG. REG. NO. E-6313
FILE NO. E-092-7082

YB-14790
SHEET 1 OF 2



YB-14634	TOPOGRAPHIC MAP PROPOSED DOLBY 3 LANDFILL AREA	CODE	NO	DATE	REVISION	BY	CKD	APPVD	JOB No.

E.C.JORDAN CO.
CONSULTING ENGINEERS

JOB NO. 4187-02 DWG. NO.

DRN	LEDUC	11/10/83
CKD	MAHER	12/16/83
CKD	RSJR	12/16/83
CORR	WAN	12-17-83
APPVD	OJL	12-19-83

ISSUE CODE
P - PRELIM B - BIDS
M - MTL T.O. C - CONST
SCALE 1"=100'

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
EXISTING TOPOGRAPHY MAP

JOB NO. 2668
ENG. REQ. NO. 2-8313
FILE NO. 2-092-7082

YB-14790
SHEET 2 OF 2

N

CARRY TYPE 2 DIVERSION DITCH AROUND END OF ROAD AND CONNECT TO TYPE 1 DITCH AT WEST SIDE OF ROAD

TYPE 2 DIVERSION DITCH

DIKE AND DRAINAGE DIVERSION DITCH SEE DWG YB-14794 FOR TYPICAL SECTION

PIPE STUB W/ TEMP CAP

CB NO. 1
N664051.8
E474233.2
RIM ELEV. 360.5
INV. IN 356.0
INV. OUT 355.8

CB NO. 2
N664061.7
E474038.1
RIM ELEV. 358.0
INV. IN 351.0
INV. OUT 350.5

TOD EL. 351.0
N664284.2
E473947.1

PIPE STUB W/ TEMP CAP

PERF. LEACHATE COLLECTION MAIN

CB NO. 3
N663849.7
E473936.6
RIM ELEV. 356.5
INV. IN 349.0
INV. OUT 345.8

TOD 351.0
N664042.8
E473987.1

TOD EL 351.00
N664321.2
E473843.0

INV. 342.50

INV. 343.00

INV. 342.54

INV. 342.26
LEACHATE HOLDING POND

Gate Valve REF. YB-14796 Notes

INLET AND PIPE BOOT L YB-14796

OUTLET STRUCTURE (TYP) K YB-14796
INV. 345.00

INV. 363.0

INV. 341.65

INV. 347.9

INV. 342.35

3-MAN GATE

12' DOUBLE LEAF GATE

MW-301 (A,B,C)

LEACHATE HOLDING POND ACCESS ROAD

S YB-14795
INV. IN: 341.35
INV. OUT: 340.85
RIM ELEV. 348.2

GATE VALVE

UNDERDRAIN MH B YB-14793
N664167.3
E473684.1
DELINEATORS AT 50' SPACING

UNDERDRAIN OUTLET
INV. 340.0

RODENT GUARD H YB-14795

TYPE 1 DITCH

END TYPE 1 DITCH

TEMP SILTATION FENCE DURING CONSTRUCTION

TEMPORARY CULVERT CAP C YB-14793

TYPICAL CATCH BASIN A YB-14793

CAP END OF DRAIN (TYP)

PROVIDE BASAL DRAINAGE BLANKET (SEE DWG. YB-14792)

2-IN., 6-IN LEACHATE COLLECTION PIPES 9 YB-14796

PERF. LEACHATE COLLECTION MAIN 11 YB-14796

SEDIMENTATION TRAP

STONE OUTLET SEDIMENT TRAP D YB-14794

WASTE AREA

TYPE 1 DITCH F YB-14794

N663500.1
E473604.5

N663500.2

N664000

E474000

N663212.2
E474257.6

CB NO. 8
N663202.5
E474340.9
RIM ELEV. 384.5
INV. IN 375.9
INV. OUT 375.7

21" BCCMP CULVERT
INV. 382.0

INV. 382.25

PIPE STUB W/ TEMP PLUG

TEMPORARY CULVERT CAP C YB-14793

CB NO. 7
N663032.5
E474300.6
RIM ELEV. 376.5
INV. IN 371.5
INV. OUT 371.0

TYPE 1 DITCH F YB-14794

STOCKPILE AREA

LANDFILL ACCESS ROAD

END TYPE 1 DITCH

DETENTION BASIN

INV. 364.6

MAIN ACCESS ROAD

RIPRAP APRON Z YB-14794
366.3

INV. 366.5

DELINEATORS AT 100' SPACING

ROADWAY DELINEATOR E YB-14794

CB NO. 6
N663312.4
E473880.9
RIM ELEV. 372.0
INV. IN 366.0
INV. OUT 365.7

CB NO. 5
N663443.5
E473811.8
RIM ELEV. 369.0
INV. IN 361.0
INV. OUT 353.8

CB NO. 4
N663487.3
E473821.7
RIM ELEV. 366.5
INV. IN 357.8
INV. IN 357.6
INV. OUT 349.0

INV. 350.0

INV. 346.9

INV. 360.0

50 25 0 50 100 FEET

NOTES:

1. BOULDERS ENCOUNTERED IN THE ROADWAY AREA SHALL BE DISPOSED OF ALONG THE EDGES OF THE ROAD OUTSIDE THE DITCH LINES.
2. BOULDERS ENCOUNTERED IN THE LEACHATE POND AREA SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE POND AND ROADWAY.
3. BOULDERS ENCOUNTERED IN THE LANDFILL AREA WHICH REQUIRE REMOVAL FOR THE INSTALLATION OF UNDERDRAINS, STORM DRAINAGE FACILITIES AND DIKE CONSTRUCTION SHALL BE DISPOSED OF IN THE DESIGNATED WASTE AREA.
4. EXISTING TOPOGRAPHY ENLARGED PHOTOGRAMMETRICALLY FROM TOPOGRAPHIC MAPPING PROVIDED BY JAMES W. SEWALL COMPANY. SEE REFERENCE DRAWING NO. YB-14634.
5. WASTE AND STOCKPILE AREAS SHALL BE GRADED, SEEDED, AND MULCHED.

DRAWING NO.	REFERENCE DRAWING TITLE
YB-14791	TOPOGRAPHIC MAP PROPOSED DOLEY 3 LANDFILL AREA

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.

E.C. JORDAN CO.
CONSULTING ENGINEERS

JOB NO. 4187-02 DWG. NO.

DRN BISKUP 11/6/83
CKD
CKD
CORR
APPVD

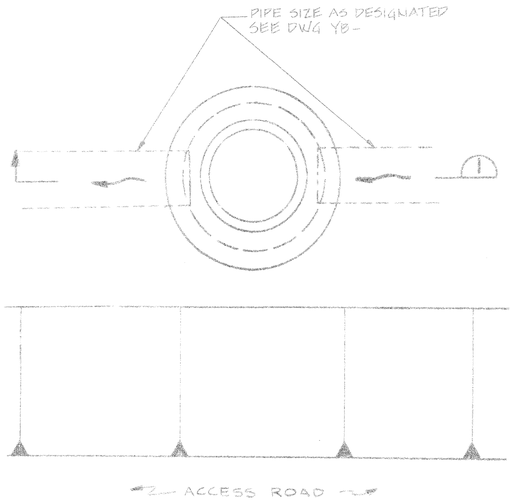
ISSUE CODE
P - PRELIM. B - BIDS
M - MTL T.O. C - CONST
SCALE 1"=50'

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

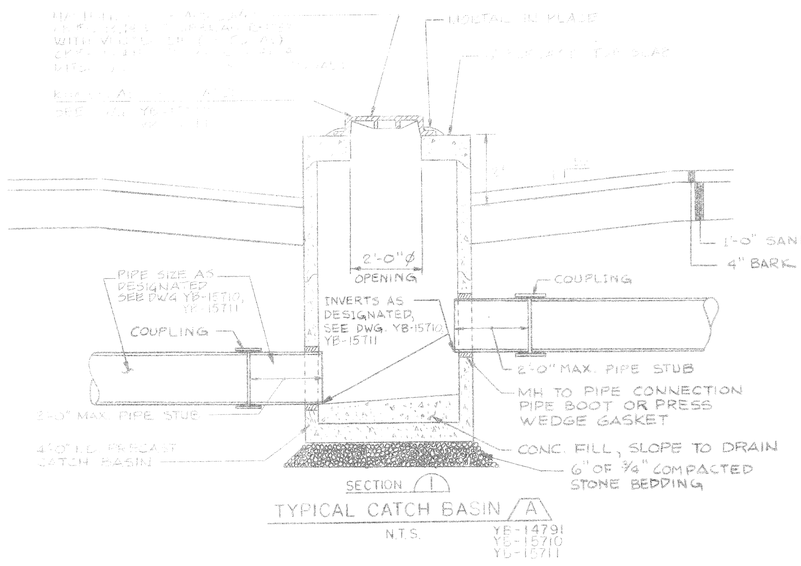
CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLEY 3 LANDFILL
SITE DEVELOPMENT PLAN
FIRST YEAR

JOB NO. 2668
ENG. REQ. NO. 2-8512
FILE NO 2-002-7082

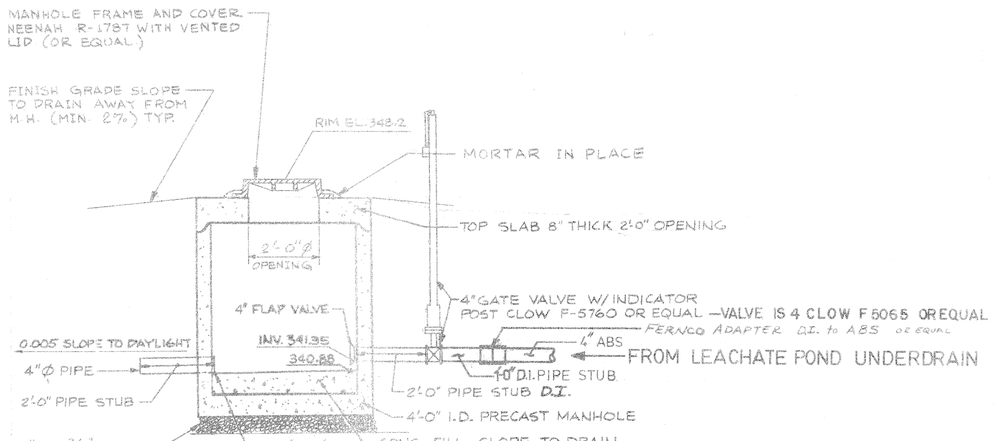
YB-14791



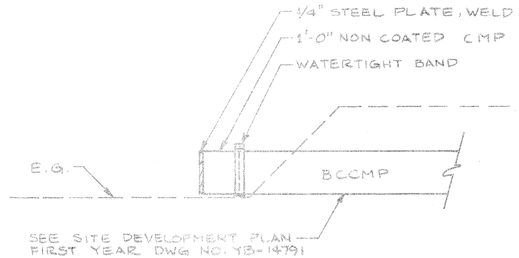
PLAN



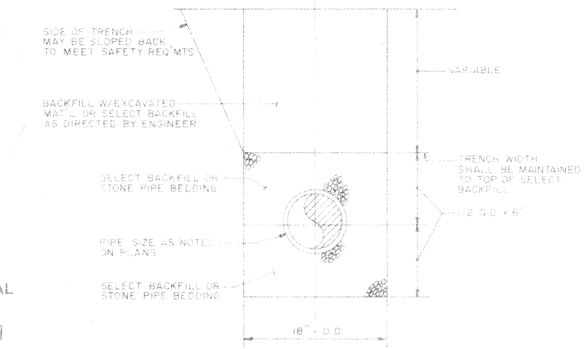
TYPICAL CATCH BASIN /A
N.T.S. YB-14791 YB-15710 YB-15711



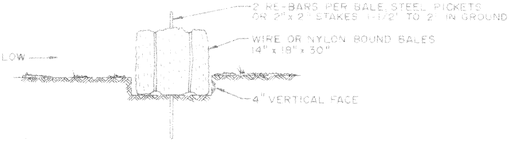
UNDERDRAIN MANHOLE /B
NTS YB-14791



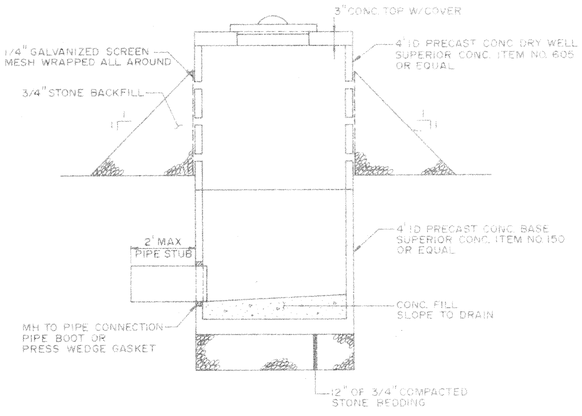
TEMPORARY CULVERT CAP /C
N.T.S. YB-14791



PIPE TRENCH /12
N.T.S. YB-15710 YB-15711



STRAW BALE DIKE /N
N.T.S. YB-15711



POND INLET /P
N.T.S. YB-15710

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C	A	5/24/87	GENERAL REVISION FOR JOB # 87478 CELL 2	MJC	ECS/WHN		87478

SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE
E.C. JORDAN CO.
CONSULTING ENGINEERS
JOB NO. 4187-02 DWG. NO.

DRN	MS/RDC	12/1/83
CKD	MAHER	12/16/83
CKD	RS JR.	12/16/83
CORR	WHN	12-17-83
APPVD	CJL	12-19-83

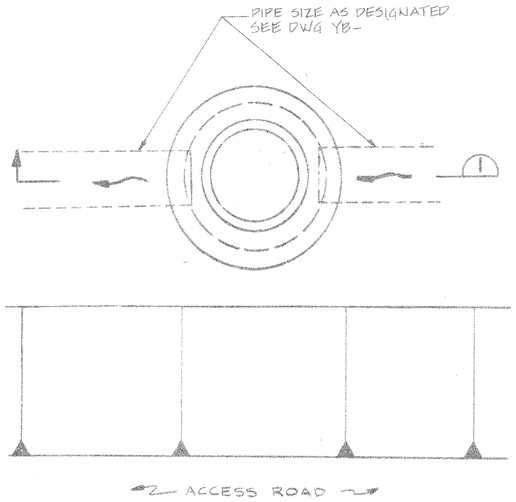
ISSUE CODE: P - PRELIM | B - BIDS | M - MTL T.O. | C - CONST
SCALE AS NOTED

Great Northern Paper
a company of Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
LANDFILL AREA
DRAINAGE DETAILS

JOB NO. 2668
ENG. REQ. NO. 4-E313
FILE NO. 2-092-7.08-2

YB-14793-A



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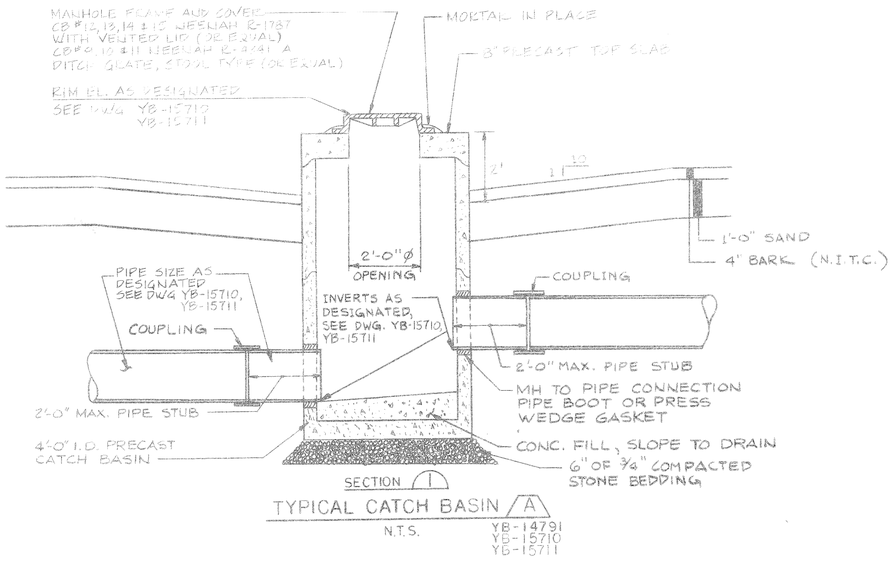
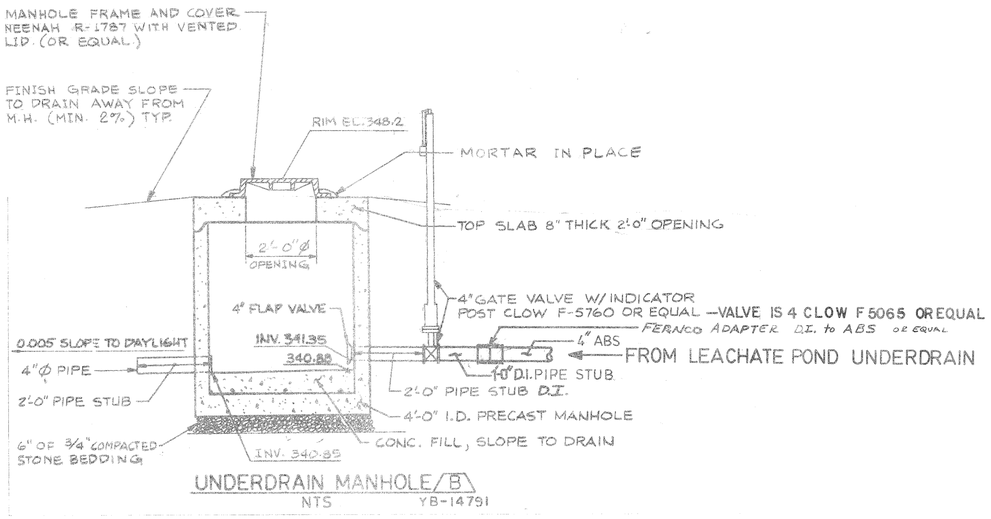
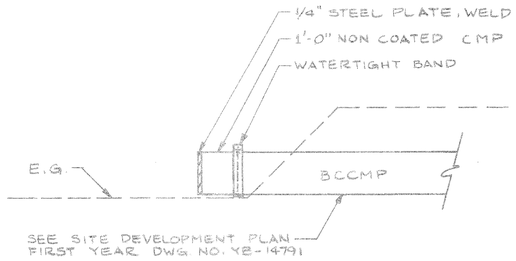


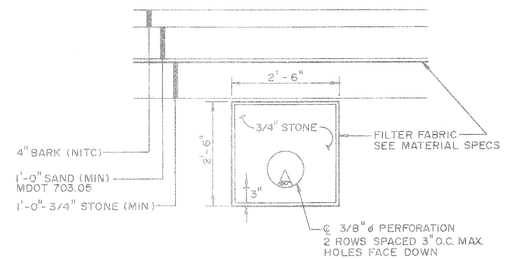
TYPICAL CATCH BASIN (A)
N.T.S. YB-14791 YB-15710 YB-15711



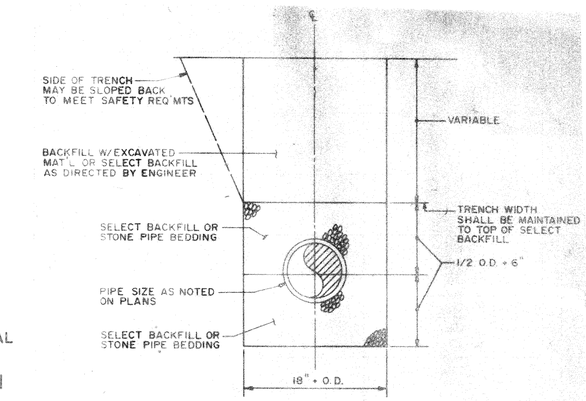
UNDERDRAIN MANHOLE (B)
NTS YB-14791



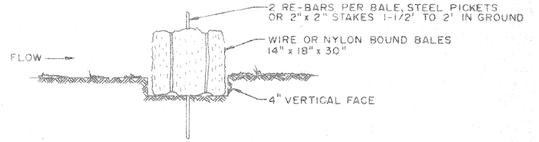
TEMPORARY CULVERT CAP (C)
N.T.S. YB-14791



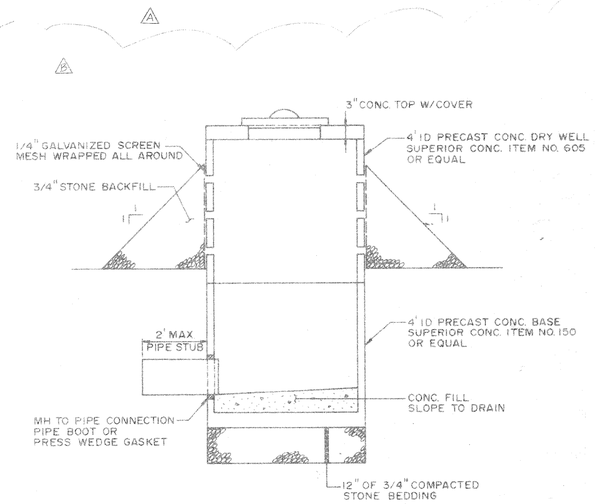
AREA DRAIN-CELL 2 (13)
N.T.S. YB-15711A



PIPE TRENCH (12)
N.T.S. YB-15710 YB-15711



STRAW BALE DIKE (N)
N.T.S. YB-15711



POND INLET (P)
N.T.S. YB-15710

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C		10/20/87	RECORD DRAWING	MJC			
C	B	7/14/87	NOT IN THIS CONTRACT	MJC			
C	A	5/24/87	GENERAL REVISION FOR JOB # 94473 CELL 2	MJC	ECS	WRN	94473

STATE OF MAINE — Mark S. Secor — FINAL — 11/4/87

SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE

E.C. JORDAN CO.
CONSULTING ENGINEERS

JOB NO. 4187-02 DWG. NO.

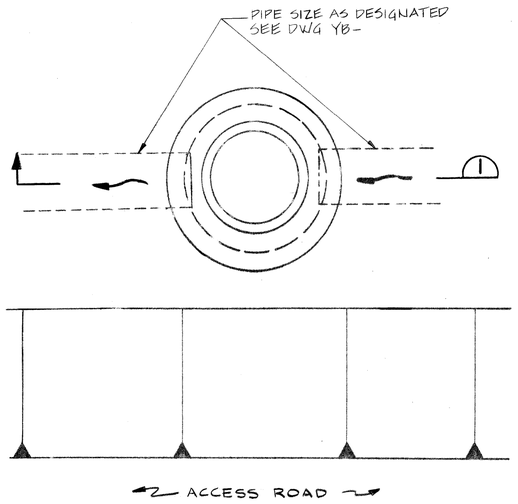
DRN MB/RDC.	12/1/83
CKD MAHER	12/16/83
CKD RS JR.	12/16/83
CORR WRN	12-17-83
APPVD DJL	12-19-83
ISSUE CODE	
P - PRELIM	B - BIDS
M - MTL T.O.	C - CONST
SCALE AS NOTED	

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

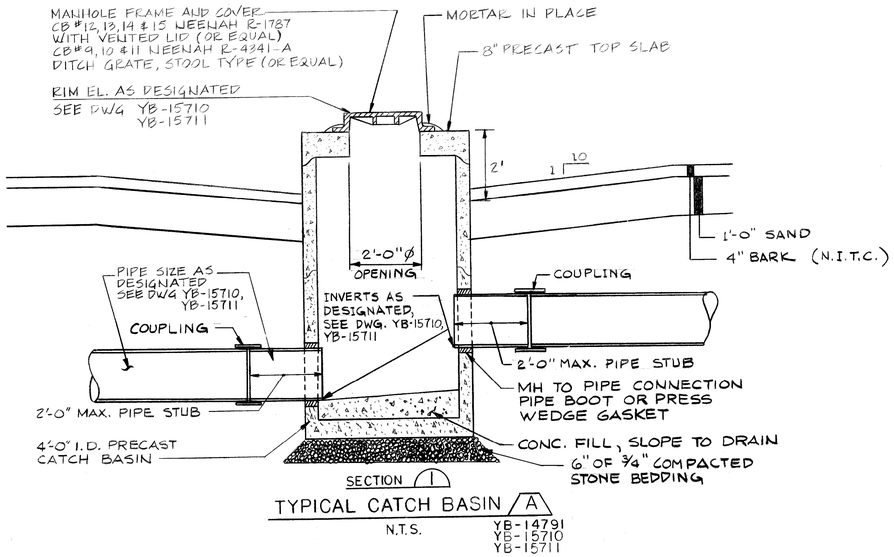
CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
LANDFILL AREA
DRAINAGE DETAILS

JOB NO. 2668
ENG. REQ. NO. 2-8313
FILE NO. 2-092-7082

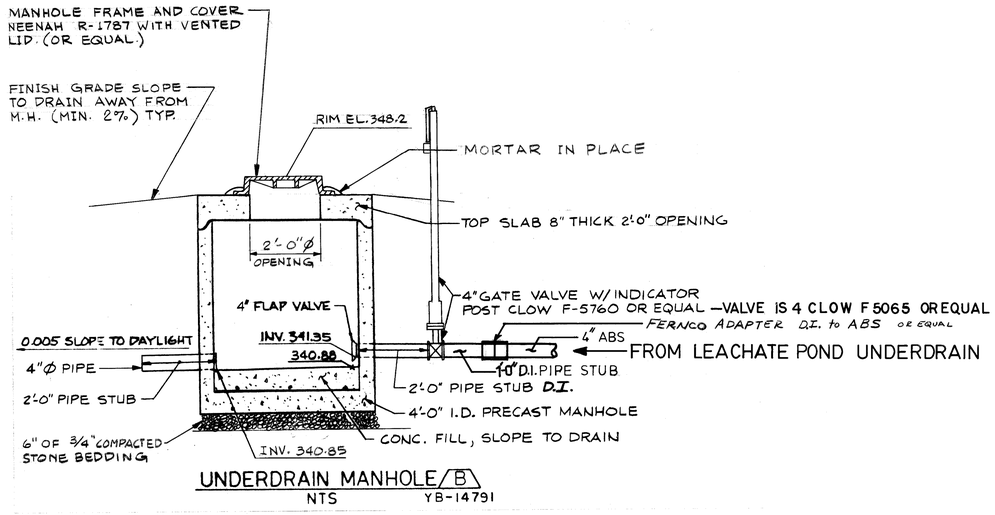
YB-14793-B



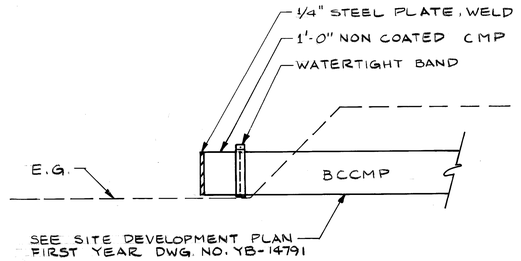
PLAN



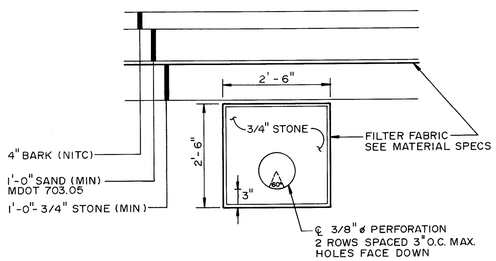
TYPICAL CATCH BASIN / A
N.T.S. YB-14791 YB-15710 YB-15711



UNDERDRAIN MANHOLE / B
NTS YB-14791



TEMPORARY CULVERT CAP / C
N.T.S. YB-14791



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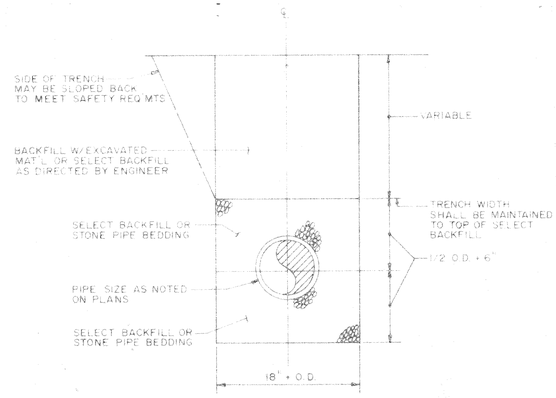
N.T.S. YB-15711A



PIPE TRENCH / 12
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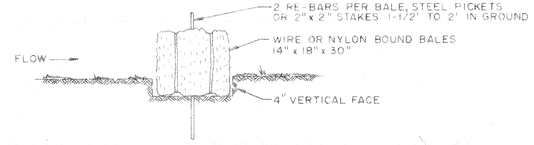

STRAW BALE DIKE / N
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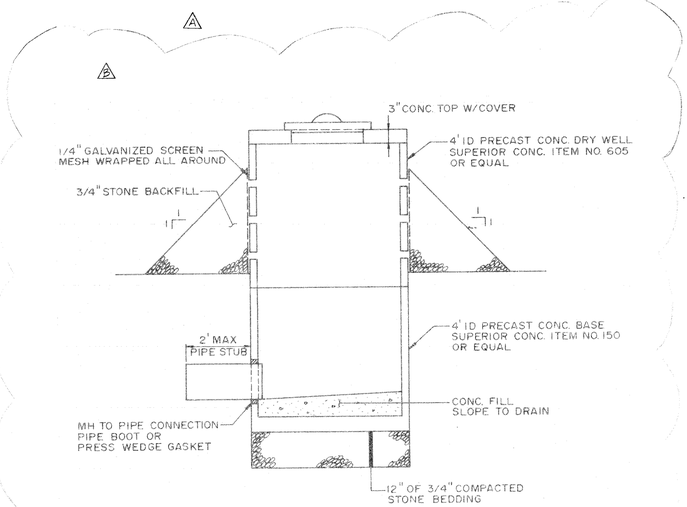


POND INLET / P
N.T.S. YB-15710

STATE OF MAINE — JAMES E. SEVEE — REGISTERED PROFESSIONAL ENGINEER — 6/9/87

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C	C	10/20/87	RECORD DRAWING	MJC	BRS		94473
C	B	7/16/87	NOT IN THIS CONTRACT	MJC	BRS		94473
C	A	5/26/87	GENERAL REVISION FOR JOB # 94473 CELL 2	MJC	ECS	WJAN	94473

SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE

E.C. JORDAN CO.
CONSULTING ENGINEERS

JOB NO. 4187-02 DWG. NO.

DRN MB/RDC	12/1/83
CKD MAHER	12/16/83
CKD RSSE	12/16/83
CORR WJAN	12-17-83
APPVD OJL	12-19-83
ISSUE CODE	
P - PRELIM	B - BIDS
M - MTL T.O.	C - CONST
SCALE AS NOTED	

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
LANDFILL AREA
DRAINAGE DETAILS

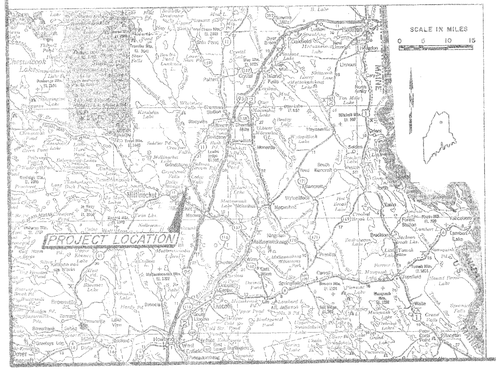
JOB NO. 2668
ENG. REQ. NO. 2-8313
FILE NO. 2-092-7082

YB-14793-C

GREAT NORTHERN PAPER CO.
MILLINOCKET, MAINE

DOLBY 3 LANDFILL
CELL 2 CONSTRUCTION

TITLE		DRAWING NO.	SHEET NO.
COVER SHEET		YB-14788	
DOLBY 3 LANDFILL	SYMBOLS, ABBREVIATIONS AND GENERAL NOTES	YB-14788A	
DOLBY 3 LANDFILL	CELL 2, SITE LOCATION PLAN	YB-15710	SHEET 1 OF 2
DOLBY 3 LANDFILL	CELL 2, SITE LOCATION PLAN	YB-15710	SHEET 2 OF 2
DOLBY 3 LANDFILL	SITE DEVELOPMENT PLAN CELL 2	YB-15711	
DOLBY 3 LANDFILL	LANDFILL AREA DRAINAGE DETAILS	YB-14793A	
DOLBY 3 LANDFILL	ACCESS ROAD TYPICAL SECTIONS AND DETAILS	YB-14794B	
DOLBY 3 LANDFILL	SITE DEVELOPMENT DETAILS	YB-14796A	



SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE

1987

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY 3 LANDFILL
COVER SHEET

JOB NO. 94473
DRG. REQ. NO. 2-8516
FILE NO. 2-092-4703.7082

YB-15709

SYMBOLS

TOPOGRAPHIC

EXISTING	PROPOSED	
		NORTH ARROW (TRUE)
		NORTH ARROW (MAGNETIC)
		NORTH ARROW (PLAN NORTH)
25	25	CONTOUR LINES
25.63	25.66	SPOT ELEVATION (GRADE)
E.G.		EXISTING GROUND (PROFILES & SECTIONS)
SB		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION POINT
		CENTERLINE OF CONSTRUCTION
P		PROPERTY OR DEED LINE (NOT SURVEYED)
525.14' N35°10'41"E	525.19' N35°10'41"E	PROPERTY LINE W/BEARING & DISTANCE
		EASEMENTS, OR RIGHT OF WAY LINE
		BOUNDARY LINE (STATE, COUNTY, MUNICIPALITY)
MON.	MON.	SURVEY MONUMENT
I.F.	I.F.	SURVEY IRON (FOUND)
PK STK DH	PK STK DH	DRILL HOLE, P.K., OR STAKE
		WOODS OR BRUSH LINE
		INDIVIDUAL TREE (DECIDUOUS)
		INDIVIDUAL TREE (CONIFEROUS)
		TREE, TO BE REMOVED
		MARSH AREA
STONE WALL		

EXISTING	PROPOSED	
		DRAINAGE COURSES W/DIRECTION & DITCH
SHORE SIDE		EDGE OF WATER
		WATER ELEVATION (GROUND OR SURFACE)
		ROCK OUTCROP OR LEDGE
		FENCE LINE (WOOD)
x x x	x x x	FENCE LINE (WIRE)
(STONE)	(CONC.) FACE	RETAINING WALL (TYPE)
		SIGNS (& TYPE)
		GUARD RAIL
		BUILDING & STRUCTURES
		STEPS W/TYPE (WOOD/CONCRETE)
	1' 3' OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)
	TOP OF SLOPE	SLOPES (W/SLOPE RATIO)
		EDGE OF TRAVELED WAY (TYPE)
C	F	CUT OR FILL LINE
C.L.L.		CLEARING LIMIT LINE
		GRAVEL SURFACED ROAD
		CONCRETE (SECTIONS & DETAILS)
P23 B38 MW99		PIEZOMETER, TEST BORING, MONITORING WELL & NUMBER
TP105	TP	TEST PIT & NUMBER
	SF	SILTATION FENCE
		CURBING

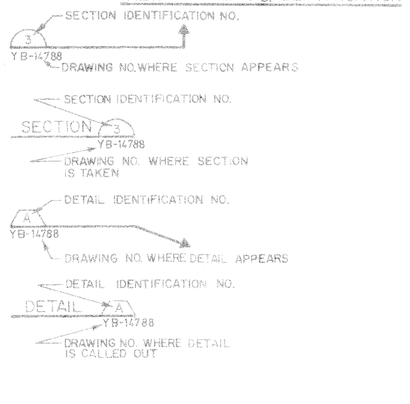
UTILITIES

EXISTING	PROPOSED	
		MANHOLE
		WATER VALVE & SIZE
		HYDRANT
J23		TELEPHONE OR POWER POLE
OR		CATCH BASIN
G	PROP. 8" G	UNDERGROUND GAS MAIN & SIZE
T	PROP. T	UNDERGROUND TELEPHONE CABLE/CONDUIT
E	PROP. E	UNDERGROUND ELECTRIC CABLE/CONDUIT
A	PROP. A	UNDERGROUND ALARM CABLE/CONDUIT
	12" ACP	SANITARY SEWER, SIZE & TYPE
	8" PVC	FORCE MAIN, SIZE & TYPE
	8" D.I.	WATER MAIN, SIZE & TYPE
	12" RCP	STORM DRAIN, SIZE & TYPE
UD	UD	UNDERDRAIN (SIZE AND TYPE)
	12" B.C.C.M.P.	CULVERT, SIZE & TYPE
		RAILROAD
OE		OVERHEAD ELECTRICAL LINE
		GAS PUMPS
	4" PVC	GAS COLLECTION SYSTEM, SIZE & TYPE
		GAS VENT

GENERAL NOTES

1. UTILITY INFORMATION SHOWN ON THE DRAWINGS IS TAKEN FROM DATA SUPPLIED BY THE UTILITY COMPANIES OF THE OWNER. THE CONTRACTOR SHALL VERIFY THE ACTUAL FIELD LOCATION OF UTILITIES PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION AND ABIDE WITH THE REGULATIONS OF THE RESPECTIVE UTILITIES WHEN WORKING IN PROXIMITY TO UTILITY LINES AND STRUCTURES.
3. RELOCATION OF UTILITIES SHALL BE BY THE RESPECTIVE OWNER UNLESS OTHERWISE DESIGNATED IN THE CONTRACT DOCUMENTS.
4. THE CONTRACTOR SHALL LIMIT THE CONSTRUCTION ACTIVITY TO THE LIMITS SHOWN ON THE DRAWINGS.
5. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL PERMITS AND REGULATIONS GOVERNING THE CONSTRUCTION ACTIVITY.
6. SATISFACTORY DISPOSAL OF WASTE MATERIALS IS THE CONTRACTOR'S RESPONSIBILITY. APPROVED DISPOSAL AREAS, IF ALLOWED, ON THE LANDS OF THE OWNER WILL BE DESIGNATED IN THE CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE THE CONSTRUCTION TO MAINTAIN TRAFFIC AND THE OWNER'S USE OF ADJACENT FACILITIES AS DESIGNATED IN THE CONTRACT DOCUMENTS.
8. FOR SPECIFIC PROJECT NOTES, REFER TO PROJECT DRAWINGS.

VIEW MARKERS & IDENTIFICATION



ABBREVIATIONS

AC	ACRE
ALT	ALTERNATE
ALUM	ALUMINUM
APPD	APPROVED
APPROX	APPROXIMATE
ARCH	ARCHITECT
ASB	ASBESTOS
A.C.P.	ASBESTOS CEMENT PIPE
ASPH	ASPHALT
A.C.C.M.P.	ASPHALT COATED CORRUGATED METAL PIPE
ASSY	ASSEMBLY
AUTO	AUTOMATIC
AVE	AVENUE
BIT	BITUMINOUS
A.D.T.	AVG. ADT DAILY TRAFFIC
A.A.D.T.	AVG. ADT ANNUAL DAILY TRAFFIC
AZ	AZIMUTH
BL	BASE LINE
BRG	BEARING
B.M.	BENCH MARK
BIT.	BITUMINOUS
B.C.C.M.P.	BITUMINOUS COATED CORRUGATED METAL PIPE
BD	BOARD
B.O.B.	BOTTOM OF BANK
BOT	BOTTOM
BLDG	BUILDING
CATV	CABLE TELEVISION
C.I.	CAST IRON
C.B.	CATCH BASIN
CEM	CEMENT
CTR	CENTER
C TO C (C/C)	CENTER TO CENTER
△	CENTRAL ANGLE OF A CURVE
CHAN	CHANNEL
CL	CHAIN
C.O.	CLEAN OUT
CLR	CLEAR
CPL	COUPLING
CONC	CONCRETE
CMP	CONDUIT
CONST	CONSTRUCTION
CONSTR	CONSTRUCTION
CONTR	CONTRACTOR
C.I.	CONTROL JOINT
C.M.P.	CORRUGATED METAL PIPE
CRS	COURSE
CVR	COVER
XSECT	CROSS-SECTION
C.F.S.	CUBIC FEET PER SECOND
C.Y.	CUBIC YARD
Da	DEGREE OF CURVE (ARC DEF.)
Dc	DEGREE OF CURVE (CHORD DEF.)
DEG	DEGREE
DEPT	DEPARTMENT
D.H.V.	DESIGN HOURLY VOLUME
DET	DETAIL
DIA OR ϕ	DIAMETER
DIM	DIMENSION
DIST	DISTANCE
DIV	DIVISION
DBL	DOUBLE
DWL	DWELL
DN	DOWN
DR	DRAIN
DRWY	DRIVEWAY

DRG	DRAWING
DR. INL.	DROP INLET
D.I.	DUCTILE IRON
EA	EACH
ELEV	ELEVATION
ELEC	ELECTRIC
EL	ELEVATION
ENG	ENGINEER
ENT	ENTRANCE OR ENTERING
EQUAL	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATED
EXC	EXCAVATE
EXCAV	EXCAVATION
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FAB	FABRICATE
FT OR '	FEET OR FOOT
F.P.S.	FEET PER SECOND
FBGL	FIBERGLASS
FIN	FINISH
FL	FLOOR
FIN	FINISHED GRADE
FLG	FLANGE
FLEX	FLEXIBLE
FLR	FLOOR
F.D.	FLOOR DRAIN
FTG	FOOTING
FW	FORWARD
FDN	FOUNDATION
FRT	FREIGHT

GAL	GALLON
G.P.D.	GALLONS PER DAY
G.P.M.	GALLONS PER MINUTE
GALV	GALVANIZED
GA	GAUGE
GR	GRADE
GRAN	GRANITE
HDWR	HARDWARE
HDR	HEADWALL
HTG	HEATING
HGT	HEIGHT
H.P.	HIGH POINT
HOR	HORIZONTAL
HP	HORSEPOWER
H.S.	HIGH STRENGTH
HYD	HYDRANT
INT.	INTERIOR
INSP	INSPECTOR
I.D.	INSIDE DIAMETER
INS	INSULATION
INT	INTERIOR
INTER	INTERSECTION
INV	INVERT
IN.SL.	INVERT ELEVATION
IN or "	INCHES
KIP	KIP = 1000 LBS
KVP	KEROSENE VAPOR PRIMER
K	1000
LAB	LABORATORY
LAT	LATITUDE
LT	LEFT
LG	LENGTH OF CURVE
LBS	LBS.
L.F.	LINEAR FEET
LOC	LOCATION
LONG	LONGITUDE
L.P.	LOW POINT
LBR	LUMBER
MACH	MACHINE
MH	MANHOLE
MFR	MANUFACTURE
MAT	MATERIAL
MAX	MAXIMUM
MIN	MINIMUM
M.I.P.	MALE IRON PIPE
MECH	MECHANICAL
MED	MEDIAN
MET	METAL
MI	MILE
MON	MONUMENT
MPH	MILES PER HOUR
MUT	MUTUAL
NAT	NATURAL
N.I.C.	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
N.T.S.	NOT TO SCALE
N.G.V.D.	NATIONAL GEODETIC VERTICAL DATUM
NTS	NOT TO SCALE

O.D.	OUTSIDE DIAMETER
O.C.	ON CENTER
OPNG	OPENING
OPP	OPPOSITE
PAT	PATENT
P.C.C.	PRECAST CONCRETE
PERF	PERFORATED
PERC	PERCENTAGE
PERIM	PERIMETER
PSI OR PSIG	POUNDS PER SQUARE INCH
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PT	POINT OF TANGENCY
PI	POINT OF INTERSECTION
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
P.O.T.	POINT OF TANGENCY
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
PVMT	PAVEMENT
PROP	PROPOSED
PROJ	PROJECT
PROV	PROVIDED
PSCP	PRESTRESSED CONCRETE PIPE
QTY	QUANTITY
RAD	RADIUS
RR	RAILROAD

R	RISER
RCP	REINFORCED CONCRETE PIPE
REC	RECEIVE
REINF	REINFORCED
REQD	REQUIRED
RET	RETAIN
RT	RIGHT
RWY	RUNWAY
S	SOUTH
SAN	SANITARY
SCH	SCHEDULE
SEC	SECOND
SECT	SECTION
SHLD	SHIELD
SHLDR	SHOULDER
SIM	SIMILAR
SLOPE	SLOPE
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
SY	SQUARE YARD
STA	STATION
STEEL	STEEL
STRUCT	STRUCTURE
S.D.R.	STANDARD DIMENSION RATIO
STD	STANDARD
SUBST	SUBSTITUTE
SYN	SYNTHETIC
TAN	TANGENT
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPORARY
THK	THICK
T.O.B.	TOP OF BANK
T.O.C.	TOP OF CONCRETE

MISCELLANEOUS ABBREVIATIONS

ADJ.	ADJACENT
∠	ANGLE (USE WITH ∠ SYM.)
∥	PARALLEL (USE WITH ∥ SYM.)
⊥	PERPENDICULAR (USE WITH ⊥ SYM.)
∼	APPROXIMATELY EQUAL
ϕ	DIAMETER
±	PLUS OR MINUS
N.T.S.	NOT TO SCALE
@	AT
#	POUND OR NUMBER

ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
CMP	CORRUGATED METAL PIPE
DIP	DUCTILE IRON PIPE
FHWA	FEDERAL HIGHWAY ADMINISTRATION
N.I.C.	NOT IN CONTRACT
RCP	REINFORCED CONCRETE PIPE
USGS	U.S. GEOLOGICAL SURVEY

SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE
E.C. JORDAN CO.
CONSULTING ENGINEERS
JOB NO. 4187-02 DWG. NO.

DES.	BISKUP	9/20/89
DR.	MAHER	12/14/89
CK.	RJS JR.	12/14/89
COMP.	WAH	12/19/89
APPD.	CJL	12/19/89

ISSUE CODE
P - PRELIM. S - SPEC.
M - MYLAR C - CONS.
SCALE N/A

C A REVISED FOR JOB NO. 94473 CELL 2. WHC ECS WAH 94473

Great Northern Paper

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES

JOB NO. 2668
DWG. NO. 2-8313
FILE NO. 2-032-70R2

YB-14788-A

MATCH LINE SHEET 2

CB #13 N664211.0 A
INV. IN = 408.0 E475018.0
INV. OUT = 407.5
RIM EL. = 416.0

6" ø ABS PIPE 12
YB-14793A

N664035.0
E474905.0

CB #12 N664025.0 A
INV. IN = 399.5 E474870.0 YB-14793A
INV. OUT = 398.5
RIM EL. = 406.5

12" ø SDR 26 PVC PIPE 12
YB-14793A

N664050.0
E474855.0

N664055.0
E474615.0

N664240.0
E474215.0

N662950.0
E475040.0

N662940.0
E474715.0

N662785.0
E474710.0

N662630.0
E474350.0

CELL 2
SEE DWG. YB-15710

SOIL STOCKPILE AREA

CELL 1
(EXISTING)

LEACHATE HOLDING POND

ACCESS ROAD

LANDFILL ACCESS ROAD

BENCH MARK N663871.733
BRASS PLUG EL. 356.99 E473715.059

WET WELL & PUMP STATION

CLL

12"

E 475500 E 475000 E 474500 E 474000 E 473500 E 473250

N 665000 N 664500 N 664000 N 663500 N 663000

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C	A	7/16/87	NOT IN THIS CONTRACT	MHC			

STATE OF MAINE
JOHN L. SEVEE
REGISTERED PROFESSIONAL ENGINEER
6/4/87

SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE

JOB NO. 8717

DRN	PAT	6-1-87
CKD	MHC	6-4-87
CKD	EOS	6-3-87
CORR	WAN	6-3-87
APPVD		

ISSUE CODE
P - PRELIM | B - BIDS
M - MTL T.O. | C - CONST
SCALE 1" = 100'

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
CELL 2
SITE LOCATION PLAN

JOB NO. 94473
ENG. REQ. NO. 2-8516
FILE NO. 2-092-4703, 7082

YB-15710 A
SHEET 1 OF 2



DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C	A	7/16/87	NOT IN THIS CONTRACT	[illegible]			

SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE

JOB NO. 8717

DRN	PAF	6-4-87
CKD	[illegible]	6-4-87
CKD	ECS	6-3-87
CORR	WAN	6-3-87
APPVD		

ISSUE CODE
P - PRELIM B - BIDS
M - MTL T.O. C - CONST
SCALE 1" = 100'

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
CELL 2
SITE LOCATION PLAN

JOB NO. 94473
ENG. REQ. NO. 2-8516
FILE NO. 2-092-4703, 7082

YB-15710 A
SHEET 2 OF 2



DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C		10/20/87	RECORD DRAWING	MHC			
YB-15263	DOLBY 3 LANDFILL AREA TOPOGRAPHIC SURVEY & DIGITIZATION AS OF 12-5-85	C	A	7/16/87	NOT IN THIS CONTRACT	MHC			

STATE OF MAINE — JOHN E. SEVEE — REGISTERED PROFESSIONAL ENGINEER — 6/14/97

SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE

JOB NO. 8717

DRN	PAF	6-4-87
CKD	MHC	6-4-87
CKD	ECS	6-3-87
CORR	WAN	6-3-97
APPVD		

ISSUE CODE
P - PRELIM | B - BIDS
M - MTL T.O. | C - CONST
SCALE 1" = 50'

Great Northern Paper
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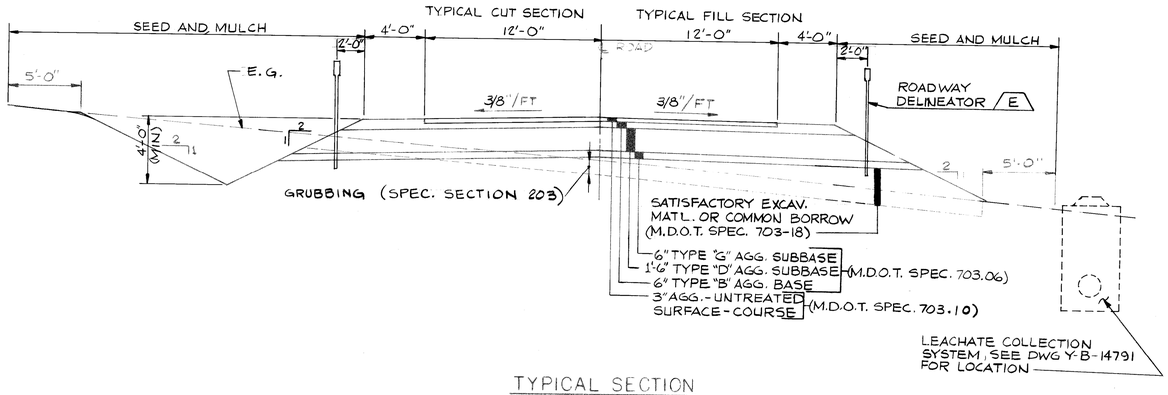
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

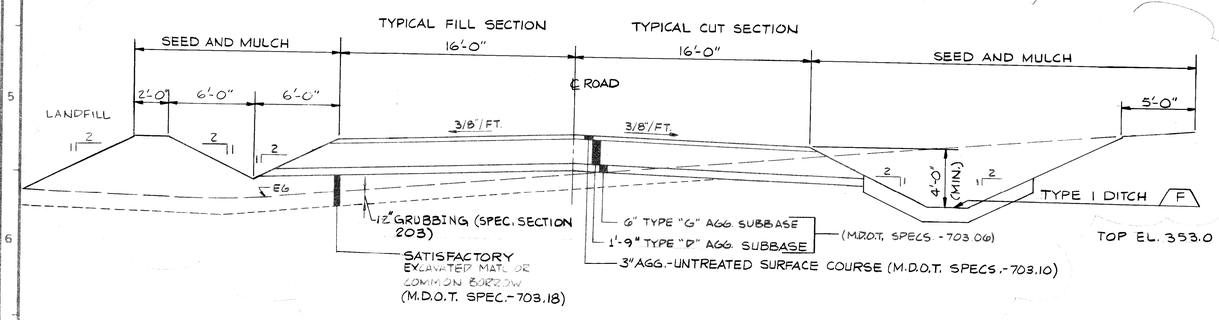
DOLBY 3 LANDFILL
SITE DEVELOPMENT PLAN
CELL 2

JOB NO. 94473
ENG. REQ. NO. 2-8516
FILE NO. 2-092-7082

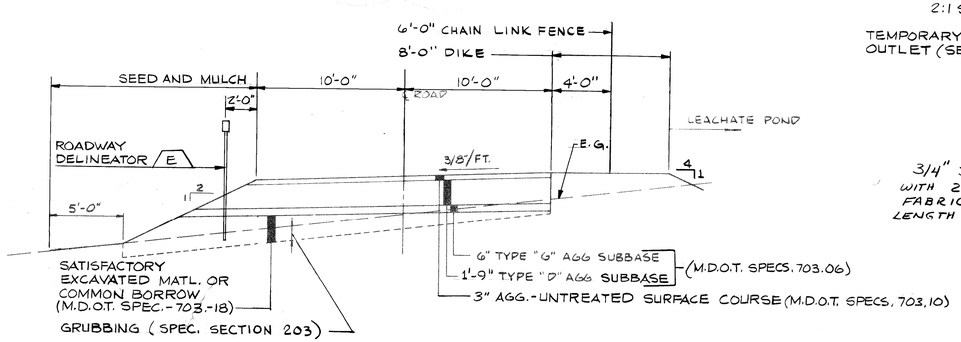
YB-15711A



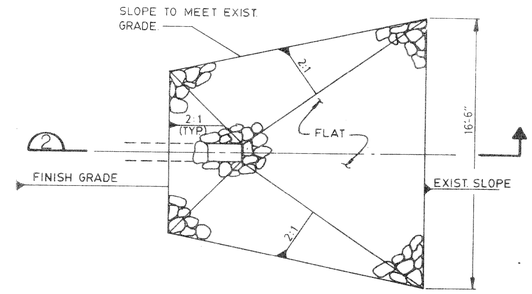
TYPICAL SECTION
MAIN ACCESS ROAD
N.T.S.



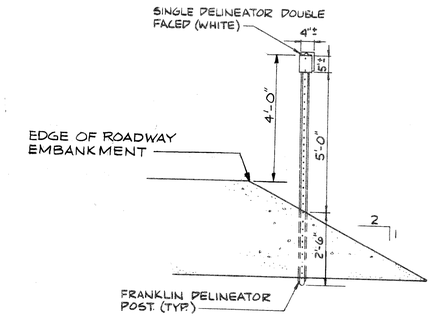
⚠2 TYPICAL SECTION
LANDFILL ACCESS ROAD
N.T.S.



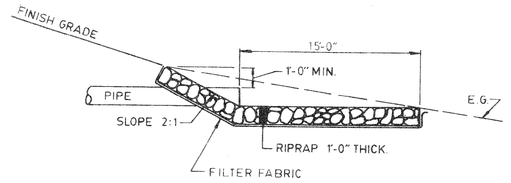
TYPICAL SECTION
LEACHATE POND ACCESS ROAD
N.T.S.



PLAN

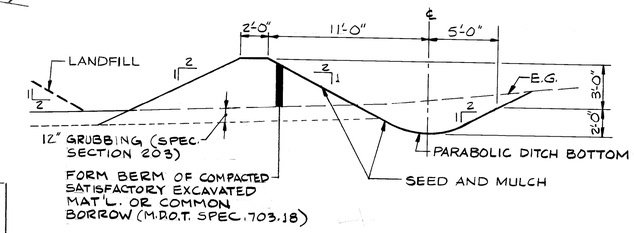


ROADWAY DELINEATOR (E)
N.T.S. YB-14791

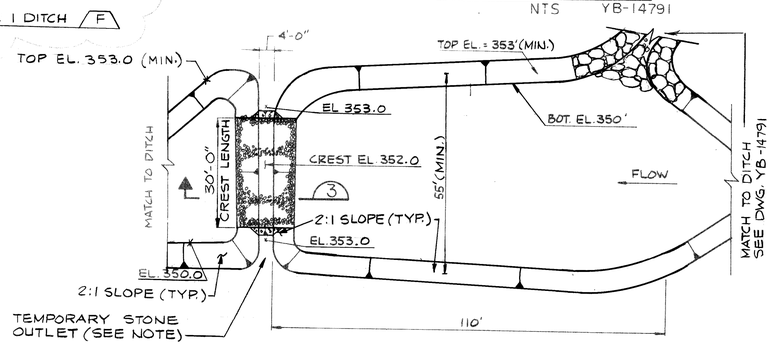


SECTION (2)

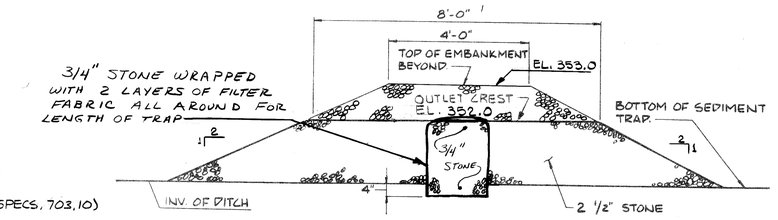
RIPRAP APRON (C)
NTS YB-14791



TYPICAL SECTION
DIKE AND TYPE 2 DRAINAGE DITCH
SCALE: 1"= 5'

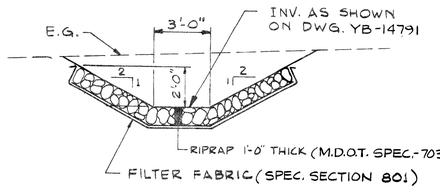


PLAN



SECTION (3)

STONE OUTLET SEDIMENT TRAP (D)
NTS YB-14791



TYPE I DITCH (F)
N.T.S. YB-14791
YB-15711

NOTE: STONE OUTLET TO BECOME PERMANENT FIXTURE. ACCUMULATED SEDIMENT TO BE REMOVED AND PLACED IN LANDFILL WHEN CONSTRUCTION COMPLETE AND TRIBUTARY AREA IS STABILIZED WITH VEGETATION, GRAVEL SURFACE OR RIPRAP. AREA TO BE SEEDED AND MULCHED WHEN CONSTRUCTION COMPLETE.

STATE OF MAINE — JOHN E. SEVEE — 6150 — REGISTERED PROFESSIONAL ENGINEER — 6/1/87

DRAWING NO	REFERENCE DRAWING TITLE

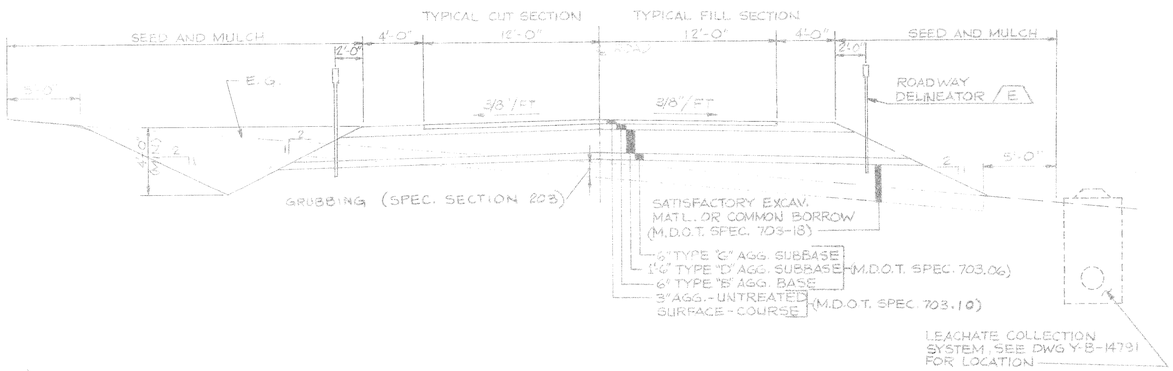
CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C	B	5/24/07	GENERAL REVISION FOR JOB #94473 CELL 2	JHC	ECS	WAN	94473
C	A	10/5/89	NOTES & 3/4" STONE AND FILTER FABRIC	PSJR		WAN	2668

SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE
E.C. JORDAN CO.
CONSULTING ENGINEERS
JOB NO. 4187-02 DWG. NO.

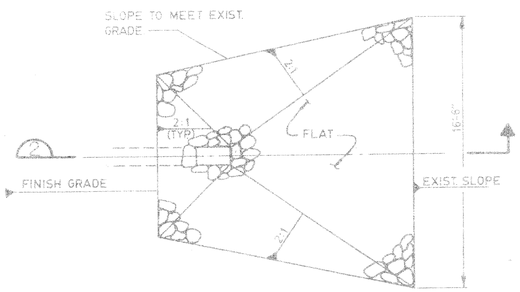
DRN LEDUC	10/12/83
CKD MAHER	12/16/83
CKD PSJR	12/16/83
CORR WAN	12/17/83
APPVD DJL	12/19/83
ISSUE CODE	
P - PRELIM	B - BIDS
M - MTL T.O.	C - CONST
SCALE NOTED	

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

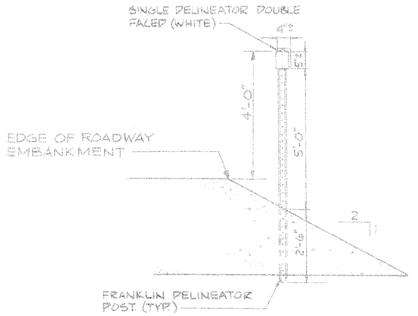
CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
ACCESS ROAD
TYPICAL SECTIONS & DETAILS
JOB NO. 2668
ENG. REQ. NO. 2-8313
FILE NO. 2-092-7082
YB-14794-B



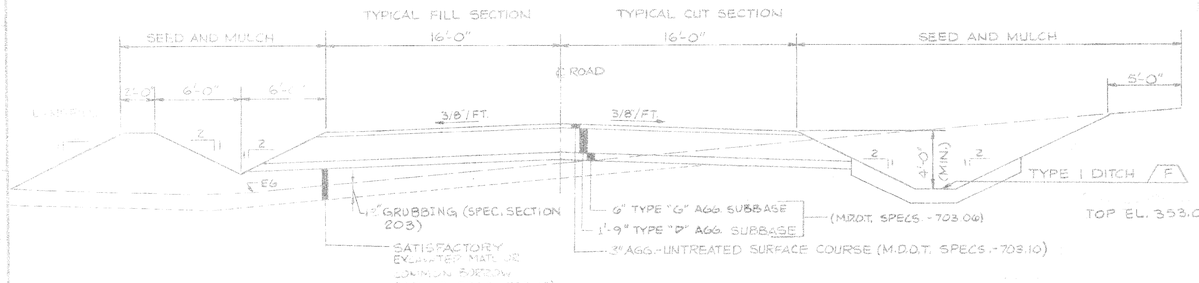
TYPICAL SECTION
MAIN ACCESS ROAD
N.T.S.

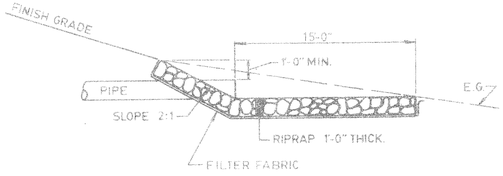


PLAN



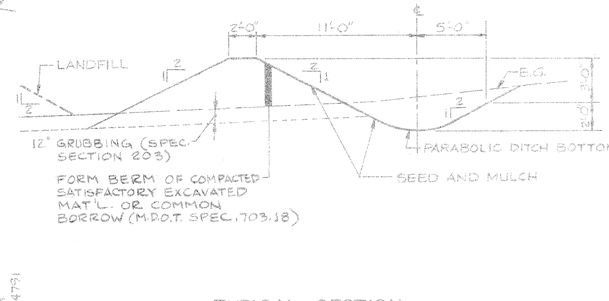
ROADWAY DELINEATOR (E)
N.T.S. YB-14791



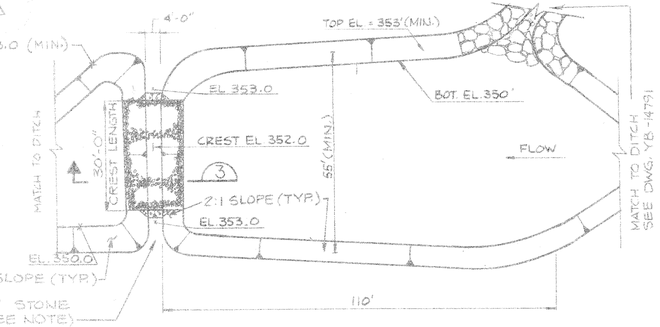


SECTION (2)

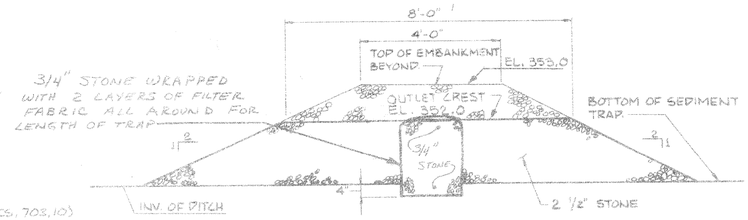
RIPRAP APRON (C)
NTS YB-14791



TYPICAL SECTION
DIKE AND TYPE 2 DRAINAGE DITCH
SCALE: 1" = 5'

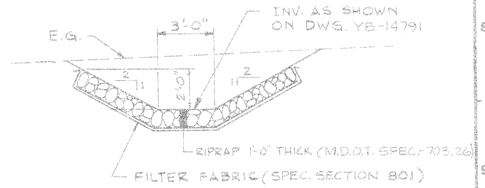


PLAN



SECTION (3)

STONE OUTLET SEDIMENT TRAP (D)
NTS YB-14791



TYPE I DITCH (F)
N.T.S. YB-14791
YB-15711

NOTE: STONE OUTLET TO BECOME PERMANENT FIXTURE. ACCUMULATED SEDIMENT TO BE REMOVED AND PLACED IN LANDFILL WHEN CONSTRUCTION COMPLETE AND TRIBUTARY AREA IS STABILIZED WITH VEGETATION, GRAVEL SURFACE OR RIPRAP. AREA TO BE SEEDED AND MULCHED WHEN CONSTRUCTION COMPLETE.

TYPICAL SECTION
LEACHATE POND ACCESS ROAD
N.T.S.

CODE	NO.	DATE	REVISION	BY	CKD	APPROVED	JOB NO.
C	B	5/24/89	GENERAL REVISION FOR 208 #94473 CELL 2	AHC	ECS	WAN	94473
C	A	10/5/88	NOTES & 3/4" STONE AND FILTER FABRIC	ES JR		WAN	2668

REFERENCE DRAWING TITLE

SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE
E.C. JORDAN CO.
CONSULTING ENGINEERS
JOB NO. 4187-02 DWG. NO.

DRN	LEDUC	10/13/83
CKD	MAHER	12/14/83
CKD	RS-SL	12/16/83
COMPR	WAN	12/22/83
APPVD	DJL	12/19/83
ISSUE CODE		
P - PRELIM	B - BIDS	
M - MTL. T.O.	C - CONST	
SCALE	NOTED	

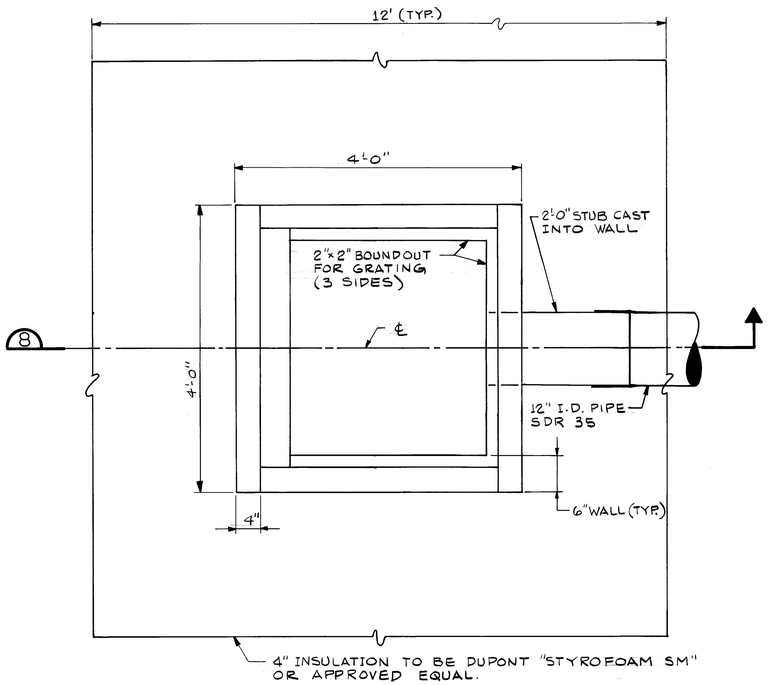
Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
ACCESS ROAD
TYPICAL SECTIONS & DETAILS

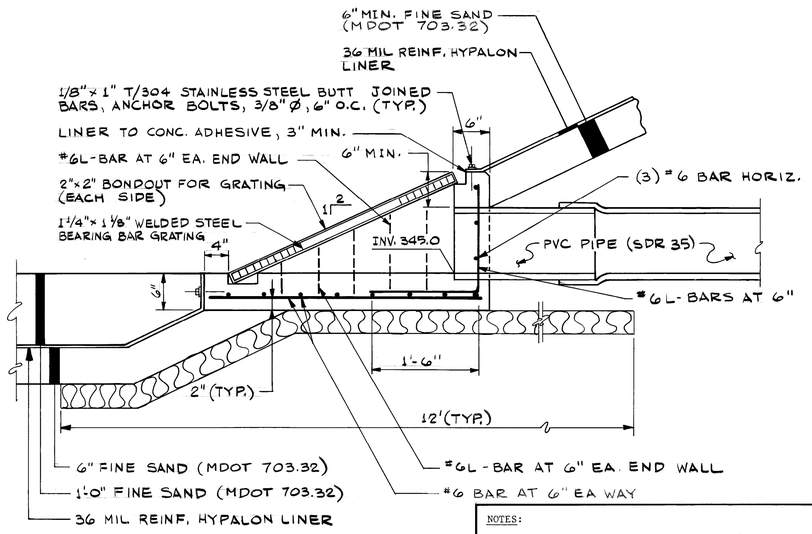
JOB NO. 2668
ENG. REQ. NO. E-8313
FILE NO. E-032-70.62

YB-14794-B

John E. Sevee
6/8/89



PLAN



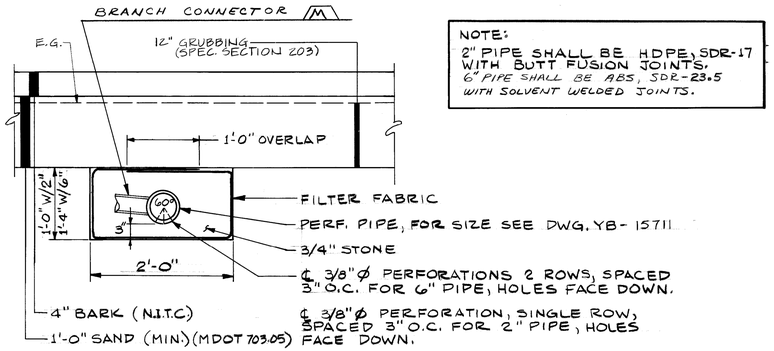
SECTION (8)

NOTES:

1. PENETRATIONS SHALL BE SEALED PER THE MANUFACTURER'S RECOMMENDATION.
2. CONTACT BOND OF LINER TO ALL CONCRETE SURFACES SHALL BE PER THE LINER MANUFACTURER'S APPROVED BONDING METHODS.

OUTLET STRUCTURE (TYP.) (K)

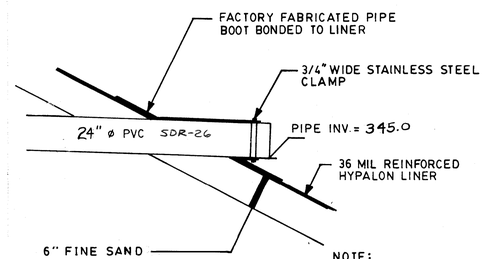
SCALE: 1"= 1'-0" YB-14791



NOTE:
2" PIPE SHALL BE HDPE, SDR-17 WITH BUTT FUSION JOINTS.
6" PIPE SHALL BE ABS, SDR-23.5 WITH SOLVENT WELDED JOINTS.

2-IN. 6-IN. LEACHATE COLLECTION PIPES (9)

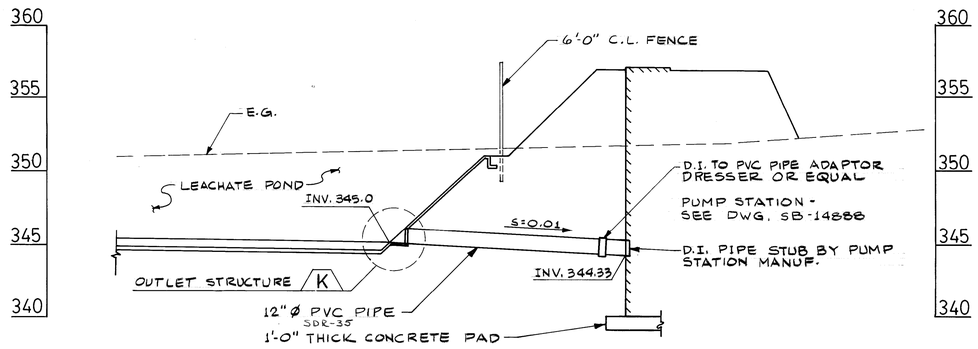
SCALE: 1"= 1'-0" YB-14791 YB-15711



NOTE:
PIPE PENETRATIONS SHALL BE SEALED PER THE LINER MANUFACTURES RECOMMENDED METHODS

POND INLET AND PIPE BOOT (L)

N.T.S. YB-14791



NOTES:

2" PIPE	HDPE	SDR-17	W/BUTT FUSION JOINTS
4" PIPE	ABS	SDR-23.5	W/SOLVENT JOINTS
6" PIPE	ABS	SDR-23.5	W/SOLVENT JOINTS (A)
12" PIPE	PVC	SDR-35	
18" PIPE	PVC	SDR-26	(A)
24" PIPE	PVC	SDR-26	

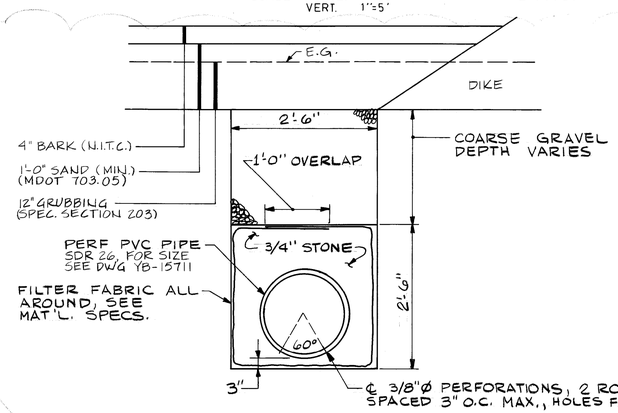
GATE VALVES - CLOW F5065 MECH. JOINT, NON RISING STEM FOR 4" & 24" PIPE OR EQUAL

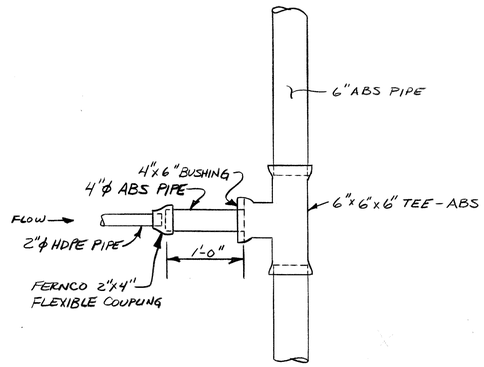
INDICATOR POST - CLOW F 5760 OR EQUAL

12" PIPE PVC SDR-26 (A)

PUMP STATION AND INLET PIPE (10)

SCALE: HORIZ. 1"= 20' VERT. 1"=5' YB-14791





PERF. LEACHATE COLLECTION MAIN (11)

YB-14791 YB-15711

BRANCH CONNECTOR (M)

N.T.S. YB-15711

STATE OF MAINE — JOHN S. KNOX — 12958 — REGISTERED PROFESSIONAL ENGINEER — 6/14/87

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C	A	5/26/87	GENERAL REVISION FOR JOB # 94473 CELL 2	MAC	ECS	WBN	94473

SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE

E.C. JORDAN CO.
CONSULTING ENGINEERS

JOB NO. 4187-02 DWG. NO.

DRN	D. F. D.	11/22/83
CKD	MAHER	12/16/83
CKD		
CORR		
APPVD		

ISSUE CODE: P-PRELIM | B-BIDS | M-MTL T.O. | C-CONST

SCALE NOTED

Great Northern Paper
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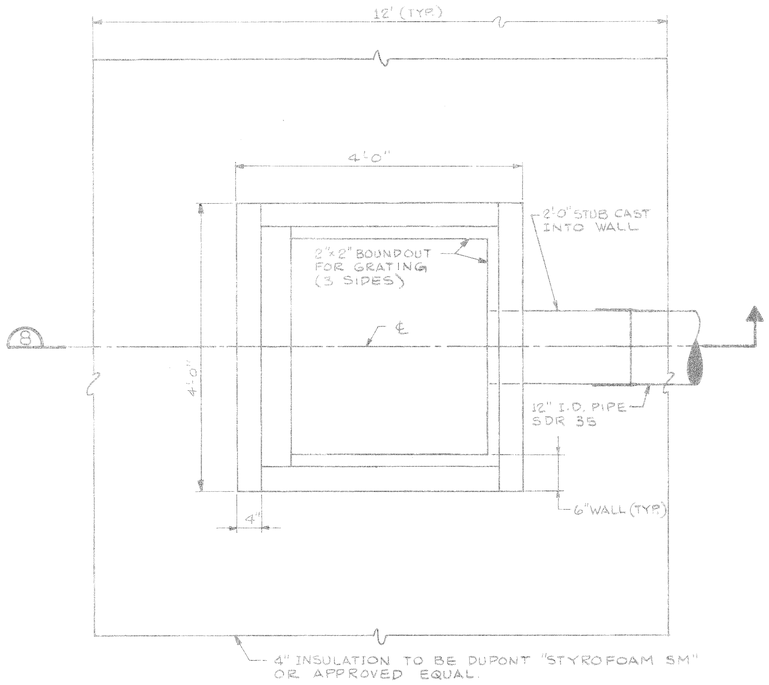
Great Northern Nekoosa Corporation

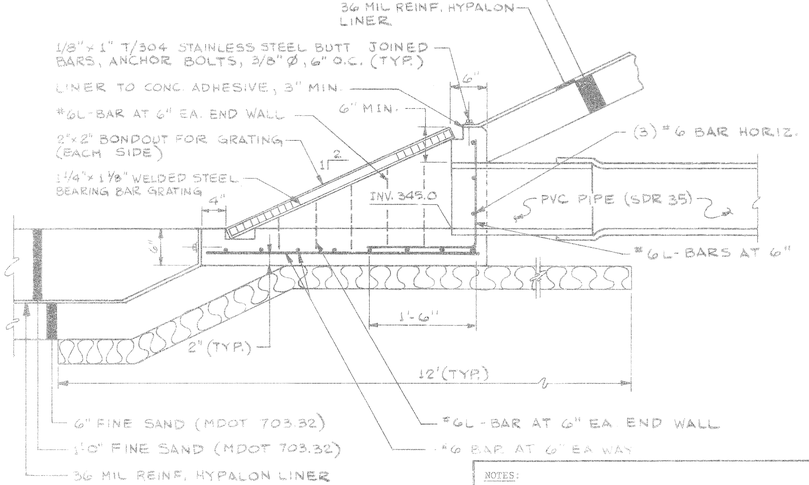
CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
SITE DEVELOPMENT
DETAILS

JOB NO. 2668
ENG. REQ. NO. 2-8313
FILE NO. 2-0927082

YB-14796-A



PLAN

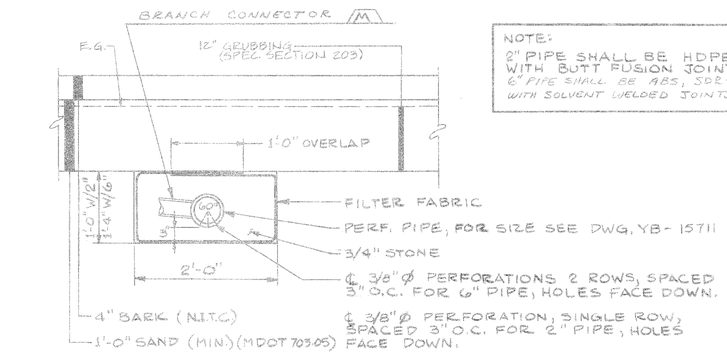


SECTION (8)

NOTES:
1. PENETRATIONS SHALL BE SEALED PER THE MANUFACTURER'S RECOMMENDATION.
2. CONTACT BOND OF LINER TO ALL CONCRETE SURFACES SHALL BE PER THE LINER MANUFACTURER'S APPROVED BONDING METHODS.

OUTLET STRUCTURE (TYP) (K)

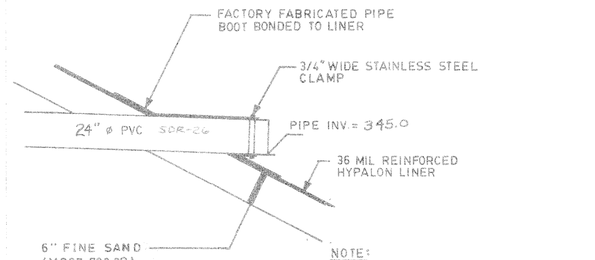
SCALE: 1"=1'-0" YB-14791



NOTE:
2" PIPE SHALL BE HDPE, SDR-17 WITH BUTT FUSION JOINTS.
6" PIPE SHALL BE ABS, SDR-23.5 WITH SOLVENT WELDED JOINTS.

2-IN. 6-IN. LEACHATE COLLECTION PIPES (9)

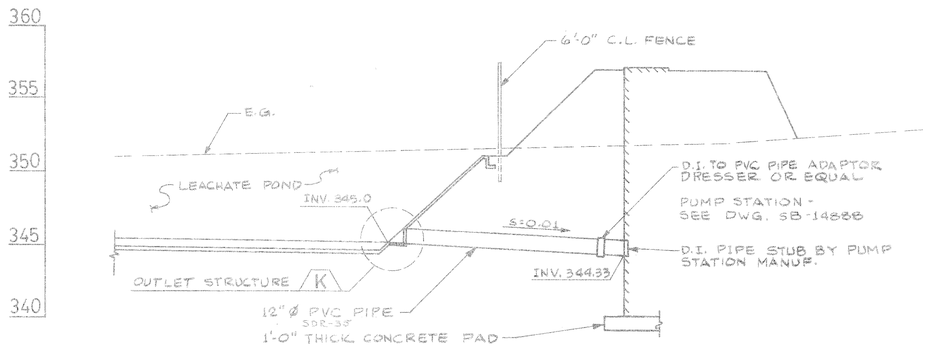
SCALE: 1"=1'-0" YB-14791 YB-15711



NOTE:
PIPE PENETRATIONS SHALL BE SEALED PER THE LINER MANUFACTURES RECOMMENDED METHODS

POND INLET AND PIPE BOOT (L)

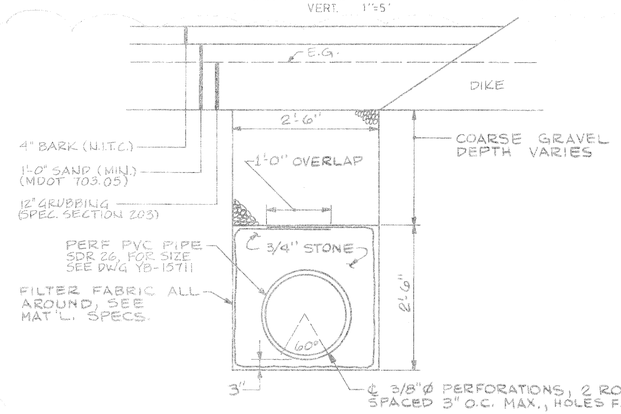
N.T.S. YB-14791

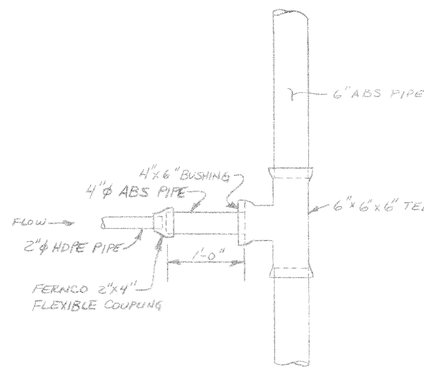


NOTES:
2" PIPE HDPE SDR-17 W/BUTT FUSION JOINTS
4" PIPE ABS SDR-23.5 W/SOLVENT JOINTS
6" PIPE ABS SDR-23.5 W/SOLVENT JOINTS (A)
12" PIPE PVC SDR-35
18" PIPE PVC SDR-26 (A)
24" PIPE PVC SDR-26
GATE VALVES - CLOW F5065 MECH. JOINT, NON RISING STEM FOR 4" & 24" PIPE OR EQUAL
INDICATOR POST - CLOW F5760 OR EQUAL
12" PIPE PVC SDR-26 (A)

PUMP STATION AND INLET PIPE (10)

SCALE: HORIZ. 1"=20' VERT. 1"=5' YB-14791





BRANCH CONNECTOR (M)

N.T.S. YB-15711

PERF. LEACHATE COLLECTION MAIN (11)

YB-14791 YB-15711

John S. Swett 6/9/87

CODE	NO.	DATE	REVISION	BY	CKD	APP'D	JOB No.
C	A	5/26/87	GENERAL REVISION FOR JOB #4487B CELL 2	MHC	ECS	WDM	4487B

DRAWING NO. | REFERENCE DRAWING TITLE

SEVEE & MAHER ENGINEERS, PA
WESTBROOK, MAINE
E.C. JORDAN CO.
CONSULTING ENGINEERS
JOB NO. 4187-02 DWG. NO.

DRN	D.J.G.	11/24/83
CKD	MAHER	12/16/83
CKD		
CORR		
APP'D		

ISSUE CODE: P-PRELIM | B-BIDS | M-MIL T.O. | C-CONST
SCALE: NOTED

Great Northern Paper
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Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL
DOLBY 3 LANDFILL
SITE DEVELOPMENT
DETAILS

JOB NO. 2668
ENG. REQ. NO. 2-8313
FILE NO. 2-0927082

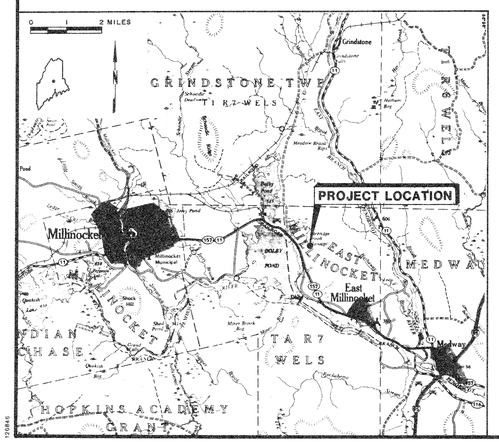
YB-14796-A

GREAT NORTHERN PAPER CO.
MILLINOCKET, MAINE

DOLBY 3 LANDFILL
CELL 3 CONSTRUCTION

RECORD DRAWINGS

TITLE	DWG. NO.
COVER SHEET	YB-15911
DOLBY 3 LANDFILL SYMBOLS & ABBREVIATIONS	YB-15912
DOLBY 3 LANDFILL SITE LOCATION PLAN	YB-15913
DOLBY 3 LANDFILL SITE DEVELOPMENT PLAN	YB-15914
DOLBY 3 LANDFILL SECTIONS & DETAILS	YB-15915



SEVEE & MAHER ENGINEERS, INC.
WESTBROOK, MAINE

1988

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a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT

DOLBY 3 LANDFILL
CELLS 3A AND 3B
COVER SHEET

JOB NO.
ENG. REQ. NO. 2-8627
FILE NO. 2-092-4703.7082

YB-15911

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			STONE WALL	TP-103	TP-103	TEST PIT & NUMBER
		NORTH ARROW (MAGNETIC)			DRAINAGE COURSES W/DIRECTION & DITCH	□	■	CLEAN OUT STRUCTURES
N		NORTH ARROW (PLAN NORTH)	SHORE SIDE		EDGE OF WATER	○	●	MANHOLE
25	25	CONTOUR LINES			WATER ELEVATION (GROUND OR SURFACE)	⌑	⌑	WATER VALVE
25 x 63	25.56	SPOT ELEVATION (GRADE)			ROCK OUTCROP OR LEDGE	⌑	⌑	HYDRANT
E.G.		EXISTING GROUND (PROFILES & SECTIONS)			FENCE LINE (WOOD)	⌑	⌑	TELEPHONE OR POWER POLE
S.B.L.		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION POINT			FENCE LINE (WIRE)	⌑	⌑	CATCH BASIN
0+00	1+00	CONSTRUCTION BASELINE	(STONE)	(CONC) FACE	RETAINING WALL (TYPE)	G	8" G	UNDERGROUND GAS MAIN & SIZE
	P.L.	PROPERTY OR DEED LINE (NOT SURVEYED)			GUARD RAIL	T	T	UNDERGROUND TELEPHONE CABLE / CONDUIT
525.14' N35°-10'-41"E	525.14' N35°-10'-41"E	PROPERTY LINE W/BEARING & DISTANCE			BUILDING & STRUCTURES	E	E	UNDERGROUND ELECTRIC CABLE / CONDUIT
		ROADS, EASEMENTS OR RIGHT OF WAY LINE			STEPS W/TYPE (WOOD / CONCRETE)	OE	OE	OVERHEAD ELECTRICAL LINE
		BOUNDARY LINE (STATE, COUNTY, MUNICIPALITY)		1 2 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)		12" ACP	SANITARY SEWER, SIZE & TYPE
MON.	MON.	SURVEY MONUMENT		TOP OF SLOPE 2:1	SLOPES (W/SLOPE RATIO)		8" PVC	FORCE MAIN, SIZE & TYPE
I.F.	I.F.	SURVEY IRON (FOUND)			EDGE OF TRAVELED WAY (TYPE)		8" DI	WATER MAIN, SIZE & TYPE
D.H. PK. STK.	D.H. PK. STK.	DRILL HOLE, PK OR STAKE	C	F	CUT OR FILL LINE		12" RCP	STORM DRAIN, SIZE & TYPE
		WOODS OR BRUSH LINE		CLL	CONSTRUCTION LIMIT LINE	UD	8" PVC UD	UNDERDRAIN, SIZE & TYPE
		INDIVIDUAL TREE (DECIDUOUS)			BITUMINOUS PAVEMENT		12" BCCMP	CULVERT, SIZE & TYPE
		INDIVIDUAL TREE (CONIFEROUS)			GRAVEL ROAD			RAILROAD
		TREE, TO BE REMOVED			CONCRETE		S S	SILTATION FENCE
		MARSH AREA	B-12 MW-2 P-20	B-12 MW-2 P-20	TEST BORING, MONITORING WELL OR PROBE & NUMBER			

PIPE SCHEDULE

2" HDPE SHALL BE SDR 17 WITH BUTT FUSED JOINTS.

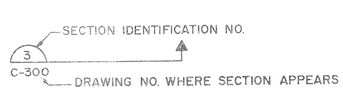
6" PVC SHALL BE SDR 21 WITH PUSH-ON JOINTS.

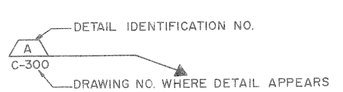
12" PVC SHALL BE SDR 26 WITH PUSH-ON JOINTS.

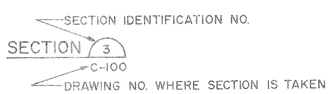
ABBREVIATIONS

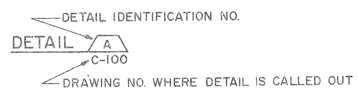
A. C. C. M. P.	ASPHALT COATED C. M. P.
A. C. P.	ASBESTOS CEMENT PIPE
AC	ACRE
AGG.	AGGREATE
ALUM	ALUMINUM
APPD	APPROVED
APPROX	APPROXIMATE
ASB	ASBESTOS
ASPH	ASPHALT
AT2 C. M. P.	ALUMINUM TYPE 2 C. M. P.
AUTO	AUTOMATIC
AUX	AUXILLIARY
AVE	AVENUE
AVG	AVERAGE
AZ	AZIMUTH
B. C. C. M. P.	BITUMINOUS COATED C. M. P.
B. M.	BENCH MARK
BIT	BITUMINOUS
BLDG	BUILDING
BOT	BOTTOM
BRG	BEARING
C. B.	CATCH BASIN
C. M. P.	CORRUGATED METAL PIPE
C. O.	CLEAN OUT
CEM. LIN.	CEMENT LINED
CEN	CENTRAL ANGLE OF CURVE
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CL	CLASS
CONC	CONCRETE
CONST	CONSTRUCTION
CONTR	CONTRACTOR
CTR	CENTER
CY	CUBIC YARD
D	DEGREE OF CURVE (ARC DEF.)
DBL	DOUBLE
DEG OR °	DEGREE
DEPT	DEPARTMENT
DI	DUCTILE IRON
DIA OR Ø	DIAMETER
DIM	DIMENSION
DIST	DISTANCE
DN	DOWN
DR	DRAIN
DRG	DRAWING
EA	EACH
EG	EXISTING GROUND
ELEC	ELECTRIC
ELL	ELBOW
EQUIP	EQUIPMENT
EST	ESTIMATED
EXC	EXCAVATE
EXIST	EXISTING
F. G.	FINISH GRADE
FBRGL	FIBERGLASS
FDN	FOUNDATION
FLEX	FLEXIBLE
FLG	FLANGE
FLR	FLOOR
FPS	FEET PER SECOND
FT OR '	FEET
FTG	FOOTING
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
HDPE	HIGH DENSITY POLYETHYLENE
HP	HORSEPOWER
HYD	HYDRANT
I. D.	INSIDE DIAMETER
IN OR "	INCHES
INV	INVERT
INV. EL.	INVERT ELEVATION
LB	POUND
LIN. FT.	LINEAR FEET
LOC	LOCATION
LT	LEFT
M. H.	MANHOLE
M. J.	MECHAMICAL JOINT
MATL	MATERIAL
MAX.	MAXIMUM
MFR	MANUFACTURE
MIN.	MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
N. I. T. C.	NOT IN THIS CONTRACT
N. T. S.	NOT TO SCALE
N/F	NOW OR FORMERLY
NO.	NUMBER
O. C.	ON CENTER
O. D.	OUTSIDE DIAMETER
P. C.	POINT OF CURVE
P. I.	POINT OF INTERSECTION
P. T.	POINT OF TANGENT
PERF	PERFORATED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QTY	QUANTITY
R. O. W.	RIGHT OF WAY
RAD	RADIUS
REQD	REQUIRED
RT	RIGHT
RTE	ROUTE
S	SLOPE
SCH	SCHEDULE
SF	SQUARE FEET
SHT	SHEET
STA	STATION
SY	SQUARE YARD
TAN	TANGENT
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPORARY
TYP	TYPICAL
V	VOLTS
W/	WITH
W/O	WITHOUT
YD	YARD

VIEW MARKERS & IDENTIFICATION









SEVEE & MAHER ENGINEERS, INC.
WESTBROOK, MAINE

JOB NO. 8804

Great Northern Paper
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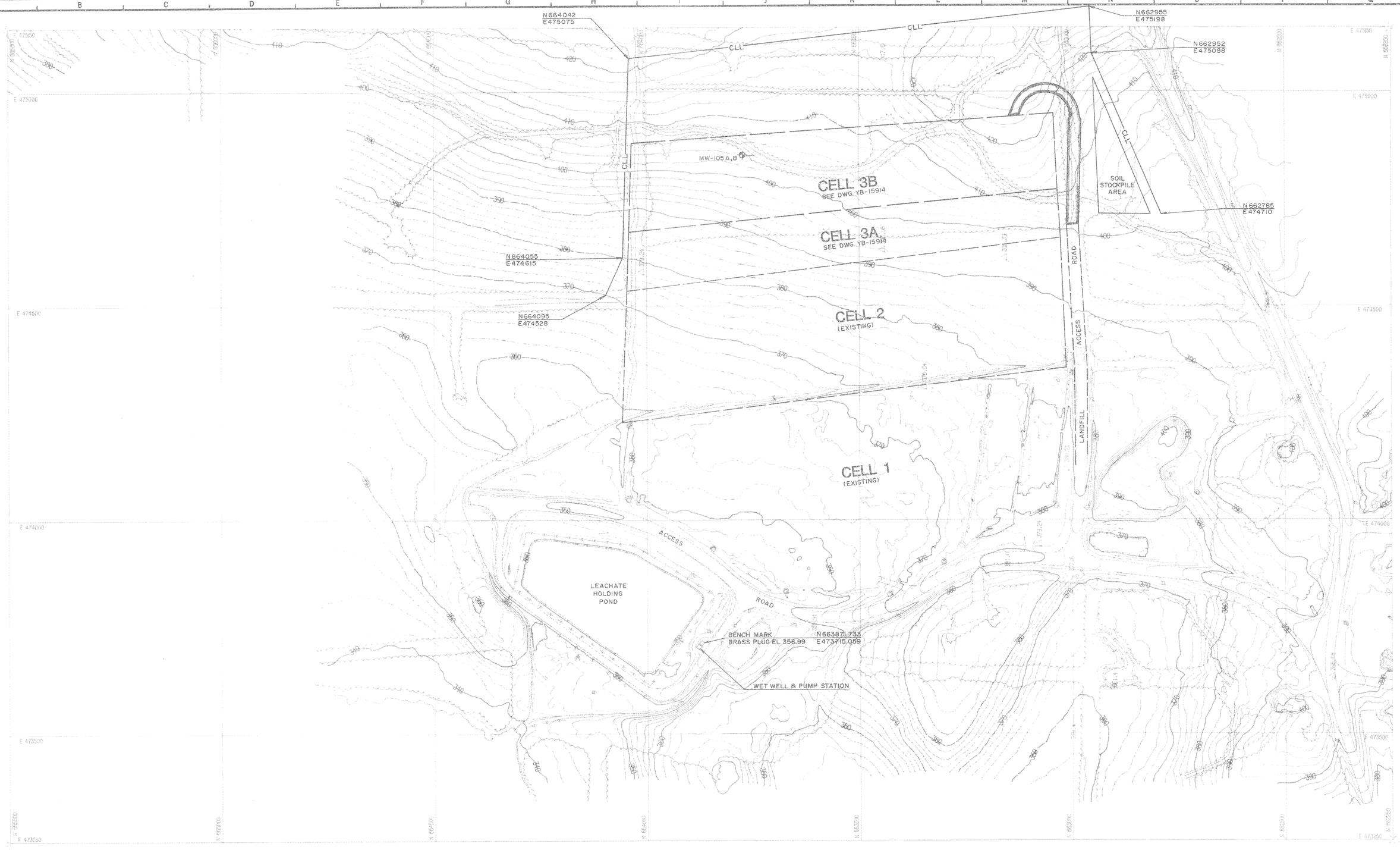
CENTRAL ENGINEERING DEPARTMENT

DOLBY 3 LANDFILL
CELLS 3A AND 3B
SYMBOLS & ABBREVIATIONS

JOB NO.
ENG. REQ. NO. 2-8627
FILE NO. 2-092-4703,7082

YB-15912



YB-15263	DOLBY III LANDFILL AREA TOPOGRAPHIC SURVEY									
SHEET 1 of 2	AND DIGITIZATION AS OF DECEMBER 5, 1985									
DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
					RECORD DRAWING				

SEVEE & MAHER ENGINEERS, INC.
WESTBROOK, MAINE

JOB NO. 8804

DRN	P.A.F.	3/88
CKD		3/88
CHD		
CORR		
APPVD		

ISSUE CODE: P - PRELIM | B - BIDS | M - MTL T.O. | C - CONSY

SCALE 1" = 100'

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CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY 3 LANDFILL
CELLS 3A AND 3B
SITE LOCATION PLAN

JOB NO.
ENG. REQ. NO. 2-8627
FILE NO. 2-092-4703, 7082

YB-15913

CONSTRUCTION NOTES

1. RODENT GUARD SHALL CONSIST OF 1/2" MESH GALVANIZED SCREEN CLAMPED TO OUTLET OF PIPE.
2. 6-INCH PIPE CAPS SHALL BE FERNCO QC106 PIPE CAPS OR EQUIVALENT.

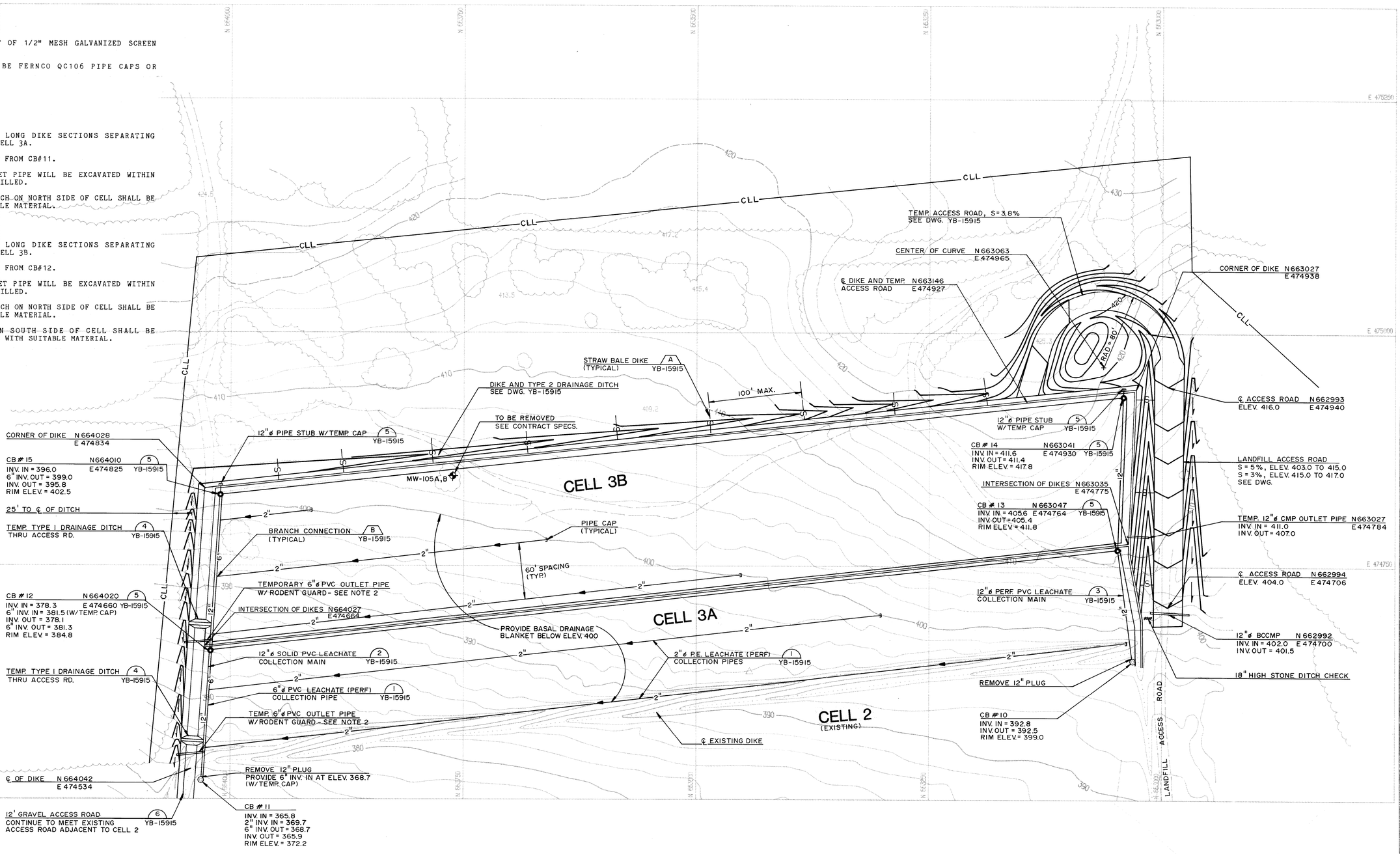
OPERATION NOTES

CELL 3A

1. REMOVE MINIMUM 15 FT LONG DIKE SECTIONS SEPARATING CB#10 AND CB#11 FROM CELL 3A.
2. REMOVE 6-INCH PIPE CAP FROM CB#11.
3. TEMPORARY 6-INCH OUTLET PIPE WILL BE EXCAVATED WITHIN DIKE, CAPPED AND BACKFILLED.
4. TEMPORARY DRAINAGE DITCH ON NORTH SIDE OF CELL SHALL BE BACKFILLED WITH SUITABLE MATERIAL.

CELL 3B

1. REMOVE MINIMUM 15 FT LONG DIKE SECTIONS SEPARATING CB#12 AND CB#13 FROM CELL 3B.
2. REMOVE 6-INCH PIPE CAP FROM CB#12.
3. TEMPORARY 6-INCH OUTLET PIPE WILL BE EXCAVATED WITHIN DIKE, CAPPED AND BACKFILLED.
4. TEMPORARY DRAINAGE DITCH ON NORTH SIDE OF CELL SHALL BE BACKFILLED WITH SUITABLE MATERIAL.
5. TEMPORARY CULVERT ON SOUTH SIDE OF CELL SHALL BE REMOVED AND BACKFILLED WITH SUITABLE MATERIAL.



DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APP'VD	JOB No.
YB-15800	DOLBY III LANDFILL - CELL III TOPOGRAPHIC SURVEY AND								
	DIGITIZATION AS OF SEPTEMBER 4, 1987								

SEVEE & MAHER ENGINEERS, INC.
WESTBROOK, MAINE

JOB NO. 8804

DRN	PAF.	3/88
CKD		3/88
CKD		
CORR.		
APP'VD		

ISSUE CODE: P - PRELIM | B - BIDS | M - MTL T.O. | C - CONST

SCALE 1" = 50'

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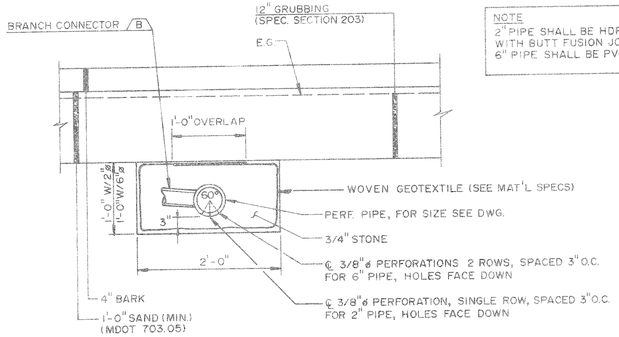
CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY 3 LANDFILL
CELLS 3A AND 3B
SITE DEVELOPMENT PLAN

JOB NO.
ENG. REQ. NO. 2-8627
FILE NO. 2-092-4703, 7082

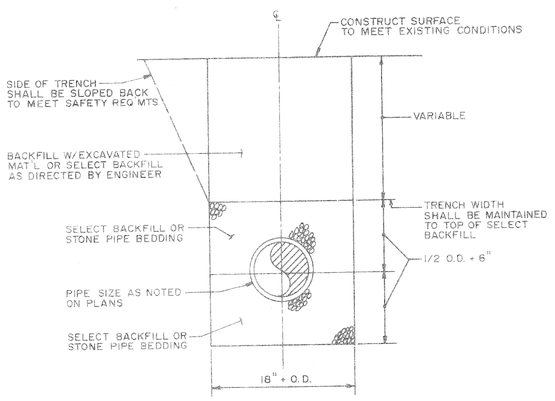
YB-15914



NOTE
2" PIPE SHALL BE HDPE, SDR-17 WITH BUTT FUSION JOINTS.
6" PIPE SHALL BE PVC, SDR- 21

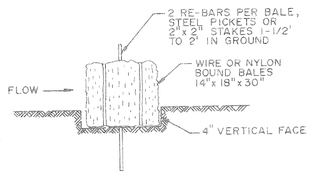
2-IN. 6-IN., LEACHATE COLLECTION PIPES / 1

SCALE: 1" = 1'-0"



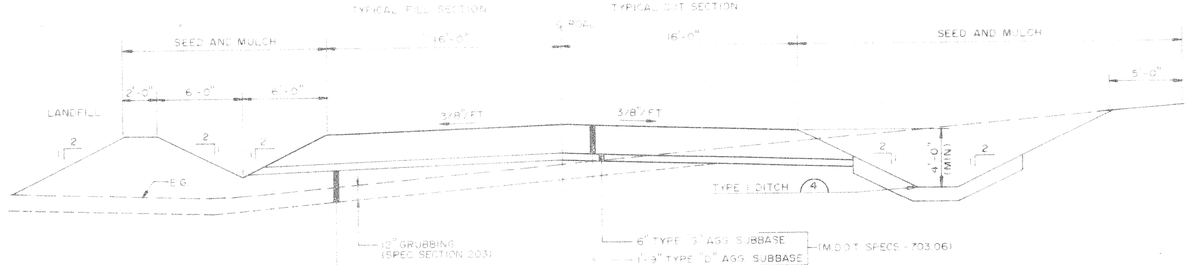
PIPE TRENCH / 2

N.T.S.



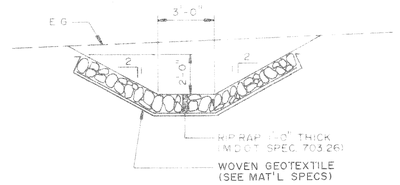
STRAW BALE DIKE / A

N.T.S.



TYPICAL SECTION LANDFILL ACCESS ROAD

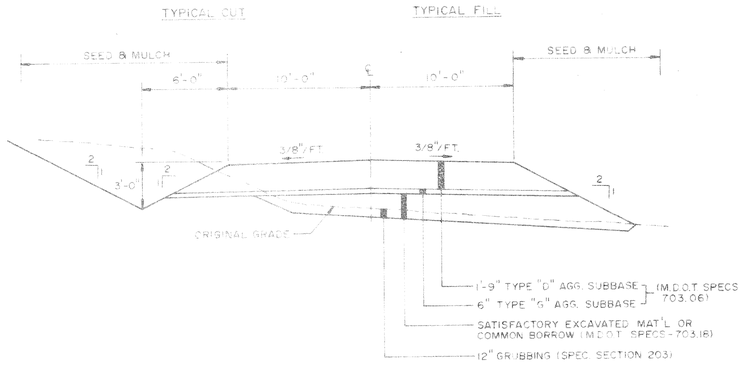
N.T.S.



TYPE I DITCH / 4

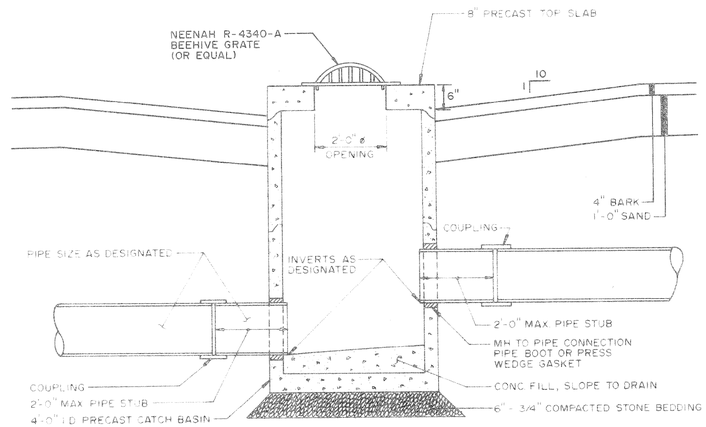
N.T.S.

NOTE: STONE OUTLET TO BECOME PERMANENT FEATURE. ACCUMULATED SEDIMENT TO BE REMOVED AND PLACED IN LANDFILL WHEN CONSTRUCTION COMPLETE AND TRIBUTARY AREA IS STABILIZED WITH VEGETATION, GRAVEL SURFACE OR RIP RAP. AREA TO BE SEEDED AND MULCHED WHEN CONSTRUCTION COMPLETE.



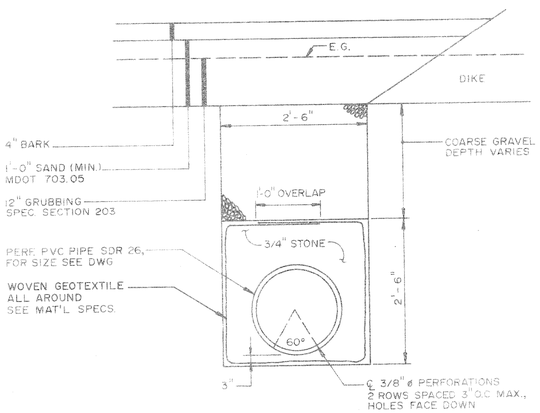
TYPICAL SECTION TEMPORARY ACCESS ROAD

N.T.S.



TYPICAL CATCH BASIN / 5

N.T.S.



PERF. LEACHATE COLLECTION MAIN / 3

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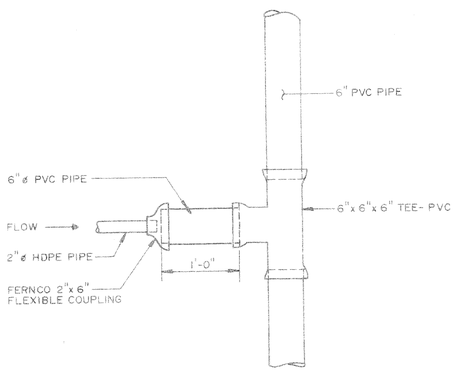
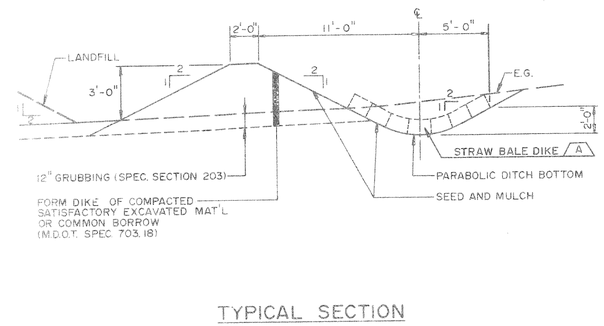


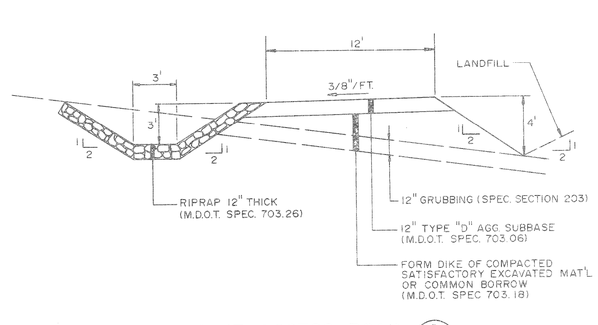
BRANCH CONNECTOR / B

N.T.S.



TYPICAL SECTION DIKE AND TYPE 2 DRAINAGE DITCH

SCALE: 1" = 5'



DIKE ACCESS ROAD / 6

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
			RECORD DRAWING				

SEVEE & MAHER ENGINEERS, INC.
WESTBROOK, MAINE

JOB NO. 8804

DRN	P.A.F.	3/88
CKD	[signature]	3/88
CKD		
CORR		
APPVD		

ISSUE CODE: P - PRELIM; B - BIDS; M - MTL T.O.; C - CONST

SCALE AS SHOWN

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT

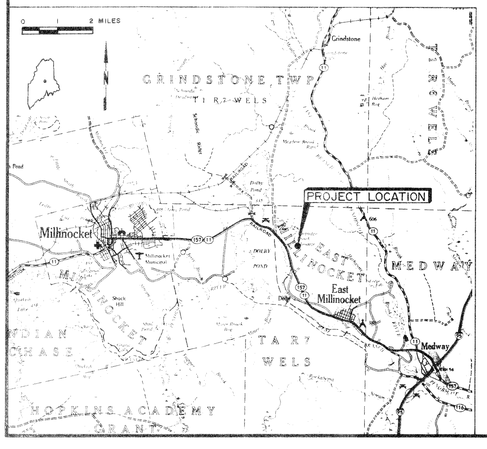
DOLBY 3 LANDFILL
CELLS 3A AND 3B
SECTIONS AND DETAILS

JOB NO.
ENG. REQ. NO. 2-8627
FILE NO. 2-092-4703,7082

YB-15915

GREAT NORTHERN PAPER CO.
MILLINOCKET, MAINE

DOLBY III LANDFILL
CELL 4 CONSTRUCTION



SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

1989

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT

DOLBY III LANDFILL
CELL 4
COVER SHEET

JOB NO. 94528
ENG. REQ. NO.
FILE NO 2-092-4703, 7082

YB-19000

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			STONE WALL	TP-103	TP-103	TEST PIT & NUMBER
		NORTH ARROW (MAGNETIC)			DRAINAGE COURSES W/DIRECTION & DITCH	□	■	CLEAN OUT STRUCTURES
N		NORTH ARROW (PLAN NORTH)	SHORE SIDE		EDGE OF WATER	○	●	MANHOLE
25	25	CONTOUR LINES			WATER ELEVATION (GROUND OR SURFACE)	⌑	⌑	WATER VALVE
25 x 63	x 25.56	SPOT ELEVATION (GRADE)			ROCK OUTCROP OR LEDGE	⌑	⌑	HYDRANT
E.G.		EXISTING GROUND (PROFILES & SECTIONS)			FENCE LINE (WOOD)	⌽	⌽	TELEPHONE OR POWER POLE
SBL		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION POINT			FENCE LINE (WIRE)	◎	◎	CATCH BASIN
	0+00 1+00	CONSTRUCTION BASELINE	(STONE)	(CONC) FACE	RETAINING WALL (TYPE)	G	8" G	UNDERGROUND GAS MAIN & SIZE
PL		PROPERTY OR DEED LINE (NOT SURVEYED)			GUARD RAIL	T	T	UNDERGROUND TELEPHONE CABLE/CONDUIT
525.14' N35°-10'-41"E	525.14' N35°-10'-41"E	PROPERTY LINE W/BEARING & DISTANCE			BUILDING & STRUCTURES	E	E	UNDERGROUND ELECTRIC CABLE/CONDUIT
		ROADS, EASEMENTS OR RIGHT OF WAY LINE			STEPS W/TYPE (WOOD/CONCRETE)	OE	OE	OVERHEAD ELECTRICAL LINE
		BOUNDARY LINE (STATE, COUNTY, MUNICIPALITY)		2 1 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)		12"ACP	SANITARY SEWER, SIZE & TYPE
MON.	MON.	SURVEY MONUMENT		TOP OF SLOPE 2	SLOPES (W/SLOPE RATIO)		6" PVC	FORCE MAIN, SIZE & TYPE
I.F.	I.F.	SURVEY IRON (FOUND)			EDGE OF TRAVELED WAY (TYPE)		8" DI	WATER MAIN, SIZE & TYPE
D.H. PK. STK.	D.H. PK. STK.	DRILL HOLE, PK OR STAKE	C	F	CUT OR FILL LINE		12" RCP	STORM DRAIN, SIZE & TYPE
		WOODS OR BRUSH LINE		CLL	CONSTRUCTION LIMIT LINE	UD	8" PVC UD	UNDERDRAIN, SIZE & TYPE
		INDIVIDUAL TREE (DECIDUOUS)			BITUMINOUS PAVEMENT		12" BCCMP	CULVERT, SIZE & TYPE
		INDIVIDUAL TREE (CONIFEROUS)			GRAVEL ROAD			RAILROAD
		TREE, TO BE REMOVED			CONCRETE		S S	SILTATION FENCE
		MARSH AREA	B-12 MW-2 F-20	B-12 MW-2 F-20	TEST BORING, MONITORING WELL OR PROBE & NUMBER			

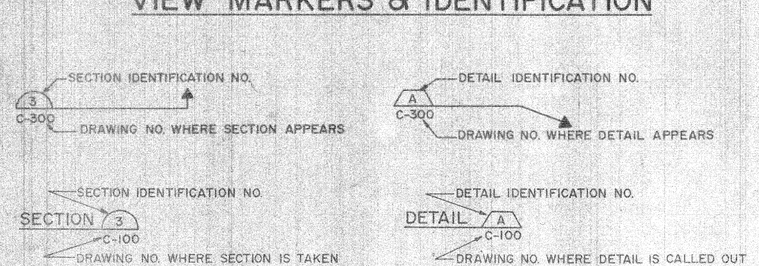
PIPE SCHEDULE

12" PVC SHALL BE SDR 26 WITH PUSH-ON JOINTS.

ABBREVIATIONS

A.C.C.M.P.	ASPHALT COATED C.M.P.	CONC	CONCRETE	FPS	FEET PER SECOND	NO.	NUMBER
A.C.P.	ASBESTOS CEMENT PIPE	CONST	CONSTRUCTION	FT OR '	FEET	O.C.	ON CENTER
AC	ACRE	CONTR	CONTRACTOR	FTG	FOOTING	O.D.	OUTSIDE DIAMETER
AGG.	AGGREATE	CTR	CENTER	GA	GAUGE	P.C.	POINT OF CURVE
ALUM	ALUMINUM	CY	CUBIC YARD	GAL	GALLON	P.I.	POINT OF INTERSECTION
APPD	APPROVED	D	DEGREE OF CURVE (ARC DEF.)	GALV	GALVANIZED	P.T.	POINT OF TANGENT
APPROX.	APPROXIMATE	DBL	DOUBLE	GPD	GALLONS PER DAY	PERF.	PERFORATED
ASB	ASBESTOS	DEG OR °	DEGREE	GPM	GALLONS PER MINUTE	PSI	POUNDS PER SQUARE INCH
ASPH	ASPHALT	DEPT	DEPARTMENT	HDPE	HIGH DENSITY POLYETHYLENE	PVC	POLYVINYL CHLORIDE
AT2 C.M.P.	ALUMINUM TYPE 2 C.M.P.	DI	DUCTILE IRON	HP	HORSEPOWER	PVMT	PAVEMENT
AUTO	AUTOMATIC	DIA OR Ø	DIAMETER	HYD	HYDRANT	QTY	QUANTITY
AUX	AUXILIARY	DIM	DIMENSION	I.D.	INSIDE DIAMETER	R.O.W.	RIGHT OF WAY
AVE	AVENUE	DIST	DISTANCE	IN OR "	INCHES	RAD	RADIUS
AVG	AVERAGE	DN	DOWN	INV	INVERT	REQD	REQUIRED
AZ	AZIMUTH	DR	DRAIN	INV. EL.	INVERT ELEVATION	RT	RIGHT
B.C.C.M.P.	BITUMINOUS COATED C.M.P.	DRG	DRAINAGE	LB	POUND	RTE	ROUTE
B.M.	BENCH MARK	EA	EACH	LIN. FT.	LINEAR FEET	S	SLOPE
BIT	BITUMINOUS	EG	EXISTING GROUND	LOC	LOCATION	SCH	SCHEDULE
BLDG	BUILDING	ELEC	ELECTRIC	LT	LEFT	SF	SQUARE FEET
BOT	BOTTOM	ELL	ELBOW	M.H.	MANHOLE	SHT	SHEET
BRG	BEARING	EQUIP	EQUIPMENT	M.J.	MECHANICAL JOINT	STA	STATION
C.B.	CATCH BASIN	EST	ESTIMATED	MATL	MATERIAL	SY	SQUARE YARD
C.M.P.	CORRUGATED METAL PIPE	ETC	EXCAVATE	MAX	MAXIMUM	TAN	TANGENT
C.O.	CLEAN OUT	EXIST	EXISTING	MFR	MANUFACTURE	TDH	TOTAL DYNAMIC HEAD
CEM. LIN.	CEMENT LINED	F.G.	FINISH GRADE	MIN.	MINIMUM	TEMP	TEMPORARY
CEN	CENTRAL ANGLE OF CURVE	FBRGL	FIBERGLASS	MISC	MISCELLANEOUS	TYP	TYPICAL
CF	CUBIC FEET	FDN	FOUNDATION	MON	MONUMENT	V	VOLTS
CFS	CUBIC FEET PER SECOND	FLEX	FLEXIBLE	N.I.T.C.	NOT IN THIS CONTRACT	W/	WITH
CI	CAST IRON	FLG	FLANGE	N.T.S.	NOT TO SCALE	W/O	WITHOUT
CL	CLASS	FLR	FLOOR	N/F	NOW OR FORMERLY	YD	YARD

VIEW MARKERS & IDENTIFICATION



STATE OF MAINE PETER M. MAHER 24107 REGISTERED PROFESSIONAL ENGINEER

PMM

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 8932

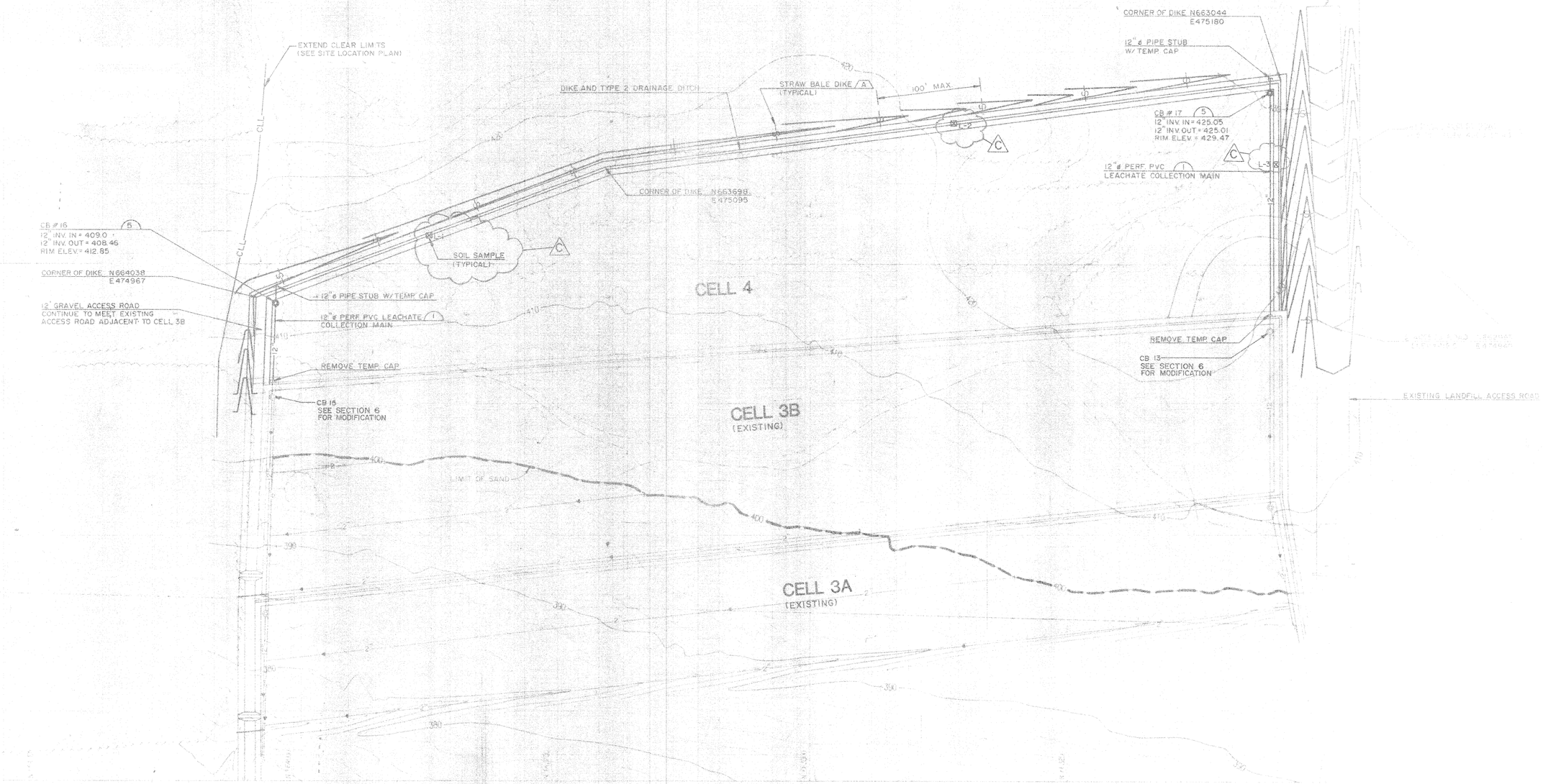
Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT

DOLBY III LANDFILL
CELL 4
SYMBOLS & ABBREVIATIONS

JOB NO. 94528
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

YB-19001



					RECORD DRAWING	MHC	BLK		
		C	2-9-90		SOIL SAMPLE POINTS ADDED	MHC	BLK		
		B	2-9-90		CATCH BASIN MODIFICATIONS & P.E. SEAL	MHC	BLK		
YB-15914	DOLBY III LANDFILL, CELLS 3A AND 3B, SITE DEVELOPMENT PLAN	A	1-4-90		MANHOLE ELEVATIONS	MHC	BLK		
	RECORD DRAWING	C	10/89		RELEASED FOR CONSTRUCTION	MHC	BLK		
DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 8932

DRN PAF	8/89
CKD MHC	8/89
CKD BLK	1/4/90
CORR	
APPVD	
ISSUE CODE	
P - PRELIM	B - BIDS
M - MT.L.T.O.	C - CONST
SCALE 1" = 50'	

Great Northern Paper
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Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET, MAINE

DOLBY III LANDFILL
CELL 4
SITE DEVELOPMENT PLAN

JOB NO. 2572A
ENG. REC. YB-15914
FILE NO. C:\SEVEE\YB15914

EXTEND CLEAR LIMITS

MATCH LINE SHEET 2

CELL 4

CELL 3B
(EXISTING)

CELL 3A
(EXISTING)

CELL 2
(EXISTING)

CELL 1
(EXISTING)

SOIL STOCKPILE AREA

ROAD

ACCESS

LANDFILL ACCESS ROAD

LEACHATE HOLDING POND

BENCH MARK N663871.733
BRASS PLUG EL. 356.99 E473715.059

WET WELL & PUMP STATION

STATE OF MAINE
PETER A. MAHER
24102
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
YB-15263	DOLBY III LANDFILL AREA, TOPOGRAPHIC SURVEY AND DIGITIZATION			2-6-90	RECORD DRAWING	PAF	BLK		
1 of 2	AS OF DECEMBER 5, 1985	C		10/87	RELEASED FOR CONSTRUCTION	PAF	BLK		

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 8932

DRN	PAF	8/89
CKD	PAF	8/89
CKD	BLK	9/87
CORR		
APPVD		

ISSUE CODE

P - PRELIM	B - BIDS
M - MTL T.O.	C - CONST
SCALE	1" = 100'

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
CELL 4
SITE LOCATION PLAN

JOB NO. 94528
ENG. REQ. NO.
FILE NO. E-092-4703,7082

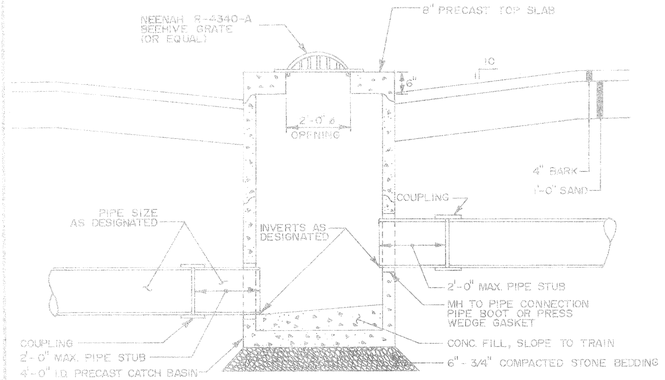
YB-19002
SHEET 1 OF 2

CELL 4

LANDFILL ACCESS ROAD

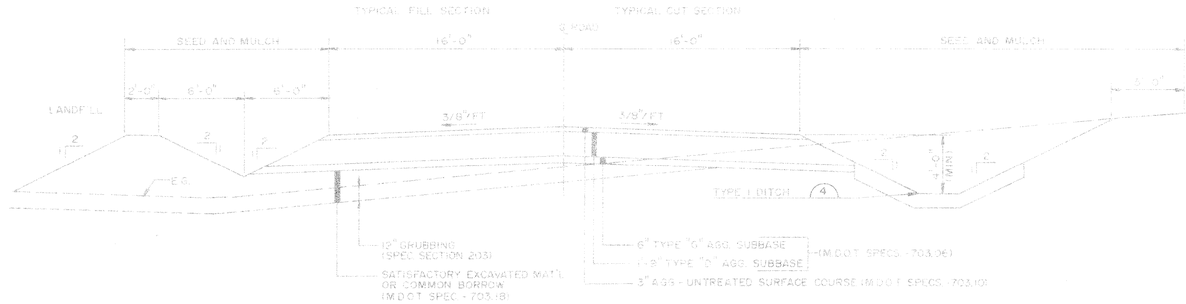
SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

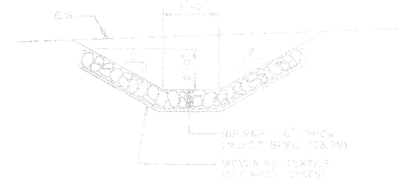
Great Northern Paper



CATCH BASIN (5)
N.T.S.

(A)

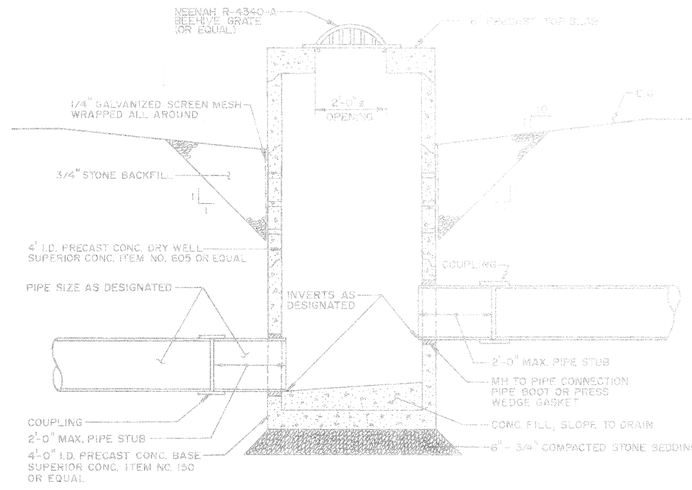




TYPE I DITCH (4)
N.T.S.

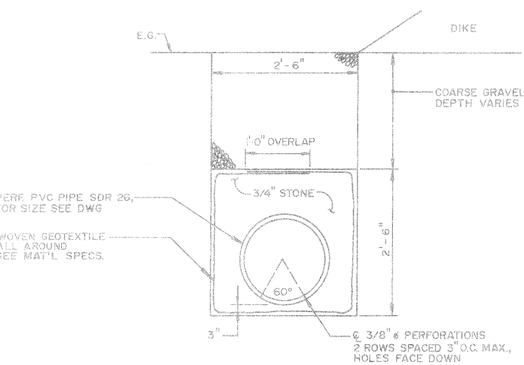
NOTE: STONE OUTLET TO BECOME PERMANENT FEATURE. ACCUMULATED SEDIMENT TO BE REMOVED & PLACED IN LANDFILL WHEN CONSTRUCTION COMPLETE AND TRIBUTARY AREA IS STABILIZED WITH VEGETATION, GRAVEL SURFACE OR RIP RAP. AREA TO BE SEEDED AND MULCHED WHEN CONSTRUCTION COMPLETE.

TYPICAL SECTION
LANDFILL ACCESS ROAD
N.T.S.

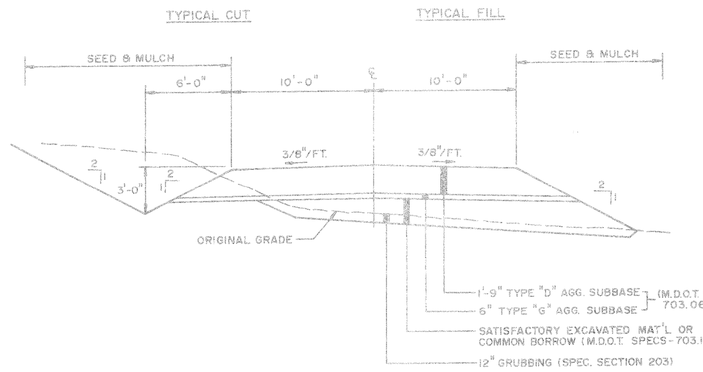


CATCH BASIN MODIFICATION (6)
N.T.S.

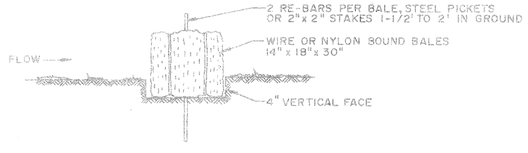
(A)



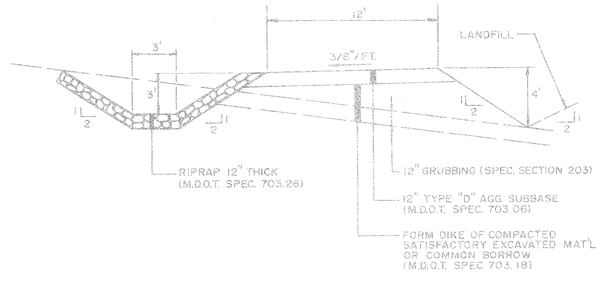
PERF. LEACHATE COLLECTION MAIN (1)
N.T.S.



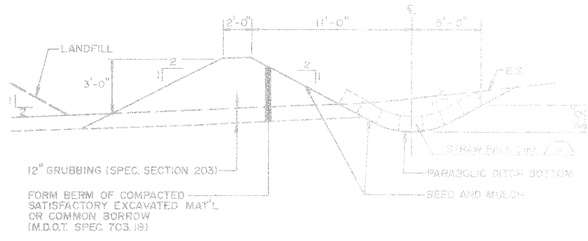
TYPICAL SECTION
TEMPORARY ACCESS ROAD
N.T.S.



STRAW BALE DIKE (A)
N.T.S.



DIKE ACCESS ROAD (3)



TYPICAL SECTION
DIKE AND TYPE 2 DRAINAGE DITCH
SCALE: 1"=5'

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
				2/6/90	RECORD DRAWING	MJC			
			A	2/19	CATCH BASIN MODIFICATIONS & PE SEAL	MJC			
			C		RELEASED FOR CONSTRUCTION	MJC			

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 8932

DSGN	DAF	8/89
DWG	MJC	8/89
CKD	RJC	
CONST		
APPVD		

ISSUE CODE
P - PRELIM | B - BID
W - MAT. T. O | C - CONST
SCALE AS SHOWN

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT

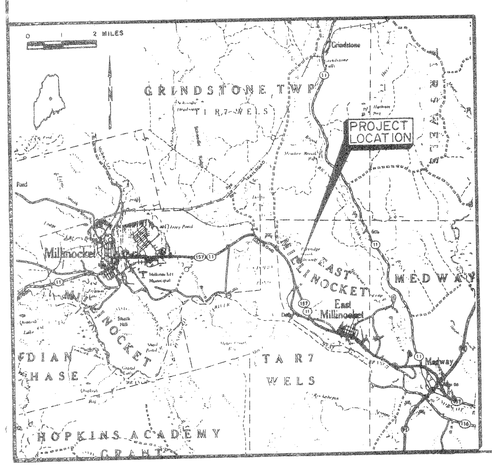
LOUISA ST. LANDFILL
CELL 4
SECTIONS AND DETAILS

JOB NO. 9482F
ENG. FILE NO.
TITLE NO. 2-096-4703/7082

YB-19004

GEORGIA-PACIFIC, NORTHERN PAPERS DIVISION
MILLINOCKET, MAINE
DOLBY III LANDFILL
REMEDIAL ACTIONS CELLS 1 AND 2

SHT NO.	TITLE	DWG. NO.
1	COVER SHEET	YB-19176
2	SYMBOLS & ABBREVIATIONS	YB-19177
3	SITE LOCATION PLAN	YB-19178
4	EXISTING TOPOGRAPHY PLAN - CELL 1	YB-19179
5	EXISTING TOPOGRAPHY PLAN - CELL 2	YB-19180
6	SECTIONS & DETAILS	YB-19181



SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE
1990

STATE OF MAINE PETER MAHER REGISTERED PROFESSIONAL ENGINEER

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
REMEDIAL ACTIONS - CELL 1 & 2
COVER SHEET

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4307, 7082

YB-19176

SYMBOLS

EXISTING	PROPOSED	
		NORTH ARROW (TRUE)
		NORTH ARROW (MAGNETIC)
		NORTH ARROW (PLAN NORTH)
25	25	CONTOUR LINES
25.63	25.56	SPOT ELEVATION (GRADE)
E.G.		EXISTING GROUND (PROFILES & SECTIONS)
S.B.		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION POINT
0+00	1+00	CONSTRUCTION BASELINE
P.L.		PROPERTY OR DEED LINE (NOT SURVEYED)
525.14' N35°-10'-41"E	525.14' N35°-10'-41"E	PROPERTY LINE W/BEARING & DISTANCE
		ROADS, EASEMENTS OR RIGHT OF WAY LINE
		BOUNDARY LINE (STATE, COUNTY, MUNICIPALITY)
MON.	MON.	SURVEY MONUMENT
I.F.	I.F.	SURVEY IRON (FOUND)
D.H. PK. STK.	D.H. PK. STK.	DRILL HOLE, PK OR STAKE
		WOODS OR BRUSH LINE
		INDIVIDUAL TREE (DECIDUOUS)
		INDIVIDUAL TREE (CONIFEROUS)
		TREE, TO BE REMOVED
		MARSH AREA

EXISTING	PROPOSED	
		STONE WALL
		DRAINAGE COURSES W/DIRECTION & DITCH
SHORE SIDE		EDGE OF WATER
		WATER ELEVATION (GROUND OR SURFACE)
		ROCK OUTCROP OR LEDGE
		FENCE LINE (WOOD)
		FENCE LINE (WIRE)
(STONE)	(CONC) FACE	RETAINING WALL (TYPE)
		GUARD RAIL
		BUILDING & STRUCTURES
		STEPS W/TYPE (WOOD/CONCRETE)
	2 1 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)
	TOP OF SLOPE 2 1	SLOPES (W/SLOPE RATIO)
		EDGE OF TRAVELED WAY (TYPE)
C	F	CUT OR FILL LINE
	CLL	CONSTRUCTION LIMIT LINE
		BITUMINOUS PAVEMENT
		GRAVEL ROAD
		CONCRETE
B-12 MW-2 P-20	B-12 MW-2 P-20	TEST BORING, MONITORING WELL OR PROBE & NUMBER

EXISTING	PROPOSED	
TP-103	TP-103	TEST PIT & NUMBER
		CLEAN OUT STRUCTURES
		MANHOLE
		WATER VALVE
		HYDRANT
		TELEPHONE OR POWER POLE
		CATCH BASIN
G	8" G	UNDERGROUND GAS MAIN & SIZE
T	T	UNDERGROUND TELEPHONE CABLE/CONDUIT
E	E	UNDERGROUND ELECTRIC CABLE/CONDUIT
OE	OE	OVERHEAD ELECTRICAL LINE
	12" ACP	SANITARY SEWER, SIZE & TYPE
	8" PVC	FORCE MAIN, SIZE & TYPE
	8" DI	WATER MAIN, SIZE & TYPE
	12" RCP	STORM DRAIN, SIZE & TYPE
UD	8" PVC UD	UNDERDRAIN, SIZE & TYPE
	12" BCCMP	CULVERT, SIZE & TYPE
		RAILROAD
S	S	SILTATION FENCE

ABBREVIATIONS

A.C.C.M.P.	ASPHALT COATED C.M.P.	C.M.P.	CORRUGATED METAL PIPE	DR	DRAIN	GPD	GALLONS PER DAY	MON	MONUMENT	SF	SQUARE FEET
A.C.P.	ASBESTOS CEMENT PIPE	C.O.	CLEAN OUT	DWG	DRAWING	GPM	GALLONS PER MINUTE	N.I.T.C.	NOT IN THIS CONTRACT	SHT	SHEET
AC	ACRE	CEM. LIN.	CEMENT LINED	EA	EACH	HDPE	HIGH DENSITY POLYETHYLENE	N.T.S.	NOT TO SCALE	STA	STATION
AGG	AGGREGATE	CEN	CENTRAL ANGLE OF CURVE	EG	EXISTING GROUND OR GRADE	HP	HORSEPOWER	N/F	NOW OR FORMERLY	SY	SQUARE YARD
ALUM	ALUMINUM	CF	CUBIC FEET	ELEC	ELECTRIC	HYD	HYDRANT	NO. OR #	NUMBER	TAN	TANGENT
APPD	APPROVED	CFS	CUBIC FEET PER SECOND	ELL	ELBOW	I.D.	INSIDE DIAMETER	O.C.	ON CENTER	TDH	TOTAL DYNAMIC HEAD
APPROX	APPROXIMATE	CI	CAST IRON	EQUIP	EQUIPMENT	IN OR "	INCHES	O.D.	OUTSIDE DIAMETER	TEMP	TEMPORARY
ASB	ASBESTOS	CL	CLASS	EST	ESTIMATED	INV	INVERT	P.C.	POINT OF CURVE	TYP	TYPICAL
ASPH	ASPHALT	CONC	CONCRETE	EXC	EXCAVATE	INV. EL.	INVERT ELEVATION	P.I.	POINT OF INTERSECTION	V	VOLTS
AT2 C.M.P.	ALUMINUM TYPE 2 C.M.P.	CONST	CONSTRUCTION	EXIST	EXISTING	LB	POUND	P.T.	POINT OF TANGENT	W/	WITH
AUTO	AUTOMATIC	CONTR	CONTRACTOR	F.G.	FINISH GRADE	LC	LEACHATE COLLECTION	PERF	PERFORATED	W/O	WITHOUT
AUX	AUXILIARY	CTR	CENTER	FBRGL	FIBERGLASS	LD	LEAK DETECTION	PSI	POUNDS PER SQUARE INCH	YD	YARD
AVE	AVENUE	CY	CUBIC YARD	FDN	FOUNDATION	LIN. FT.	LINEAR FEET	PVC	POLYVINYL CHLORIDE		
AVG	AVERAGE	D	DEGREE OF CURVE (ARC DEF.)	FLEX	FLEXIBLE	LOC	LOCATION	PVMT	PAVEMENT		
AZ	AZIMUTH	DBL	DOUBLE	FLG	FLANGE	LT	LEFT	QTY	QUANTITY		
B.C.C.M.P.	BITUMINOUS COATED C.M.P.	DEG OR °	DEGREE	FLR	FLOOR	M.H.	MANHOLE	R.O.W.	RIGHT OF WAY		
B.M.	BENCH MARK	DEPT	DEPARTMENT	FPS	FEET PER SECOND	M.J.	MECHANICAL JOINT	RAD	RADIUS		
BIT	BITUMINOUS	DI	DUCTILE IRON	FT OR '	FEET	MATL	MATERIAL	REQD	REQUIRED		
BLDG	BUILDING	DIA OR Ø	DIAMETER	FTG	FOOTING	MAX.	MAXIMUM	RT	RIGHT		
BOT	BOTTOM	DIM	DIMENSION	GA	GAUGE	MFR	MANUFACTURE	RTE	ROUTE		
BRG	BEARING	DIST	DISTANCE	GAL	GALLON	MIN.	MINIMUM	S	SLOPE		
C.B.	CATCH BASIN	DN	DOWN	GALV	GALVANIZED	MISC	MISCELLANEOUS	SCH	SCHEDULE		

MATERIAL SPECIFICATIONS

SAND - MDOT SPECIFICATION 703.06b, TYPE F (AGGREGATE FOR SAND LEVELING) PERMEABILITY $\geq 1 \times 10^{-3}$ cm/sec

COVER SOIL - WELL GRADED TILL SOIL WITH GREATER THAN 15 PERCENT PASSING A NO. 200 SIEVE. NO STONES GREATER THAN 4 INCHES IN DIAMETER (COMPACTED 85 PERCENT STANDARD PROCTOR) A

TOP COVER SOIL - A MIXTURE OF WELL GRADED TILL SOIL WITH GREATER THAN 15 PERCENT PASSING A NO. 200 SIEVE AND SECONDARY SLUDGE. NO STONES GREATER THAN 3 INCHES IN DIAMETER A

SLUDGE - HOMOGENEOUS SECONDARY SLUDGE AS RECEIVED FROM MILL.

MATERIAL TESTING SCHEDULE A

BORROW SOURCE	TEST	FREQUENCY
COVER SOIL	GRAIN SIZE	4 TEST
SAND	GRAIN SIZE	2 TEST
SAND	PERMEABILITY	2 TEST
ON-SITE		
COVER SOIL	GRAIN SIZE	1/2000 CY
SAND	GRAIN SIZE	4 TEST
SAND	PERMEABILITY	1/5000 CY

TEST METHODS

GRAIN SIZE	ASTM D422
PERMEABILITY	ASTM D2434

VIEW MARKERS & IDENTIFICATION

SECTION NO. & LOCATION: 3 / C-300 — DRAWING WHERE SECTION OR DETAIL APPEARS

DETAIL IDENTIFICATION & LETTER: MANHOLE A — C-300

SECTION TITLE & NO.: ACCESS ROAD 3 — DRAWING WHERE SECTION IS TAKEN: C-100

DETAIL TITLE & LETTER: MANHOLE A — DRAWING WHERE DETAIL IS CALLED OUT: C-100

STATE OF MAINE PETER MAHER #4107 REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APP'D	JOB No.
		B	A	8/20/90	ISSUED FOR BID - ADDENDUM 1	RLR			

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

DRN	RLR	7/90
CKD	RLR	8/90
CKD		
CORR		
APP'D		

ISSUE CODE: B - BIDS

SCALE

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
REMEDIAL ACTIONS - CELL 1 & 2
SYMBOLS & ABBREVIATIONS

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

YB-19177

MATCH LINE SHEET 2

CELL 5

CELL 4

CELL 3B

CELL 3A

CELL 2

CELL 1

NOTE: CONTOURS SHOWN E 475000 MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE

BOULDER STOCKPILE AREA

ROAD

ACCESS

LANDFILL

LIMITS OF CONSTRUCTION

ACCESS

LEACHATE HOLDING POND

36" BCCMP

BENCH MARK
N663871.733
BRASS PLUG EL. 356.99 E473715.059

WET WELL & PUMP STATION

SEDIMENT POND OUTLET STRUCTURE C YB-19181

LEVEL SPREADER (TYP.) D YB-19181

E 475150
E 475000
E 474500
E 474000
E 473500
E 473250
N 665500
N 665000
N 664500
N 664000
N 663500
N 663000
N 662500
N 662250

STATE OF MAINE
PETER W. MAHER
#6107
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE
YB-15263	DOLBY III LANDFILL AREA, TOPOGRAPHIC SURVEY AND DIGITIZATION

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		12/90	RECORD DRAWING				

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

DRN	R.L.R.	7/90
CKD	M. Cote	8/90
CKD		
CORR		
APPVD		
ISSUE CODE		
C-CONST		
SCALE	1" = 100'	

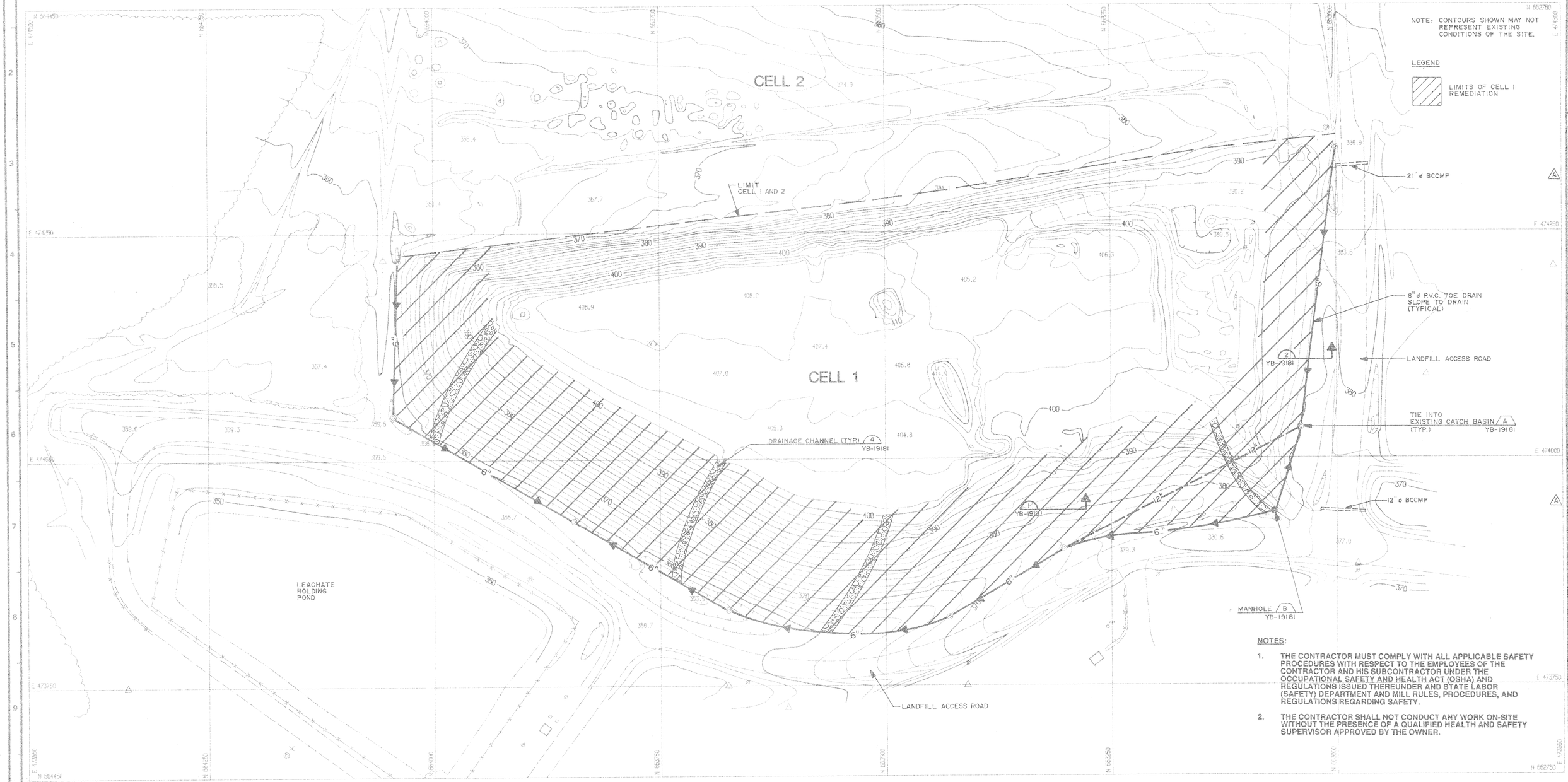
Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
REMEDIAL ACTIONS - CELL 1 & 2
SITE LOCATION PLAN

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4703.7062

YB-19178



NOTES:

1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.
2. THE CONTRACTOR SHALL NOT CONDUCT ANY WORK ON-SITE WITHOUT THE PRESENCE OF A QUALIFIED HEALTH AND SAFETY SUPERVISOR APPROVED BY THE OWNER.

STATE OF MAINE — PETER J. MAHER — 14107 — REGISTERED PROFESSIONAL ENGINEER

YB-15798	DOLBY III LANDFILL-CELL 1, TOPOGRAPHIC SURVEY & DIGITIZ. (9/4/87)	B	A	6/20/90	ISSUED FOR BID - ADDENDUM 1				
				12/90	RECORD DRAWING				
DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.

SEVEE & MAHER ENGINEERS, INC.

CUMBERLAND, MAINE

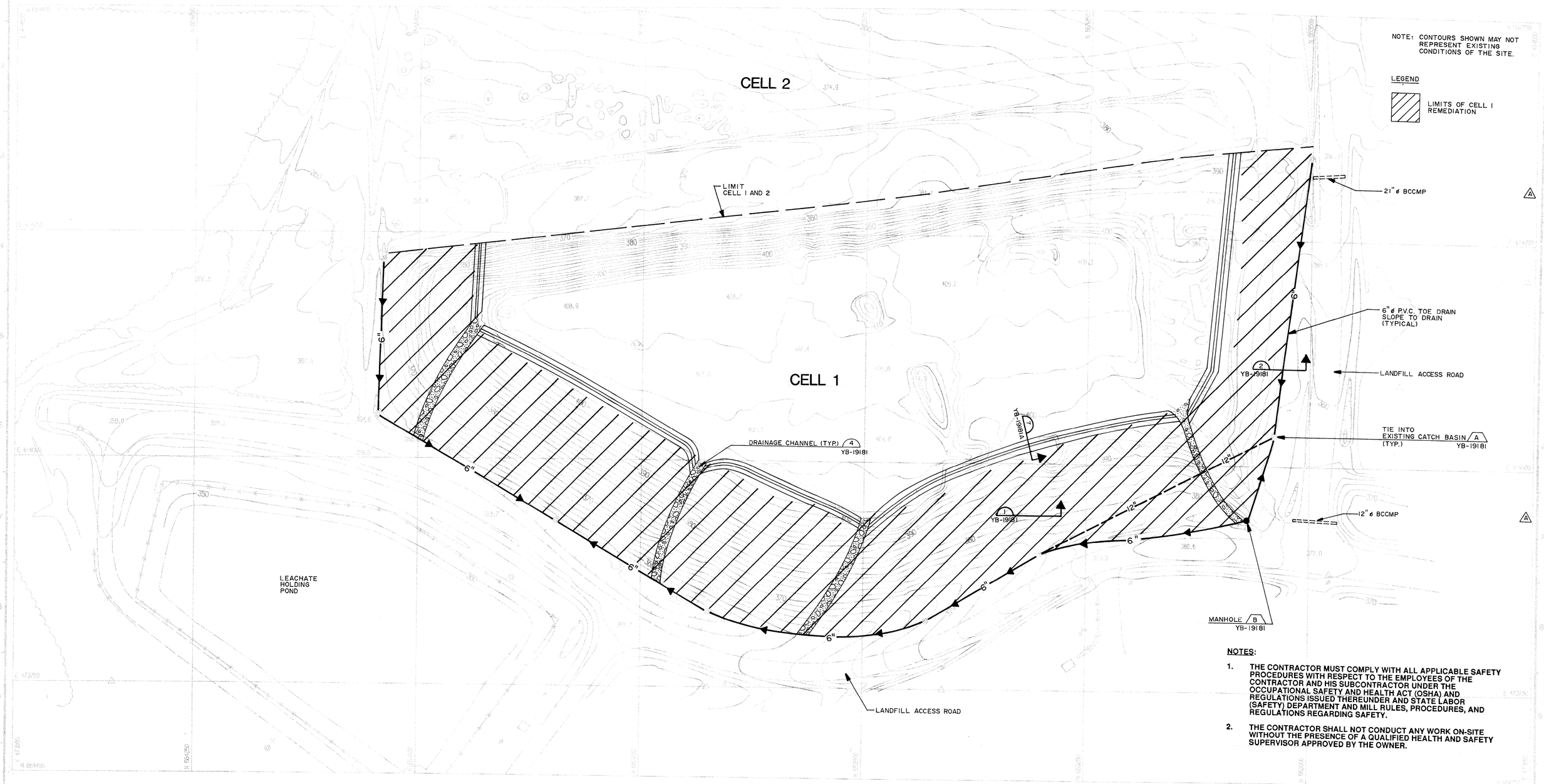
DRN	RLR 7/90
CKD	8/90
CKD	
CORP	
APPVD	
ISSUE CODE	
	C-CONST
SCALE	1" = 50'

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
REMEDIAL ACTIONS - CELL 1 & 2
EXISTING TOPOGRAPHY PLAN - CELL 1

JOB NO. YB-19179
ENG. REQ. NO.
FILE NO. 2-092-4703,7082



NOTE: CONTOURS SHOWN MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.

LEGEND

LIMITS OF CELL 1 REMEDIATION

NOTES:

1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.
2. THE CONTRACTOR SHALL NOT CONDUCT ANY WORK ON-SITE WITHOUT THE PRESENCE OF A QUALIFIED HEALTH AND SAFETY SUPERVISOR APPROVED BY THE OWNER.

STATE OF MAINE PETER M. MAHER No. 107 REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB NO.
				8/91	" " FOR NEW DIKE				
				12/90	RECORD DRAWING	HAC			
YB-15798	DOLBY III LANDFILL-CELL 1, TOPOGRAPHIC SURVEY & DIGITIZ. (9/4/87)	B	A	8/20/90	ISSUED FOR BID - ADDENDUM 1	HAC			

SEVEE & MAHER ENGINEERS, INC.

CUMBERLAND, MAINE

DRN RLR 7/90
CKD M. G. 8/90
CKD
CORR
APPRD
ISSUE CODE
[redacted] C-CONST
SCALE 1" = 50'

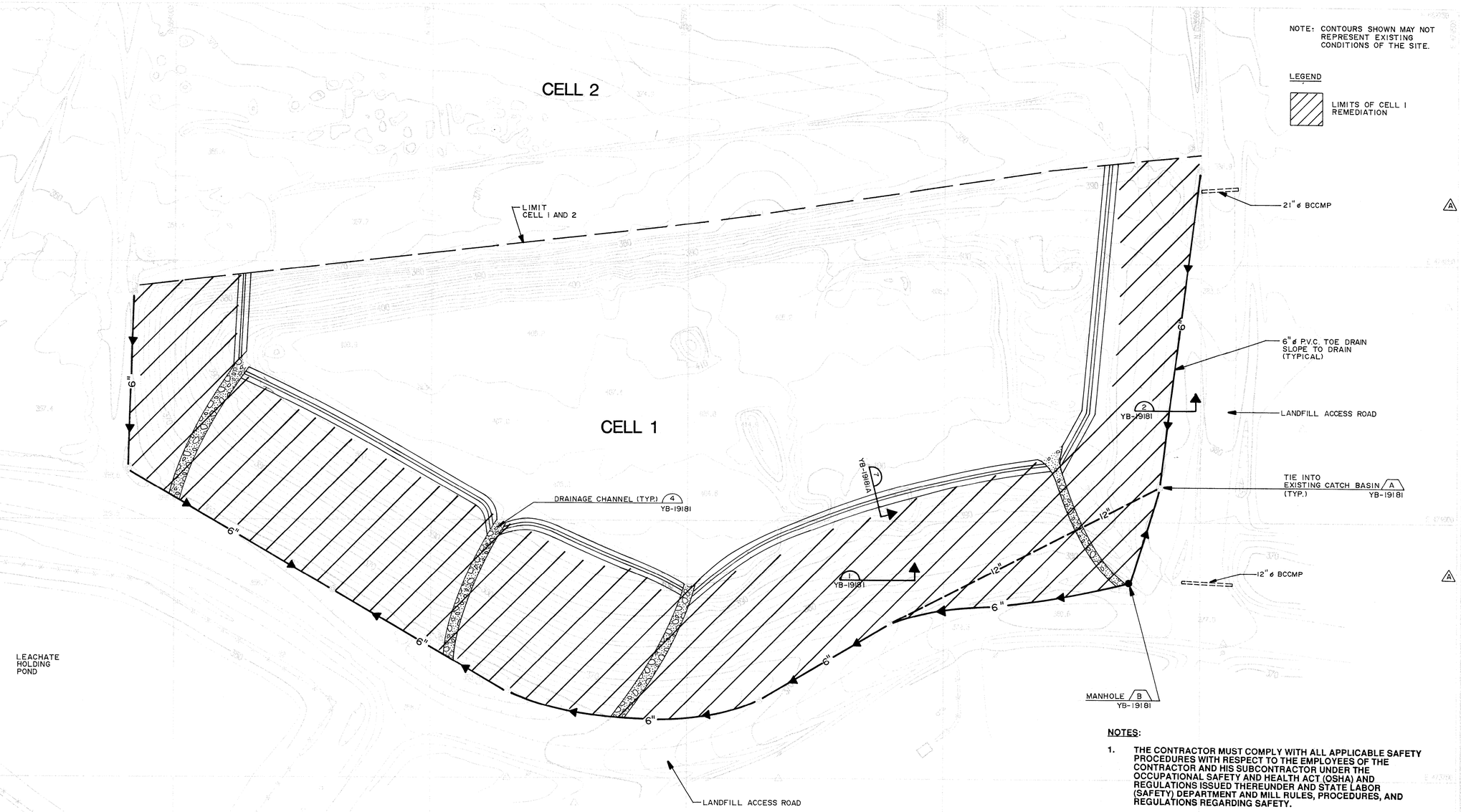
Great Northern Paper
a company of Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
REMEDIAL ACTIONS - CELL 1 & 2
EXISTING TOPOGRAPHY PLAN - CELL 1

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-19179A



NOTE: CONTOURS SHOWN MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.

LEGEND

LIMITS OF CELL 1 REMEDIATION

NOTES:

1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.
2. THE CONTRACTOR SHALL NOT CONDUCT ANY WORK ON-SITE WITHOUT THE PRESENCE OF A QUALIFIED HEALTH AND SAFETY SUPERVISOR APPROVED BY THE OWNER.

STATE OF MAINE · PETER L. MAHER · 4107 · REGISTERED PROFESSIONAL ENGINEER

DRAWING NO	REFERENCE DRAWING TITLE	ECOS NO.	DATE	REVISION	BY	CKD	APPVD	JOB NO.
YB-15798	DOLBY III LANDFILL-CELL 1, TOPOGRAPHIC SURVEY & DIGITIZ.(9/4/87)	B	12/90	RECORD DRAWING	MJC			
		A	8/20/90	ISSUED FOR BID - ADDENDUM 1	MJC			

SEVEE & MAHER ENGINEERS, INC.

CUMBERLAND, MAINE

DES RLP 7/90
DWN M. Sa 8/90
CHK
APPVD
ISSUE DOCM
SCALE 1" = 50'

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

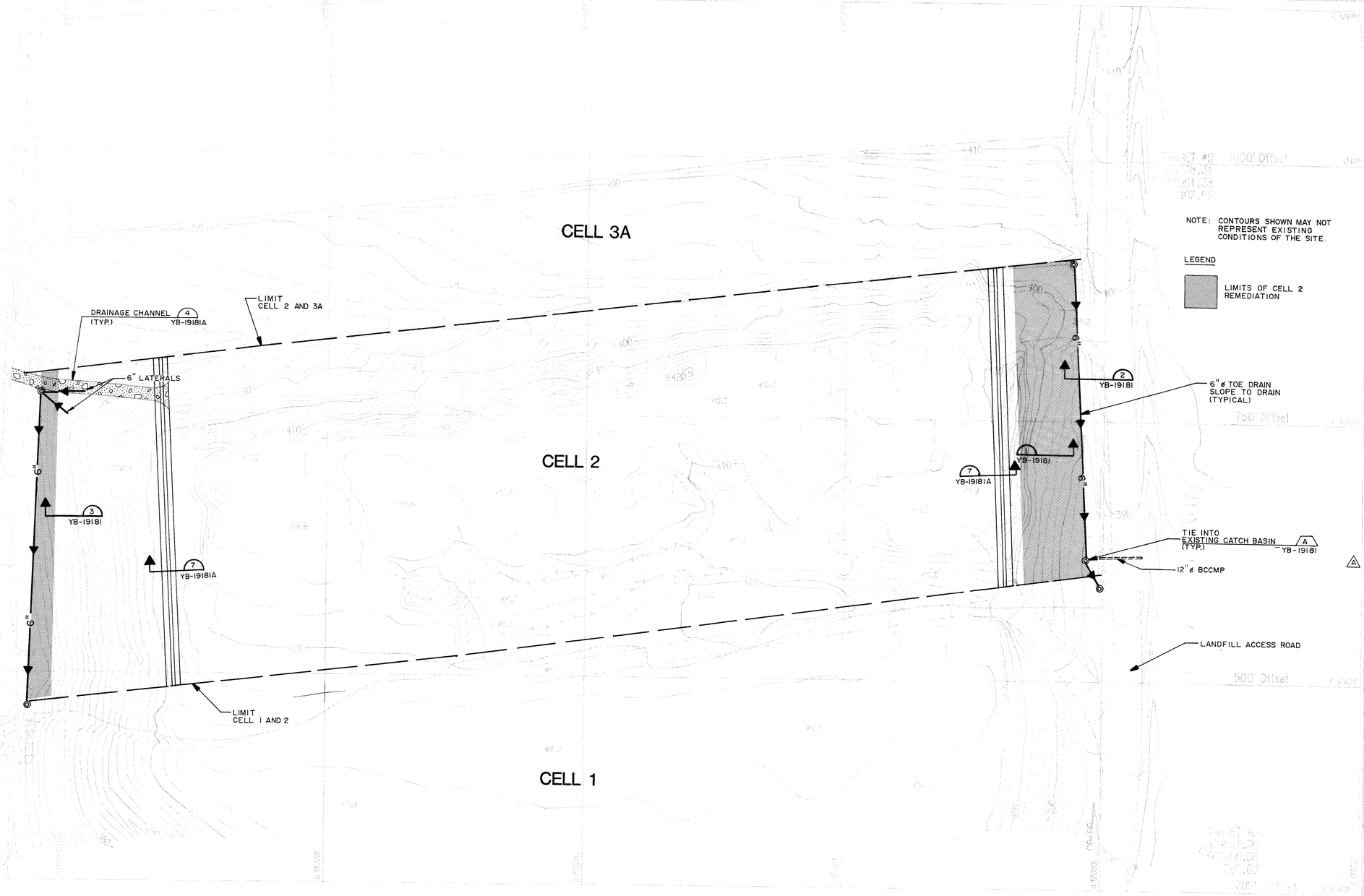
DOLBY III LANDFILL
REMEDIAL ACTIONS - CELL 1 & 2
EXISTING TOPOGRAPHY PLAN - CELL 1

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-19179A

NOTES:

1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.
2. THE CONTRACTOR SHALL NOT CONDUCT ANY WORK ON-SITE WITHOUT THE PRESENCE OF A QUALIFIED HEALTH AND SAFETY SUPERVISOR APPROVED BY THE OWNER.



DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB NO.
				12/90	RECORD DRAWING				
YB-15799	DOLBY III LANDFILL-CELL 2, TOPOGRAPHIC SURVEY & DIGITIZ. (9/4/87)	B	A	8/20/90	ISSUED FOR BID - ADDENDUM I				

STATE OF MAINE
PETER MAHER #4107
REGISTERED PROFESSIONAL ENGINEER

SEVEE & MAHER ENGINEERS, INC.

CUMBERLAND, MAINE

DRN RCR 7/90
CHK M. Cote 8/90
CKD
CONF
APPVD
ISSUE CODE
[redacted] C-CONST
SCALE 1"=50'

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

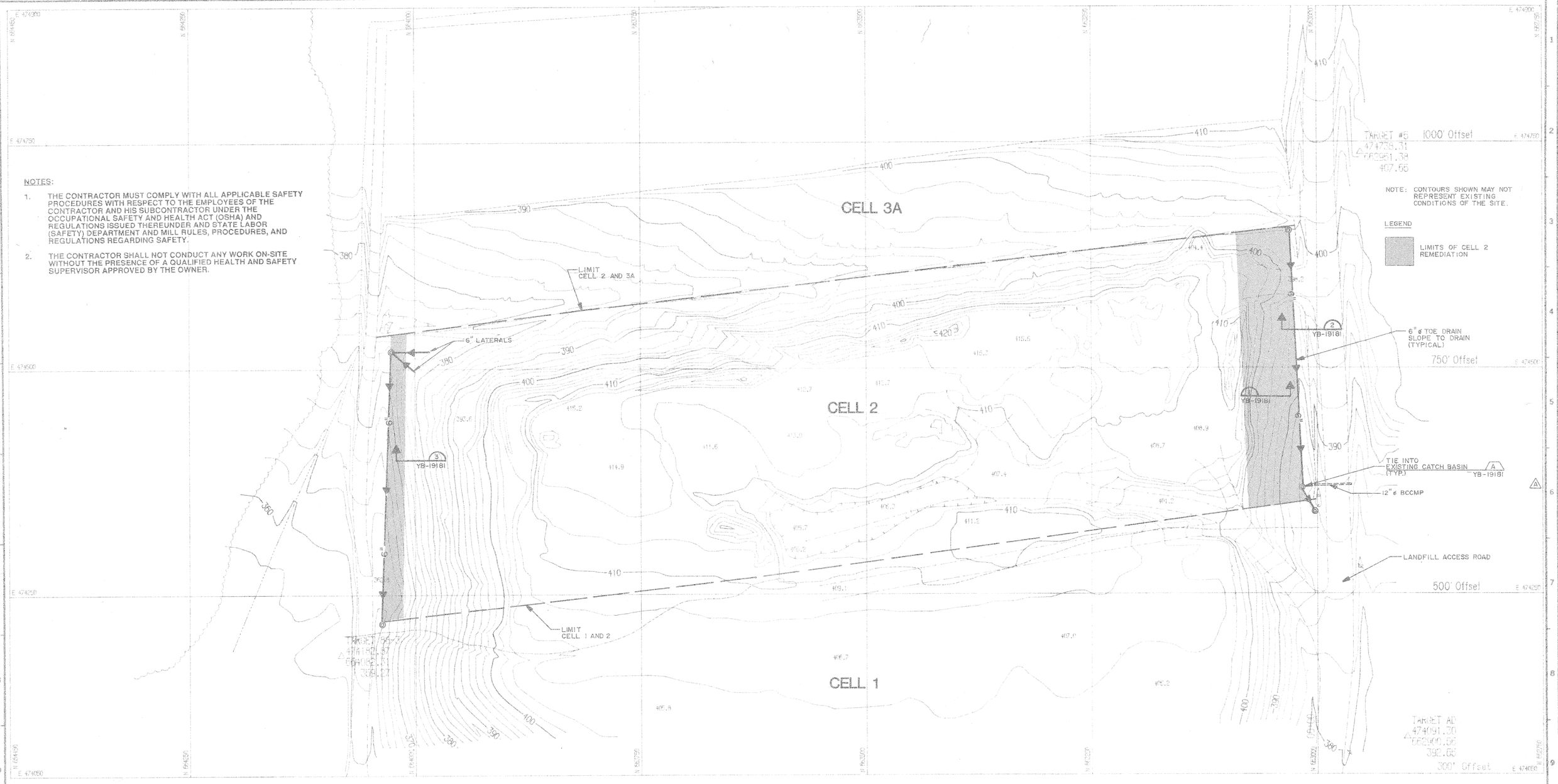
DOLBY III LANDFILL
REMEDIAL ACTIONS - CELL 1 & 2
EXISTING TOPOGRAPHY PLAN - CELL 2

JOB NO.
ENG. REG. NO.
FILE NO. 2-092-4703,7082

YB-19180A

NOTES:

1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.
2. THE CONTRACTOR SHALL NOT CONDUCT ANY WORK ON-SITE WITHOUT THE PRESENCE OF A QUALIFIED HEALTH AND SAFETY SUPERVISOR APPROVED BY THE OWNER.



DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
YB-15799	DOLBY III LANDFILL-CELL 2, TOPOGRAPHIC SURVEY & DIGITIZ. (9/4/87)	B	A	12/90	RECORD DRAWING				
				8/20/90	ISSUED FOR BID - ADDENDUM 1				

SEVEE & MAHER ENGINEERS, INC.

CUMBERLAND, MAINE

DRN RCR 7/90
CKD M. Cote 8/90
CKD
CORR
APPVD
ISSUE CODE
C-CONST
SCALE 1"=50'

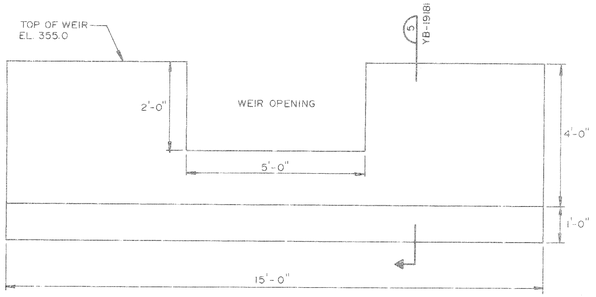
Great Northern Paper
a company of
Great Northern Nekoosa Corporation

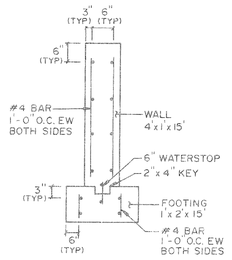
CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
REMEDIAL ACTIONS - CELL 1 & 2
EXISTING TOPOGRAPHY PLAN - CELL 2

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4703, 7082

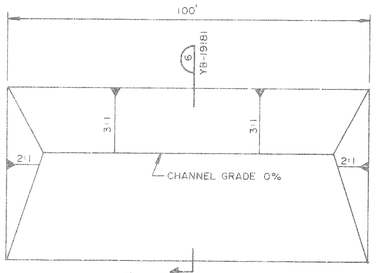
YB-19180



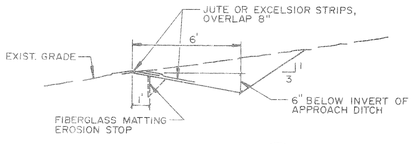


SECTION 5
YB-19181

WEIR DETAIL C
SCALE: 1" = 2'-0" YB-19178

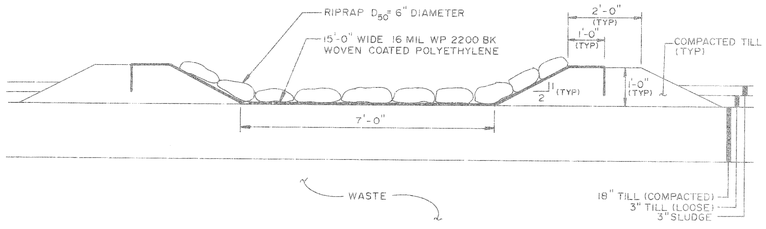


NOTE: LAST 20 FT. OF DRAINAGE DITCH NOT TO EXCEED 1% GRADE

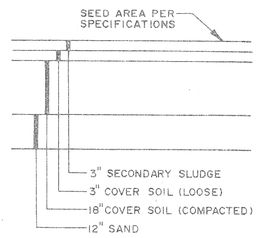


SECTION 6
YB-19181

LEVEL SPREADER D
N.T.S. YB-19178

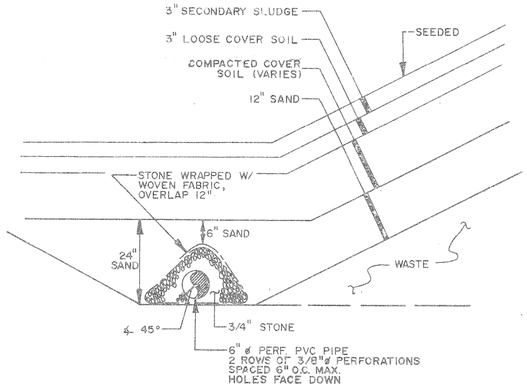


SIDESLOPE DRAINAGE CHANNELS 4
SCALE: 1" = 2'-0" YB-19179

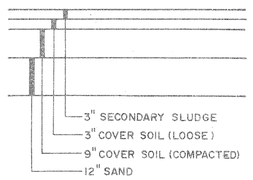


NOTE: SOUTHERN SIDE OF CELL 2 AND ALONG ENTIRE FACE OF CELL 1 AS SHOWN ON EXISTING TOPOGRAPHY PLANS.

FINAL COVER SECTION 1
SCALE: 1" = 2'-0" YB-19179 YB-19180

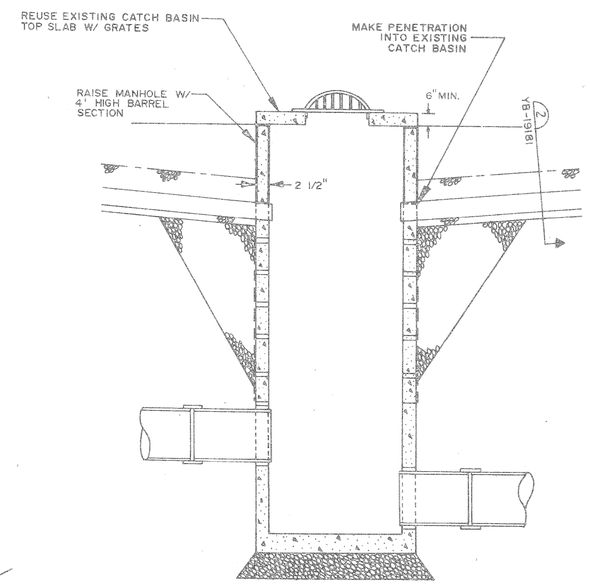


TOE DRAIN SECTION 2
N.T.S. YB-19179 YB-19180

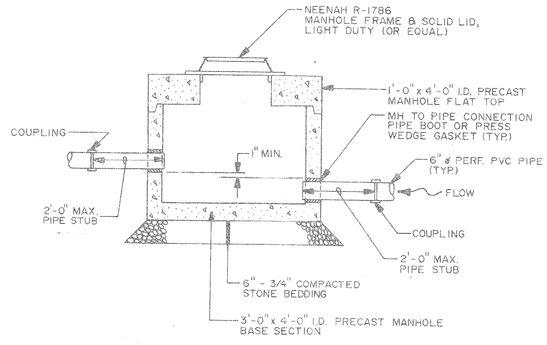


NOTE: NORTHERN SIDE OF CELL 2 SHOWN ON EXISTING TOPOGRAPHY PLAN.

INTERMEDIATE SLOPE COVER SECTION 3
SCALE: 1" = 2'-0" YB-19180



CATCH BASIN A
N.T.S. (EXISTING) YB-19179 YB-19180



MANHOLE B
SCALE: 1" = 2'-0" YB-19179

STATE OF MAINE — PAUL M. MAHER — #6107 — REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		12/90	RECORD DRAWING				
B	A	8/20/90	ISSUED FOR BID - ADDENDUM 1				

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

DRN	RCR	7/90
CED		8/90
CKD		
CORR		
APPVD		

ISSUE CODE: C - CONST
SCALE AS SHOWN

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

A
CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

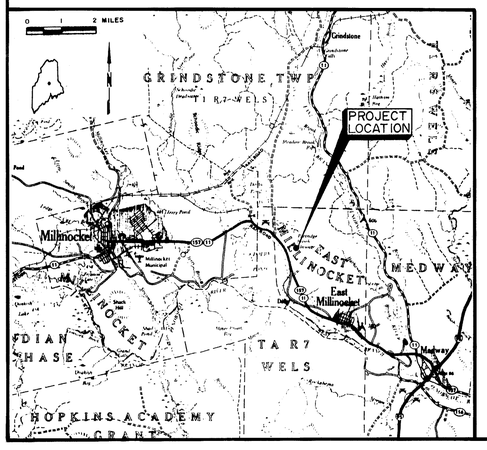
DOLBY III LANDFILL
REMEDIAL ACTIONS - CELL 1 & 2
SECTIONS & DETAILS

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

YB-19181

GEORGIA-PACIFIC, NORTHERN PAPERS DIVISION
MILLINOCKET, MAINE
DOLBY III LANDFILL
FINAL COVER OF CELLS 3A, 3B AND 4

SHT NO.	TITLE	DWG. NO.
1	COVER SHEET	YB-19167
2	SYMBOLS & ABBREVIATIONS	YB-19168
3	SITE LOCATION PLAN	YB-19169
4	EXISTING TOPOGRAPHY PLAN	YB-19170
5	SECTIONS & DETAILS	YB-19171



SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE
1990

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
FINAL COVER - CELLS 3A, 3B, & 4
COVER SHEET

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4703, 7082

YB-19167

SYMBOLS

EXISTING	PROPOSED	
		NORTH ARROW (TRUE)
		NORTH ARROW (MAGNETIC)
N		NORTH ARROW (PLAN NORTH)
25	25	CONTOUR LINES
25.63	25.56	SPOT ELEVATION (GRADE)
E.G.		EXISTING GROUND (PROFILES & SECTIONS)
S.B.L.		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION POINT
0+00 1+00		CONSTRUCTION BASELINE
P.L.		PROPERTY OR DEED LINE (NOT SURVEYED)
525.14' N35°-10'-41"E	525.14' N35°-10'-41"E	PROPERTY LINE W/BEARING & DISTANCE
		ROADS, EASEMENTS OR RIGHT OF WAY LINE
		BOUNDARY LINE (STATE, COUNTY, MUNICIPALITY)
MON	MON	SURVEY MONUMENT
I.F.	I.F.	SURVEY IRON (FOUND)
D.H. PK STK	D.H. PK STK	DRILL HOLE, PK OR STAKE
		WOODS OR BRUSH LINE
		INDIVIDUAL TREE (DECIDUOUS)
		INDIVIDUAL TREE (CONIFEROUS)
		TREE, TO BE REMOVED
		MARSH AREA

EXISTING	PROPOSED	
		STONE WALL
		DRAINAGE COURSES W/DIRECTION & DITCH
SHORE SIDE		EDGE OF WATER
		WATER ELEVATION (GROUND OR SURFACE)
		ROCK OUTCROP OR LEDGE
o—o		FENCE LINE (WOOD)
x—x		FENCE LINE (WIRE)
(STONE)	(CONC) FACE	RETAINING WALL (TYPE)
		GUARD RAIL
		BUILDING & STRUCTURES
		STEPS W/TYPE (WOOD/CONCRETE)
	2 1 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)
	TOP OF SLOPE 2	SLOPES (W/SLOPE RATIO)
		EDGE OF TRAVELED WAY (TYPE)
C F		CUT OR FILL LINE
CLL		CONSTRUCTION LIMIT LINE
		BITUMINOUS PAVEMENT
		GRAVEL ROAD
		CONCRETE
B-12 MW-2 P-20	B-12 MW-2 P-20	TEST BORING, MONITORING WELL OR PROBE & NUMBER

EXISTING	PROPOSED	
TP-103	TP-103	TEST PIT & NUMBER
□	■	CLEAN OUT STRUCTURES
○	●	MANHOLE
⌑	⌑	WATER VALVE
		HYDRANT
		TELEPHONE OR POWER POLE
◎	◎	CATCH BASIN
G	8" G	UNDERGROUND GAS MAIN & SIZE
T	T	UNDERGROUND TELEPHONE CABLE/CONDUIT
E	E	UNDERGROUND ELECTRIC CABLE/CONDUIT
OE	OE	OVERHEAD ELECTRICAL LINE
	12"ACP	SANITARY SEWER, SIZE & TYPE
	8" PVC	FORCE MAIN, SIZE & TYPE
	8" DI	WATER MAIN, SIZE & TYPE
	12" RCP	STORM DRAIN, SIZE & TYPE
UD	8" PVC UD	UNDERDRAIN, SIZE & TYPE
	12" BCCMP	CULVERT, SIZE & TYPE
		RAILROAD
S S		SILTATION FENCE

ABBREVIATIONS

A.C.C.M.P.	ASPHALT COATED C.M.P.	C.M.P.	CORRUGATED METAL PIPE	DR	DRAIN	GPD	GALLONS PER DAY	MON	MONUMENT	SF	SQUARE FEET
A.C.P.	ASBESTOS CEMENT PIPE	C.O.	CLEAN OUT	DWG	DRAWING	GPM	GALLONS PER MINUTE	N.I.T.C.	NOT IN THIS CONTRACT	SHT	SHEET
AC	ACRE	CEM. LIN.	CEMENT LINED	EA	EACH	HDPE	HIGH DENSITY POLYETHYLENE	N.T.S.	NOT TO SCALE	STA	STATION
AGG	AGGREGATE	CEN	CENTRAL ANGLE OF CURVE	EG	EXISTING GROUND OR GRADE	HP	HORSEPOWER	N/F	NOW OR FORMERLY	SY	SQUARE YARD
ALUM	ALUMINUM	CF	CUBIC FEET	ELEC	ELECTRIC	HYD	HYDRANT	NO. OR #	NUMBER	TAN	TANGENT
APPD	APPROVED	CFS	CUBIC FEET PER SECOND	ELL	ELBOW	I.D.	INSIDE DIAMETER	O.C.	ON CENTER	TDH	TOTAL DYNAMIC HEAD
APPROX	APPROXIMATE	CI	CAST IRON	EQUIP	EQUIPMENT	IN OR "	INCHES	O.D.	OUTSIDE DIAMETER	TEMP	TEMPORARY
ASB	ASBESTOS	CL	CLASS	EST	ESTIMATED	INV	INVERT	P.C.	POINT OF CURVE	TYP	TYPICAL
ASPH	ASPHALT	CONC	CONCRETE	EXC	EXCAVATE	INV. EL.	INVERT ELEVATION	P.I.	POINT OF INTERSECTION	V	VOLTS
AT2 C.M.P.	ALUMINUM TYPE 2 C.M.P.	CONST	CONSTRUCTION	EXIST	EXISTING	LB	POUND	P.T.	POINT OF TANGENT	W/	WITH
AUTO	AUTOMATIC	CONTR	CONTRACTOR	F.G.	FINISH GRADE	LC	LEACHATE COLLECTION	PERF	PERFORATED	W/O	WITHOUT
AUX	AUXILIARY	CTR	CENTER	FBRGL	FIBERGLASS	LD	LEAK DETECTION	PSI	POUNDS PER SQUARE INCH	YD	YARD
AVE	AVENUE	CY	CUBIC YARD	FDN	FOUNDATION	LIN. FT.	LINEAR FEET	PVC	POLYVINYL CHLORIDE		
AVG	AVERAGE	D	DEGREE OF CURVE (ARC DEF.)	FLEX	FLEXIBLE	LOC	LOCATION	PVMT	PAVEMENT		
AZ	AZIMUTH	DBL	DOUBLE	FLG	FLANGE	LT	LEFT	QTY	QUANTITY		
B.C.C.M.P.	BITUMINOUS COATED C.M.P.	DEG OR °	DEGREE	FLR	FLOOR	M.H.	MANHOLE	R.O.W.	RIGHT OF WAY		
B.M.	BENCH MARK	DEPT	DEPARTMENT	FPS	FEET PER SECOND	M.J.	MECHANICAL JOINT	RAD	RADIUS		
BIT	BITUMINOUS	DI	DUCTILE IRON	FT OR '	FEET	MATL	MATERIAL	REQD	REQUIRED		
BLDG	BUILDING	DIA OR Ø	DIAMETER	FTG	FOOTING	MAX.	MAXIMUM	RT	RIGHT		
BOT	BOTTOM	DIM	DIMENSION	GA	GAUGE	MFR	MANUFACTURE	RTE	ROUTE		
BRG	BEARING	DIST	DISTANCE	GAL	GALLON	MIN.	MINIMUM	S	SLOPE		
C.B.	CATCH BASIN	DN	DOWN	GALV	GALVANIZED	MISC	MISCELLANEOUS	SCH	SCHEDULE		

MATERIAL SPECIFICATIONS

FINAL COVER

SAND - MDOT SPECIFICATION 703.06b, TYPE F (AGGREGATE FOR SAND LEVELING) PERMEABILITY $\geq 1 \times 10^{-3}$ cm/sec

COVER SOIL - WELL GRADED TILL SOIL WITH GREATER THAN 15 PERCENT PASSING A NO. 200 SIEVE. NO STONES GREATER THAN 4 INCHES IN DIAMETER (COMPACTED 95 PERCENT STANDARD PROCTOR) △A

TOP COVER SOIL - A MIXTURE OF WELL GRADED TILL SOIL WITH GREATER THAN 15 PERCENT PASSING A NO. 200 SIEVE AND SECONDARY SLUDGE. NO STONES GREATER THAN 3 INCHES IN DIAMETER △A

SLUDGE - HOMOGENEOUS SECONDARY SLUDGE AS RECEIVED FROM MILL.

MATERIAL TESTING SCHEDULE △A

BORROW SOURCE	TEST	FREQUENCY
COVER SOIL	GRAIN SIZE	4 TEST
SAND	GRAIN SIZE	2 TEST
SAND	PERMEABILITY	2 TEST
ON-SITE		
COVER SOIL	GRAIN SIZE	1/2000 CY
SAND	GRAIN SIZE	4 TEST
SAND	PERMEABILITY	1/5000 CY

TEST METHODS

GRAIN SIZE ASTM D422
PERMEABILITY ASTM D2434

VIEW MARKERS & IDENTIFICATION

SECTION NO. & LOCATION — 3 / C-300 — DRAWING WHERE SECTION OR DETAIL APPEARS

DETAIL IDENTIFICATION & LETTER — MANHOLE A — C-300

SECTION TITLE & NO. — ACCESS ROAD 3 — DRAWING WHERE SECTION IS TAKEN C-100

DETAIL TITLE & LETTER — MANHOLE A — DRAWING WHERE DETAIL IS CALLED OUT C-100

STATE OF MAINE PETER A. WARNER 04107 REGISTERED PROFESSIONAL ENGINEER

DRAWING NO	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
B	A	8/20/90	ISSUED FOR BID - ADDENDUM 1	AHC			

JOB NO.

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

DRN	RLR	7/90
CKD	A.H.	8/90
CKD		
CORR		
APPVD		
ISSUE CODE	B-BIDS	
SCALE		

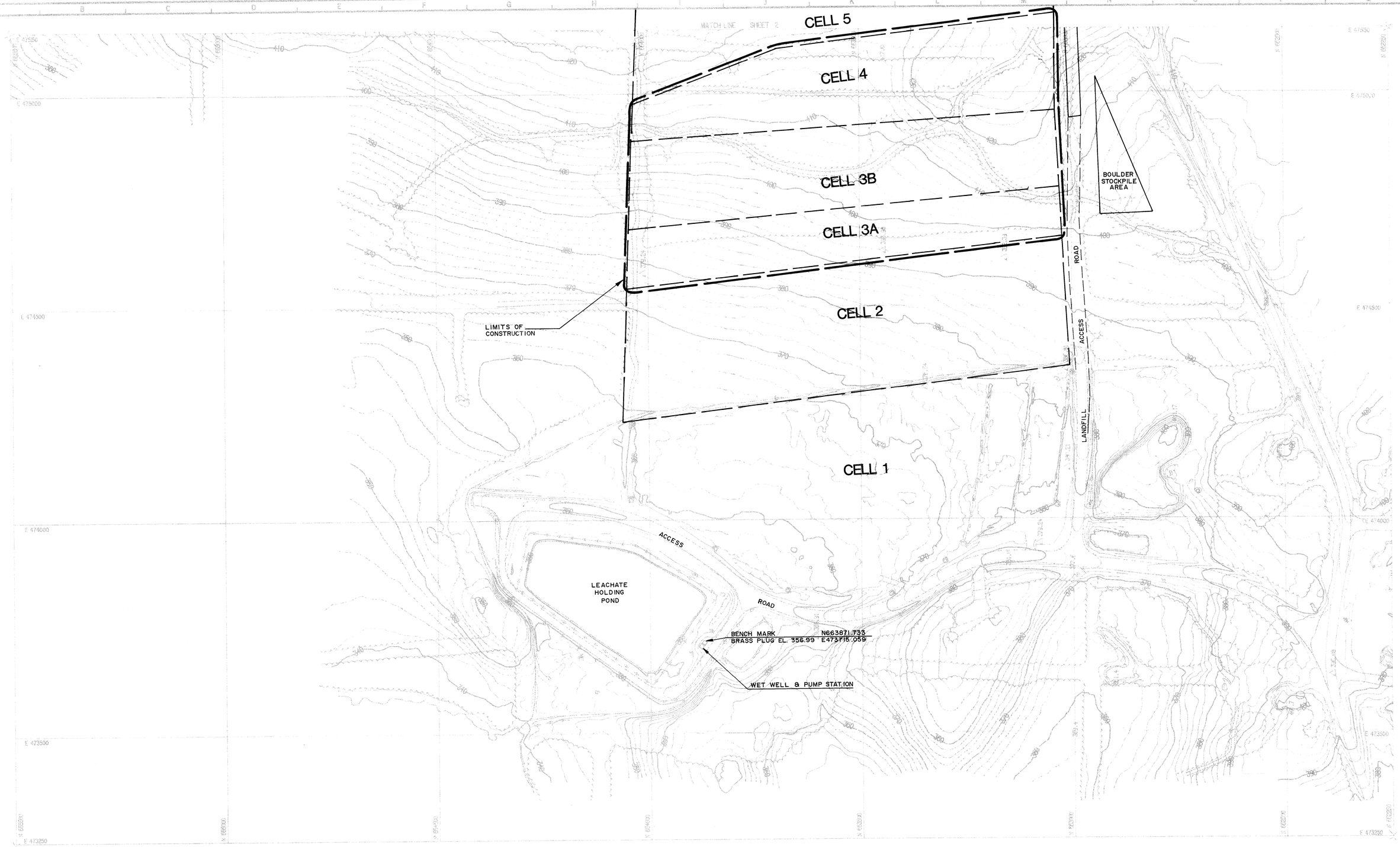
Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
FINAL COVER - CELLS 3A, 3B, & 4
SYMBOLS & ABBREVIATIONS

JOB NO.
ENG. REQ. NO.
FILE NO 2-092-4703, 7082

YB-19168



YB-15263	DOLBY III LANDFILL AREA, TOPOGRAPHIC SURVEY AND DIGITIZATION								
DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO.

DRN	RCR	7/90
CKD	M. Cote	8/90
CKD		
DOR#		
APPVD		
ISSUE CODE		
[redacted]	B-BIDS	
SCALE	1" = 100'	

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
FINAL COVER-CELLS 3A, 3B, & 4
SITE LOCATION PLAN

JOB NO.
ENG. REG. NO.
FILE NO. 2-092-4703,7082

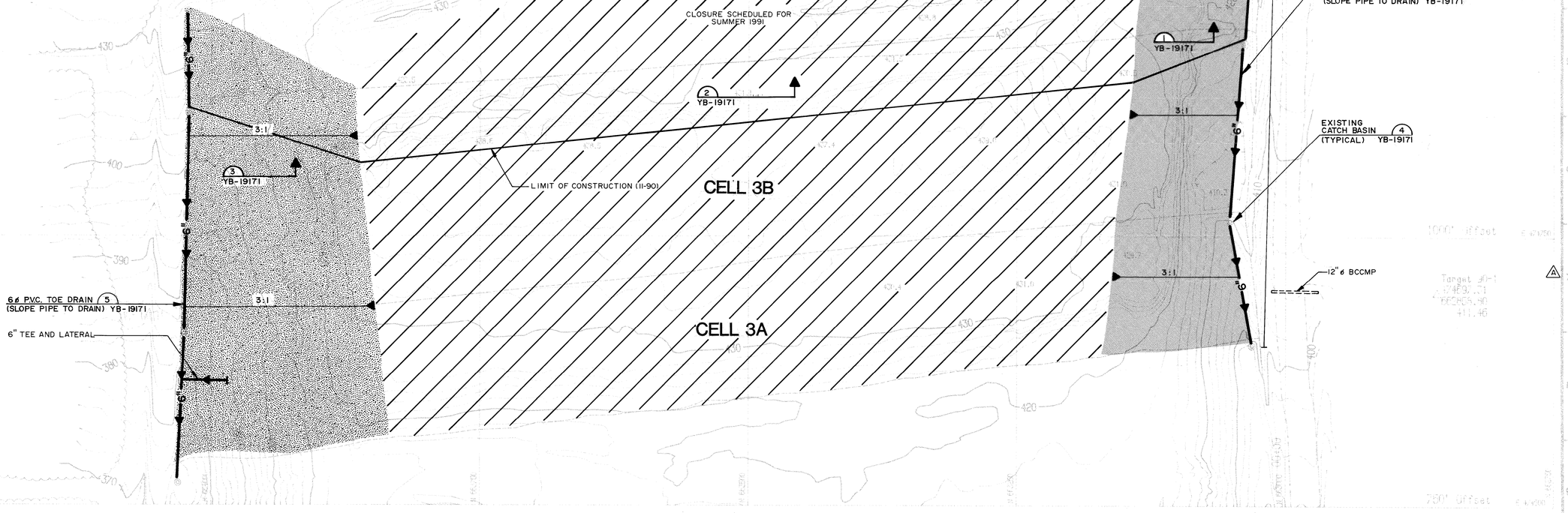
YB-19169

NOTES:

1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.

2. THE CONTRACTOR SHALL NOT CONDUCT ANY WORK ON-SITE WITHOUT THE PRESENCE OF A QUALIFIED HEALTH AND SAFETY SUPERVISOR APPROVED BY THE OWNER.

NOTE: CONTOURS SHOWN MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.



DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CHD	APPVD	JOB No.
				12/90	RECORD DRAWING				
YB-16476	DOLBY III LANDFILL-CELLS 3A, 3B, & 4 TOPO. SURVEY & DIGITIZ.(4/18/90)	B	A	8/20/90	ISSUED FOR BID - ADDENDUM 1				

STATE OF MAINE — PETER R. MAHER — 5107 — REGISTERED PROFESSIONAL ENGINEER

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO.

DRN RLR 7/90
CHD [illegible] 8/90
CHD
CORR
APPVD
ISSUE CODE
C - CONST
SCALE 1" = 50'

Great Northern Paper
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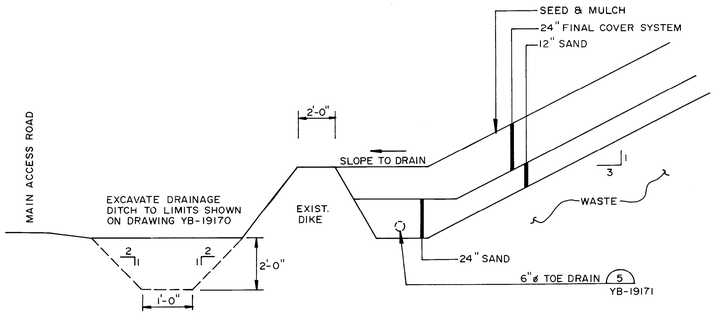
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

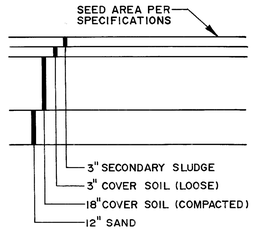
DOLBY III LANDFILL
FINAL COVER - CELLS 3A, 3B, & 4
EXISTING TOPOGRAPHY PLAN

JOB NO.
ENG. REC. NO.
FILE NO. 2-092-4703,7082

YB-19170

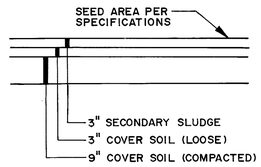


DITCH ENHANCEMENT DETAIL A
N.T.S. YB-19170



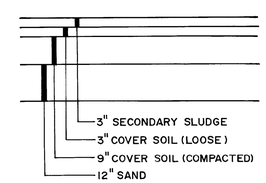
NOTE: SOUTHERN SIDE OF LANDFILL AS SHOWN ON EXISTING TOPOGRAPHY PLAN.

FINAL COVER SECTION 1
SCALE: 1" = 2'-0" YB-19170



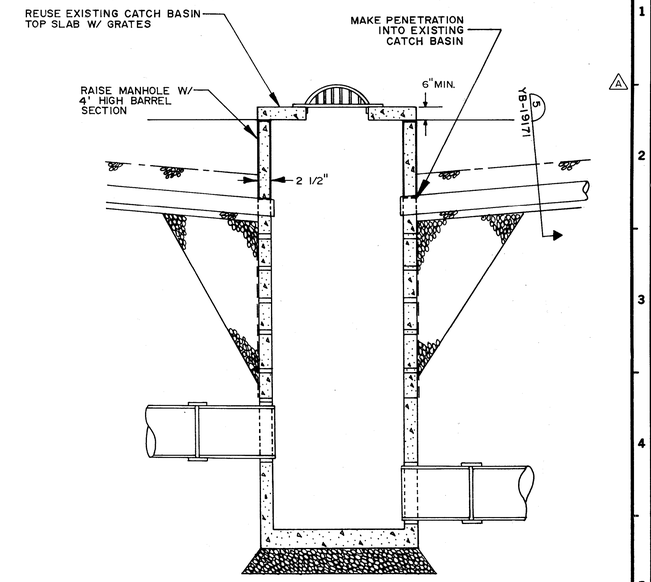
NOTE: TOP OF LANDFILL AS SHOWN ON EXISTING TOPOGRAPHY PLAN.

INTERMEDIATE TOP COVER SECTION 2
SCALE: 1" = 2'-0" YB-19170

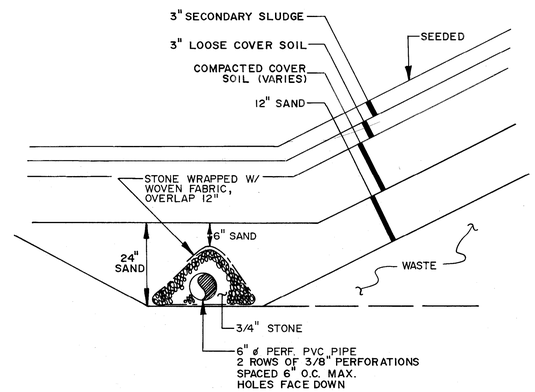


NOTE: NORTHERN SIDE OF LANDFILL AS SHOWN ON EXISTING TOPOGRAPHY PLAN.

INTERMEDIATE SLOPE COVER SECTION 3
SCALE: 1" = 2'-0" YB-19170



CATCH BASIN 4
N.T.S. (EXISTING) YB-19170



SECTION 5
N.T.S. YB-19170 YB-19171

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
				12/90	RECORD DRAWING				
		B	A	8/20/90	ISSUED FOR BID - ADDENDUM 1				

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO.

DRN RCR 7/90
CKD H. Cote 8/90
CKD
CORR
APPVD
ISSUE CODE
C-CONST
SCALE AS SHOWN

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

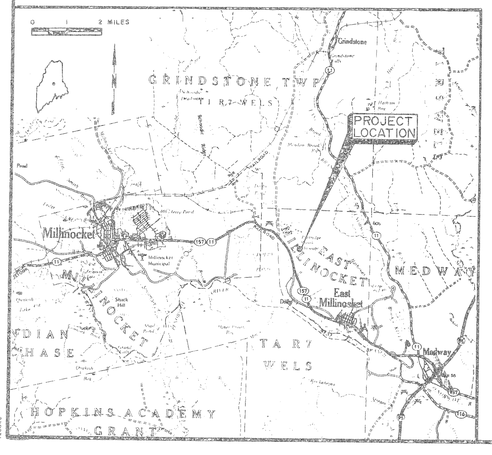
DOLBY III LANDFILL
FINAL COVER-CELLS 3A, 3B, & 4
SECTIONS & DETAILS

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4703, 7082

YB-19171

GREAT NORTHERN PAPER CO.
MILLINOCKET, MAINE
DOLBY III LANDFILL
CELL 5 CONSTRUCTION

SHT NO.	TITLE	DWG. NO.
1	COVER SHEET	YB-19086
2	SYMBOLS & ABBREVIATIONS	YB-19087
3	SITE LOCATION PLAN SHEET 1 OF 2	YB-19088
4	SITE LOCATION PLAN SHEET 2 OF 2	YB-19088
5	SITE DEVELOPMENT PLAN	YB-19089
6	SECTIONS & DETAILS	YB-19090
7	FINAL GRADING PLAN	YB-19091 (N.I.T.C.)



SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE
1990

STATE OF MAINE PETER A. MAHER 4101 REGISTERED PROFESSIONAL ENGINEER

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT

DOLBY III LANDFILL
CELL 5
COVER SHEET

JOB NO. 94545
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-19086

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			STONE WALL	TP-103	TP-103	TEST PIT & NUMBER
		NORTH ARROW (MAGNETIC)			DRAINAGE COURSES W/DIRECTION & DITCH	□	■	CLEAN OUT STRUCTURES
N		NORTH ARROW (PLAN NORTH)	SHORE SIDE		EDGE OF WATER	○	●	MANHOLE
25	25	CONTOUR LINES			WATER ELEVATION (GROUND OR SURFACE)	⌑	⌑	WATER VALVE
25 x 63	25.56	SPOT ELEVATION (GRADE)			ROCK OUTCROP OR LEDGE	⌑	⌑	HYDRANT
E.G.		EXISTING GROUND (PROFILES & SECTIONS)			FENCE LINE (WOOD)	⌑	⌑	TELEPHONE OR POWER POLE
S.B.L.		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION POINT			FENCE LINE (WIRE)	⌑	⌑	CATCH BASIN
0+00	1+00	CONSTRUCTION BASELINE	(STONE)	(CONC) FACE	RETAINING WALL (TYPE)	G	8" G	UNDERGROUND GAS MAIN & SIZE
P.L.		PROPERTY OR DEED LINE (NOT SURVEYED)			GUARD RAIL	T	T	UNDERGROUND TELEPHONE CABLE/CONDUIT
525.14' N35°-10'-41"E	525.14' N35°-10'-41"E	PROPERTY LINE W/BEARING & DISTANCE			BUILDING & STRUCTURES	E	E	UNDERGROUND ELECTRIC CABLE/CONDUIT
		ROADS, EASEMENTS OR RIGHT OF WAY LINE			STEPS W/TYPE (WOOD/CONCRETE)	OE	OE	OVERHEAD ELECTRICAL LINE
		BOUNDARY LINE (STATE, COUNTY, MUNICIPALITY)		1:2 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)		12"ACP	SANITARY SEWER, SIZE & TYPE
□ MON.	■ MON.	SURVEY MONUMENT		TOP OF SLOPE 2:1	SLOPES (W/SLOPE RATIO)		8" PVC	FORCE MAIN, SIZE & TYPE
○ I.F.	● I.F.	SURVEY IRON (FOUND)			EDGE OF TRAVELED WAY (TYPE)		8" DI	WATER MAIN, SIZE & TYPE
○ D.H. PK. STK.	● D.H. PK. STK.	DRILL HOLE, PK OR STAKE	C	F	CUT OR FILL LINE		12" RCP	STORM DRAIN, SIZE & TYPE
		WOODS OR BRUSH LINE		CLL	CONSTRUCTION LIMIT LINE	UD	8" PVC UD	UNDERDRAIN, SIZE & TYPE
		INDIVIDUAL TREE (DECIDUOUS)			BITUMINOUS PAVEMENT		12" BCCMP	CULVERT, SIZE & TYPE
		INDIVIDUAL TREE (CONIFEROUS)			GRAVEL ROAD			RAILROAD
		TREE, TO BE REMOVED			CONCRETE	S	S	SILTATION FENCE
		MARSH AREA	B-12 MW-2 P-20	B-12 MW-2 P-20	TEST BORING, MONITORING WELL OR PROBE & NUMBER			

ABBREVIATIONS

A.C.C.M.P.	ASPHALT COATED C.M.P.	C.M.P.	CORRUGATED METAL PIPE	DR	DRAIN	GPD	GALLONS PER DAY	MON	MONUMENT	SF	SQUARE FEET
A.C.P.	ASBESTOS CEMENT PIPE	C.O.	CLEAN OUT	DWG	DRAWING	GPM	GALLONS PER MINUTE	N.I.T.C.	NOT IN THIS CONTRACT	SHT	SHEET
AC	ACRE	CEM. LIN.	CEMENT LINED	EA	EACH	HDPE	HIGH DENSITY POLYETHYLENE	N.T.S.	NOT TO SCALE	STA	STATION
AGG	AGGREGATE	CEN	CENTRAL ANGLE OF CURVE	EG	EXISTING GROUND OR GRADE	HP	HORSEPOWER	N/F	NOW OR FORMERLY	SY	SQUARE YARD
ALUM	ALUMINUM	CF	CUBIC FEET	ELEC	ELECTRIC	HYD	HYDRANT	NO. OR #	NUMBER	TAN	TANGENT
APPD	APPROVED	CFS	CUBIC FEET PER SECOND	ELL	ELBOW	I.D.	INSIDE DIAMETER	O.C.	ON CENTER	TDH	TOTAL DYNAMIC HEAD
APPROX	APPROXIMATE	CI	CAST IRON	EQUIP	EQUIPMENT	IN OR "	INCHES	O.D.	OUTSIDE DIAMETER	TEMP	TEMPORARY
ASB	ASBESTOS	CL	CLASS	EST	ESTIMATED	INV	INVERT	P.C.	POINT OF CURVE	TYP	TYPICAL
ASPH	ASPHALT	CONC	CONCRETE	EXC	EXCAVATE	INV. EL.	INVERT ELEVATION	P.I.	POINT OF INTERSECTION	V	VOLTS
AT2 C.M.P.	ALUMINUM TYPE 2 C.M.P.	CONST	CONSTRUCTION	EXIST	EXISTING	LB	POUND	P.T.	POINT OF TANGENT	W/	WITH
AUTO	AUTOMATIC	CONTR	CONTRACTOR	F.G.	FINISH GRADE	LC	LEACHATE COLLECTION	PERF	PERFORATED	W/O	WITHOUT
AUX	AUXILIARY	CTR	CENTER	FBRGL	FIBERGLASS	LD	LEAK DETECTION	PSI	POUNDS PER SQUARE INCH	YD	YARD
AVE	AVENUE	CY	CUBIC YARD	FDN	FOUNDATION	LIN. FT.	LINEAR FEET	PVC	POLYVINYL CHLORIDE		
AVG	AVERAGE	D	DEGREE OF CURVE (ARC DEF.)	FLEX	FLEXIBLE	LOC	LOCATION	PVMT	PAVEMENT		
AZ	AZIMUTH	DBL	DOUBLE	FLG	FLANGE	LT	LEFT	QTY	QUANTITY		
B.C.C.M.P.	BITUMINOUS COATED C.M.P.	DEG OR °	DEGREE	FLR	FLOOR	M.H.	MANHOLE	R.O.W.	RIGHT OF WAY		
B.M.	BENCH MARK	DEPT	DEPARTMENT	FPS	FEET PER SECOND	M.J.	MECHANICAL JOINT	RAD	RADIUS		
BIT	BITUMINOUS	DI	DUCTILE IRON	FT OR '	FEET	MATL	MATERIAL	REQD	REQUIRED		
BLDG	BUILDING	DIA OR Ø	DIAMETER	FTG	FOOTING	MAX.	MAXIMUM	RT	RIGHT		
BOT	BOTTOM	DIM	DIMENSION	GA	GAUGE	MFR	MANUFACTURE	RTE	ROUTE		
BRG	BEARING	DIST	DISTANCE	GAL	GALLON	MIN.	MINIMUM	S	SLOPE		
C.B.	CATCH BASIN	DN	DOWN	GALV	GALVANIZED	MISC	MISCELLANEOUS	SCH	SCHEDULE		

VIEW MARKERS & IDENTIFICATION

SECTION NO. & LOCATION

3 / C-300 — DRAWING WHERE SECTION OR DETAIL APPEARS — C-300

DETAIL IDENTIFICATION & LETTER

MANHOLE A — C-300

SECTION TITLE & NO.

ACCESS ROAD 3 — C-100

DRAWING WHERE SECTION IS TAKEN

DETAIL TITLE & LETTER

MANHOLE A — C-100

DRAWING WHERE DETAIL IS CALLED OUT

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 9019

DRN	RLR	
CKD	[illegible]	5/90
CKD	DKR	5/3/90
CORR	[illegible]	5/31/90
APPVD	BAP	5/31/90
ISSUE CODE		
B-BIDS		
SCALE		

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
CELL 5
SYMBOLS & ABBREVIATIONS

JOB NO. 94545
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

YB-19087

MATCH LINE SHEET 2

CELL 5

CELL 4
(EXISTING)

CELL 3B
EXISTING

CELL 3A
(EXISTING)

CELL 2
(EXISTING)

CELL 1
(EXISTING)

BOULDER STOCKPILE AREA

ACCESS ROAD

LANDFILL ACCESS ROAD

LEACHATE HOLDING POND

BENCH MARK N663871.733
BRASS PLUG EL. 356.99 E473715.059

WET WELL & PUMP STATION

E 475000
E 474500
E 474000
E 473500
E 473250

STATE OF MAINE
PETER R. KYNOCH
14107
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
YB-15263	DOLBY III LANDFILL AREA, TOPOGRAPHIC SURVEY AND DIGITIZATION								

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 9019

DRN	RLR	
CKD	[illegible]	5/90
CKD	DSM	5/3/90
CONFR	[illegible]	5/3/90
APPVD	GAP	5/3/90
ISSUE CODE	B-BIDS	
SCALE	1" = 100'	

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
CELL 5
SITE LOCATION PLAN

JOB NO. 94545
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-19088
SHEET 1 OF 2



DRAWING NO	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	ION No.

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 9019

DRN	RLR	
CKD	MHC	5/90
CKD	DAE	5/3/90
CORR	BRB	5/3/90
APPVD	BAP	5/3/90

ISSUE CODE
B-BIDS
SCALE 1" = 100'

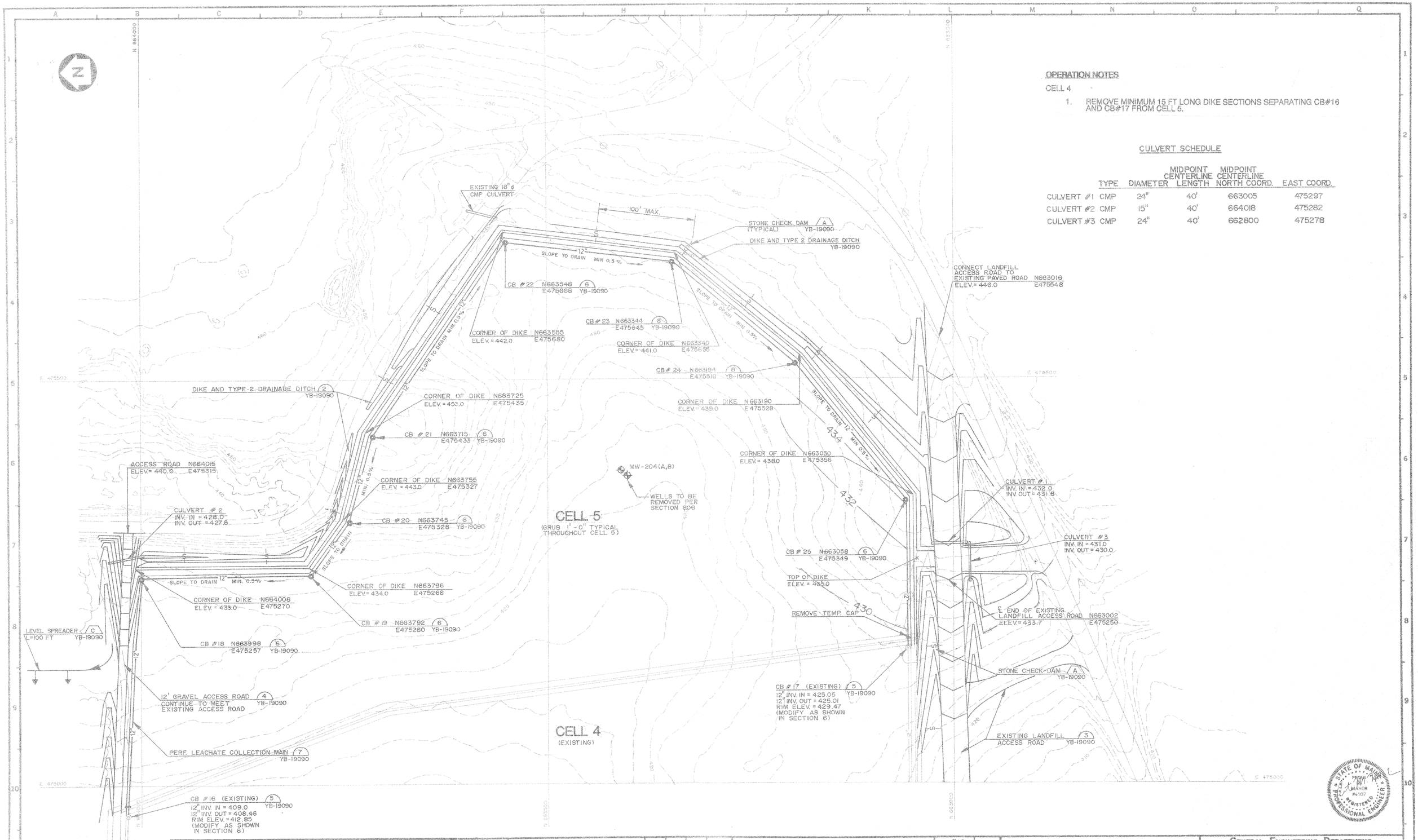
Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
CELL 5
SITE LOCATION PLAN

JOB NO. 94545
ENG. REG. NO.
FILE NO 2-092-4703, 7082

YB-19088
SHEET 2 OF 2



OPERATION NOTES

CELL 4

1. REMOVE MINIMUM 15 FT LONG DIKE SECTIONS SEPARATING CB#16 AND CB#17 FROM CELL 5.

CULVERT SCHEDULE

	TYPE	DIAMETER	MIDPOINT CENTERLINE LENGTH	MIDPOINT CENTERLINE NORTH COORD.	EAST COORD.
CULVERT #1	CMP	24"	40'	663005	475297
CULVERT #2	CMP	15"	40'	664018	475282
CULVERT #3	CMP	24"	40'	662800	475278

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
YB-15914	DOLBY III LANDFILL, CELL 4, SITE DEVELOPMENT PLAN								

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 9019

DRN RLR
CKD AHC 5/90
CKD DHE 5/3/90
CORR BRR 5/3/90
APPVD GAP 5/3/90
ISSUE CODE
B-BIDS
SCALE 1" = 50'

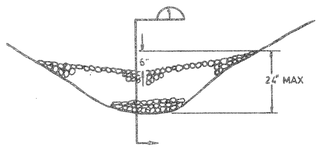
Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

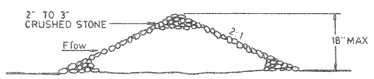
DOLBY III LANDFILL
CELL 5
SITE DEVELOPMENT PLAN

JOB NO. 94545
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

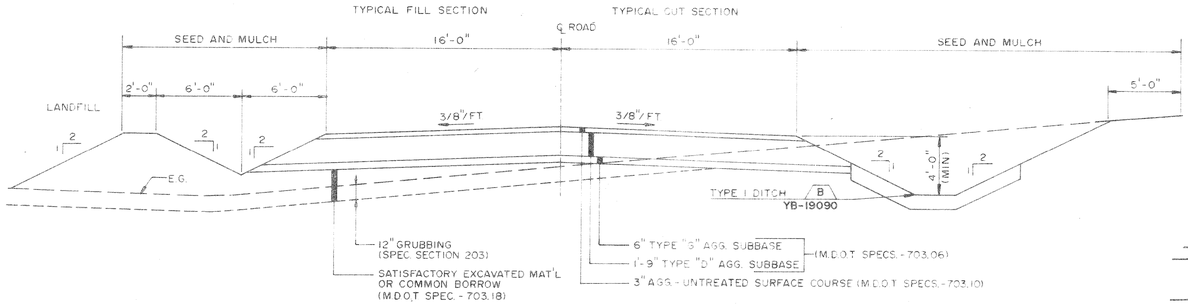
YB-19089



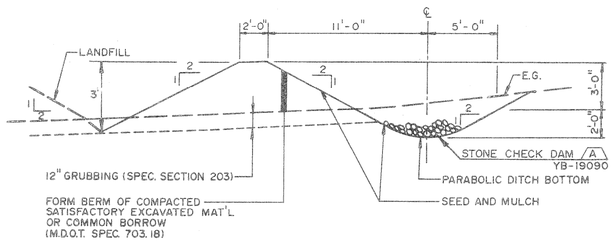
STONE CHECK DAM (A)
N.T.S. YB-19089

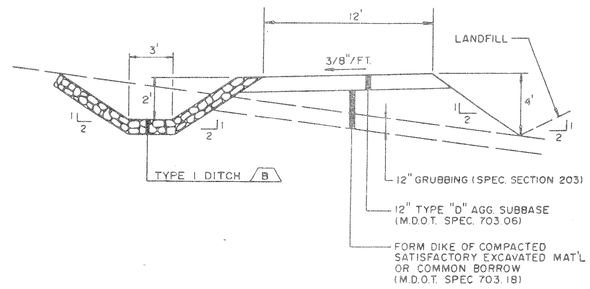


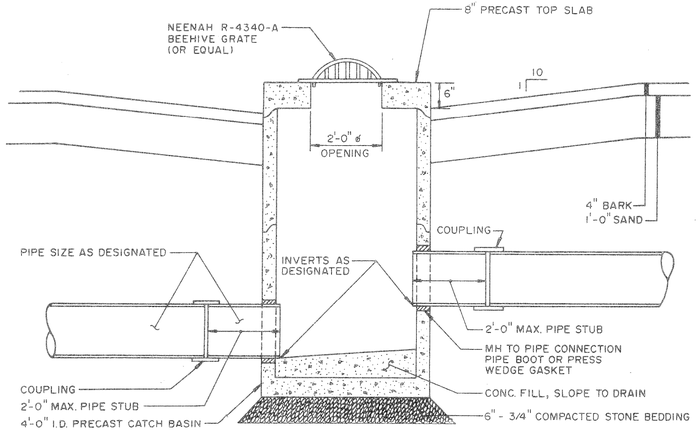
SECTION (1)
N.T.S.



TYPICAL SECTION
LANDFILL ACCESS ROAD (3)
N.T.S. YB-19089

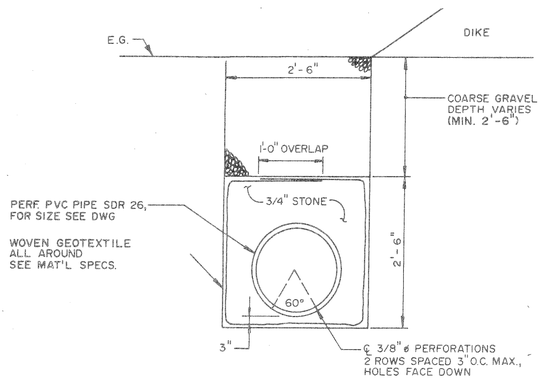




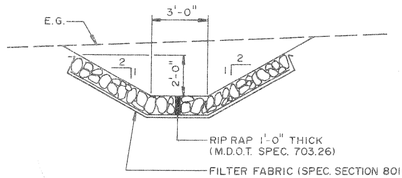


TYPICAL CATCH BASIN - (5)
N.T.S. (EXISTING) YB-19089

TYPICAL SECTION
DIKE AND TYPE 2 DRAINAGE DITCH (2)
SCALE: 1"=5' YB-19089



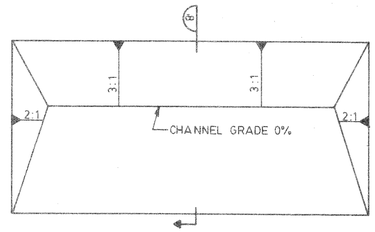
PERF. LEACHATE COLLECTION MAIN (7)
N.T.S. YB-19089



TYPE I DITCH (B)
N.T.S. YB-19090

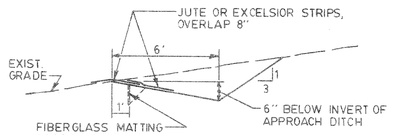
NOTE: STONE OUTLET TO BECOME PERMANENT FIXTURE. ACCUMULATED SEDIMENT TO BE REMOVED AND PLACED IN LANDFILL WHEN CONSTRUCTION COMPLETE AND TRIBUTARY AREA IS STABILIZED WITH VEGETATION, GRAVEL SURFACE OR RIP RAP. AREA TO BE SEEDED AND MULCHED WHEN CONSTRUCTION COMPLETE.

DIKE ACCESS ROAD (4)
N.T.S. YB-19089

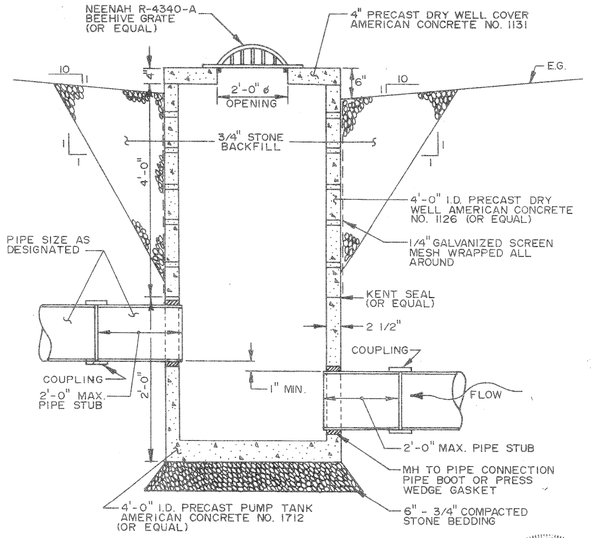


NOTE: LAST 20 FT. OF DRAINAGE DITCH NOT TO EXCEED 1% GRADE

PLAN
SCALE: 1"=4'



SECTION (8)
LEVEL SPREADER (C)
N.T.S. YB-19089



CATCH BASIN (6)
N.T.S. YB-19089

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 9019

DRN	RCR	
CKD	MHR	5/90
CKD	DKR	5/3/90
CORR	DKR	5/17/90
APPVD	BAP	5/31/90
ISSUE CODE		
B - BIDS		
SCALE	AS SHOWN	

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT

DOLBY III LANDFILL
CELL 5
SECTIONS & DETAILS

JOB NO. 94545
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-19090



DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB NO.
YB-19050	DOLBY III LANDFILL, CELL 4, FINAL GRADING PLAN								

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 9019

DWN	RLR	
CKD	GHE	5/90
CKD	DKE	5/3/90
CHKD	DRD	5/ 90
APPVD	BAP	5/3/90

ISSUE CODE
P - PRELIM | B - BIDS
M - MTL T.O. | C - CONST
SCALE 1" = 50'

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
CELL 5
FINAL GRADING PLAN (N.I.T.C.)

JOB NO. 94545
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-19091



DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		8-5-91	SUBMITTED TO MDEP		MHC		

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

DRN		
CKD	7/91	MHC
CKD		
CORR		
APPVD		

ISSUE CODE

P - PRELIM	B - BIDS
M - MTL T.O.	C - CONST

SCALE 1" = 100'

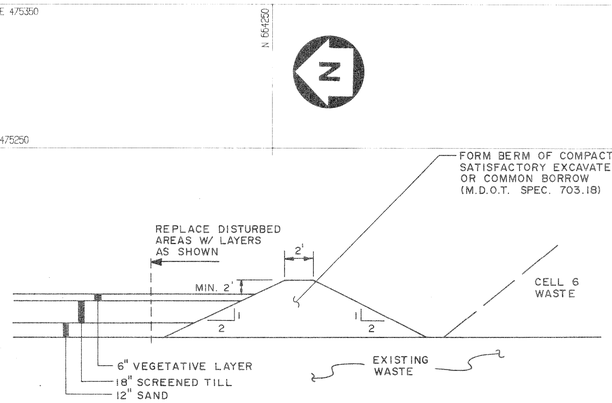
Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

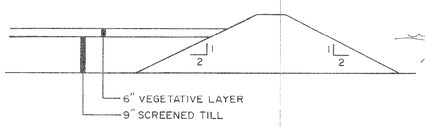
DOLBY III LANDFILL
CELL 6
FINAL GRADING PLAN

JOB NO. _____
ENG. REQ. NO. _____
FILE NO. 2-092-4703, 7082

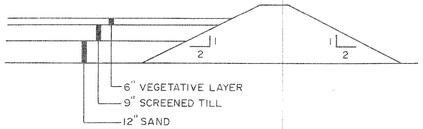
YB-20023



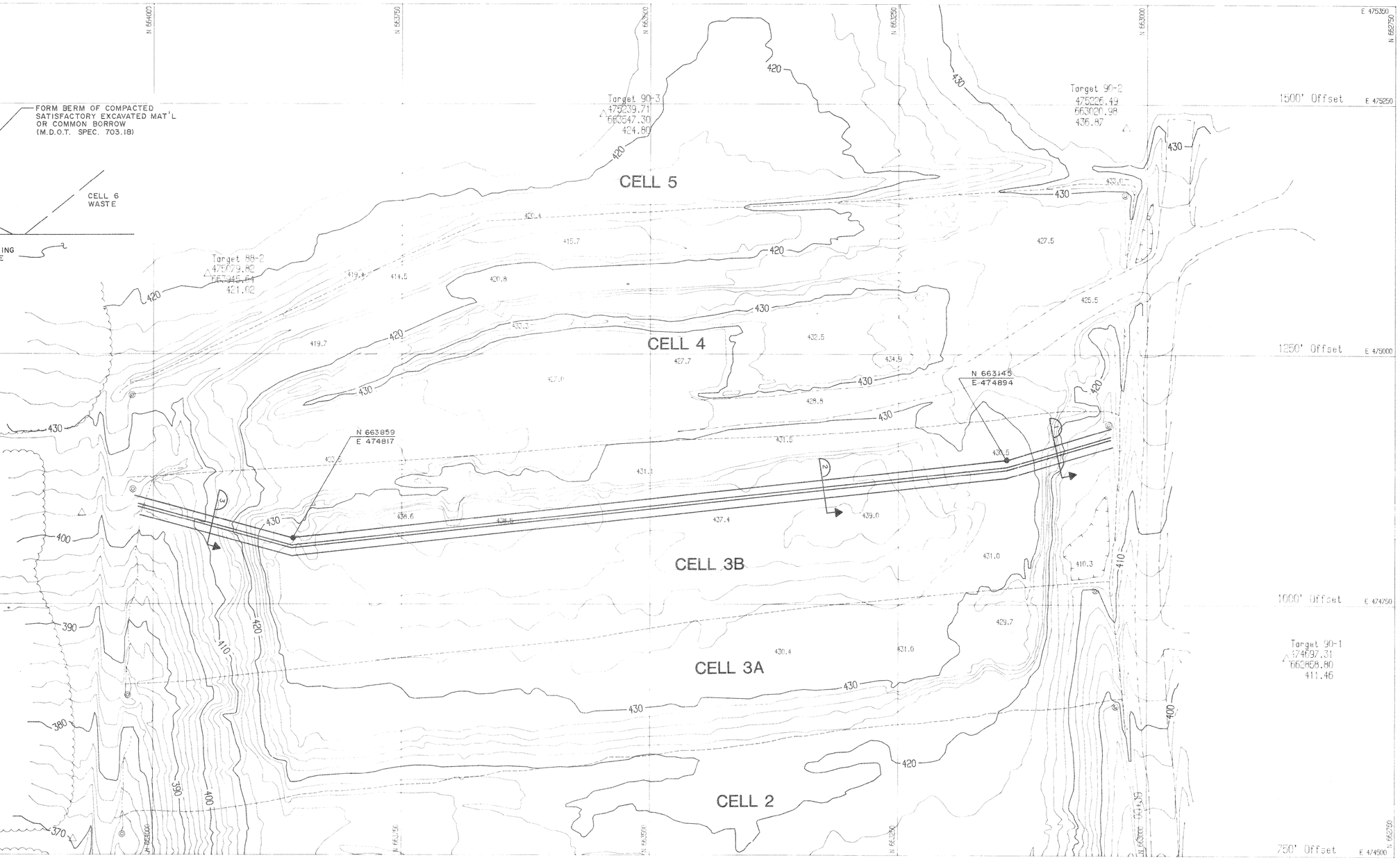
DIKE SECTION (1)
N.T.S.



DIKE SECTION (2)
N.T.S.



DIKE SECTION (3)
N.T.S.



0 25 50 100 150 200 FEET

NOTES:

1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING ASBESTOS HANDLING.
2. CONTOURS SHOWN MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.

MATERIAL QUANTITIES

BORROW	1500 CY
SEEDING	20 UNITS

DRAWING NO	REFERENCE DRAWING TITLE
YB-16476	DOLBY III LANDFILL - CELLS 3A, 3B, & 4 TOPO SURVEY & DIGITIZ. (4/18/90)

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
	1	8-8-92	RECORD DRAWING				
		8-5-91	SUBMITTED TO MDEP				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

DRN		
CKD	7/91	
CKD		
CORR		
APPVD		
ISSUE CODE		
P - PRELIM	B - BIDS	
M - MTL.T.O.	C - CONST	
SCALE AS SHOWN		

Great Northern Paper
a company of
Great Northern Nekoosa Corporation

CENTRAL ENGINEERING DEPARTMENT
EAST MILLINOCKET MILL

DOLBY III LANDFILL
CELL 6
SITE DEVELOPMENT PLAN

JOB NO. _____
ENG. REQ. NO. _____
FILE NO. 2-092-4703, 7062

YB-20024



DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
	COMPILED AND CONTROLLED BY JAMES W. SEWALL CO.								
	OLD TOWN, ME BY PHOTOGRAMMETRIC METHODS								
	FROM AERIAL PHOTOGRAPHS DATED 8/9/90								
				1/93	RECORD DRAWING				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 92051

DRN	PAF	9-92
CKD	GHE	9-92
CKD		
CORR		
APPVD		
ISSUE CODE		
P - PRELIM	B - BIDS	
M - MTL T.O.	C - CONST	
SCALE 1" = 50'		

BOWATER
GREAT NORTHERN PAPER, INC.

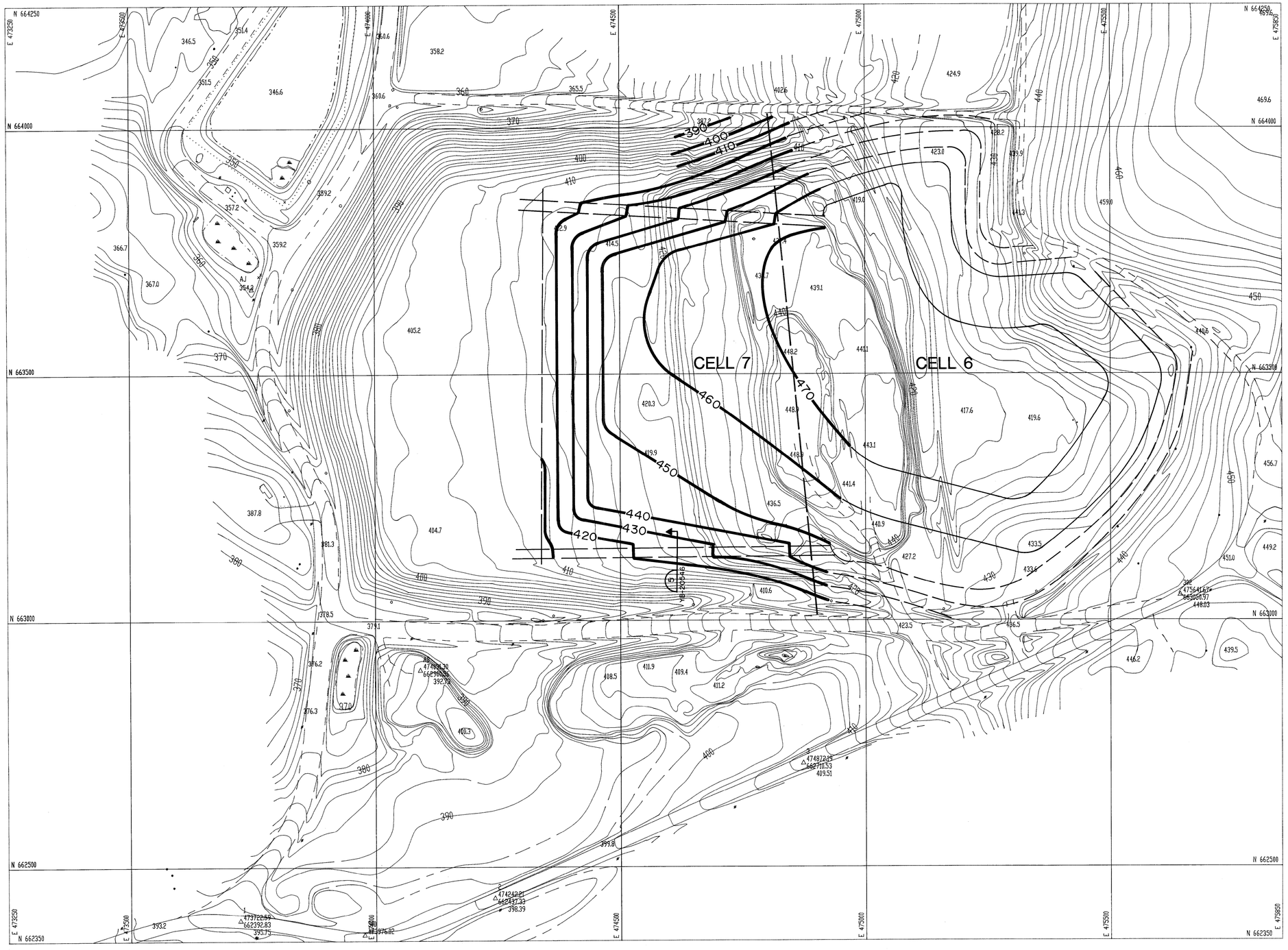
CENTRAL ENGINEERING DEPARTMENT
EAST OPERATION

DOLBY III LANDFILL
CELL 7
SITE DEVELOPMENT PLAN

JOB NO.
ENG. REQ. NO. 95-6249
FILE NO. 2-092-4703,7082

YB-20544

167674
SPILLER'S



DRAWING NO.	REFERENCE DRAWING TITLE
	COMPILED AND CONTROLLED BY JAMES W. SEWALL CO.
	OLD TOWN, ME BY PHOTOGRAMMETRIC METHODS
	FROM AERIAL PHOTOGRAPHS DATED 8/9/90

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE
JOB NO. 92051

DRN	PAF	9-92
CKD	[illegible]	9-92
CKD		
CORR		
APPVD		

ISSUE CODE: P - PRELIM | B - BIDS | M - MTL.T.O. | C - CONST
SCALE 1" = 100'

BOWATER
GREAT NORTHERN PAPER, INC.

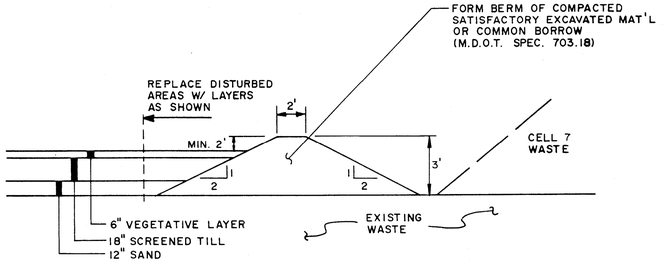
CENTRAL ENGINEERING DEPARTMENT
EAST OPERATION

DOLBY III LANDFILL
CELL 7
FINAL GRADING PLAN

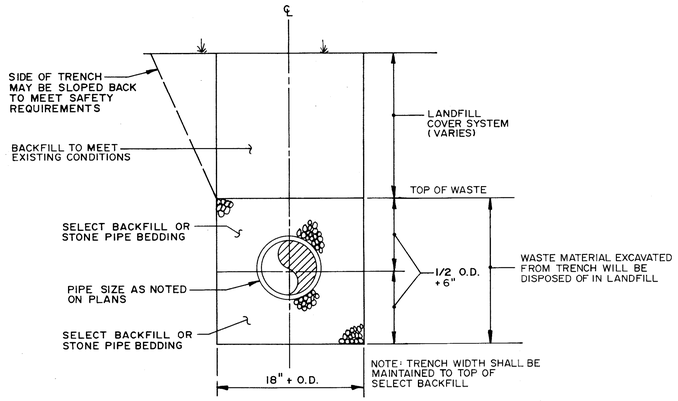
JOB NO. ____
ENG. REQ. NO. 95-6249
FILE NO. 2-092-4703,7082

YB-20545

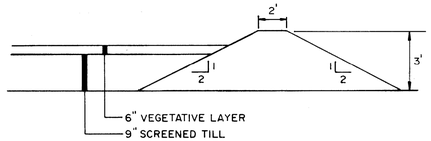
187874
SPILLER'S



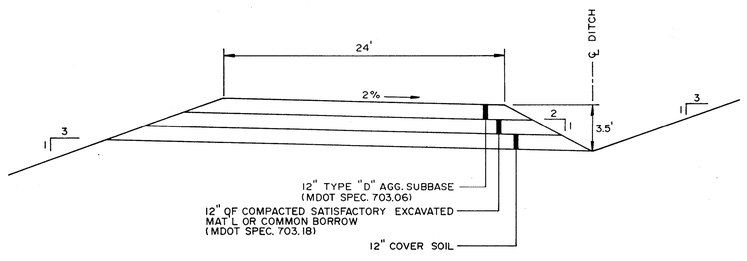
DIKE SECTION 1
N.T.S. YB-20544



PIPE TRENCH 4
N.T.S. YB-20544

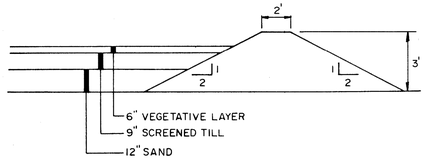


DIKE SECTION 2
N.T.S. YB-20544

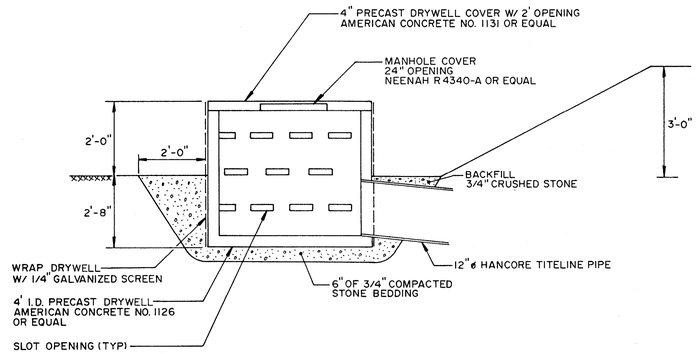


ROAD TERRACE 5
NTS YB-20545

N.T.S.



DIKE SECTION 3
N.T.S. YB-20544



DRAINAGE MANHOLE A
NTS YB-20544

GENERAL NOTES:

1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.
2. CONTOURS SHOWN ON PLANS MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.
3. EXCAVATIONS ENCOUNTERING WASTE MATERIALS, I.E. SLUDGE, WILL BE DISPOSED OF IN THE ACTIVE DISPOSAL AREA.

MATERIAL SPECIFICATIONS:

DIKE EMBANKMENT SOIL:

COMPACTION - THE DIKE EMBANKMENT SOIL SHALL BE COMPACTED TO A DENSITY OF 90 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR).

STONE BEDDING - THE STONE BEDDING MATERIAL SHALL BE SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL. THE BEDDING MATERIAL SHALL MEET THE FOLLOWING GRADATION:

SIEVE DESIGNATION	PERCENT PASSING BY WEIGHT
1 INCH	100
1/4 INCH	≤5

GRUBBING:

ALL VEGETATION AND TOPSOIL SHALL BE STRIPPED FROM CELL 7 AREA PRIOR TO PLACING THE DRAINAGE OR EMBANKMENT MATERIAL. ANY TOPSOIL CLAIMED DURING THE GRUBBING OPERATION WILL BE STOCKPILED FOR THE OWNER'S USE. ALL OTHER GRUBBINGS WILL BE DISPOSED OF IN THE EXISTING LANDFILL.

SEED AND FERTILIZER:

AREAS DISTURBED BY CONSTRUCTION AND THE OUTBOARD SLOPES OF THE DIKE SHALL BE FERTILIZED AND SEEDED.

MATERIALS -

AGRICULTURAL GROUND LIMESTONE: 25 LBS PER UNIT (1,000 SF)

FERTILIZER: GRANULAR FERTILIZER 18.5, 18.5, 18.5 (N,P,K) 10 LBS PER UNIT

SEED:		
	TALL FESCUE	59%
	RED FESCUE	25%
	RED TOP	5%
	LADINO CLOVER	3%
	ANNUAL RYEGRASS	8%

THIS SEED MIXTURE SHALL BE APPLIED AT A RATE OF 3 LBS PER UNIT

INSTALLATION - MDOT 618.05 AND MDOT 618.06

RECOMMENDED TIME OF SEEDING IS FROM APRIL 15 TO SEPTEMBER 15.

MATERIAL QUANTITIES:

GRUBBING	17,000 CY
DIKE SOIL	1,600 CY
12" DIA. PIPE	355 LF
3/4" STONE	74 CY
DRYWELLS WITH COVERS, GRATES & FRAMES	2

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
	1	1/93	RECORD DRAWING	MHC			

JOB NO. 92051

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

DRN	PAF	9-92
CKD	MHC	9-92
CKD		
CORR		
APPVD		
ISSUE CODE		
P - PRELIM	B - BIDS	
M - MTL T.O.	C - CONST	
SCALE	NTS	

BOWATER
GREAT NORTHERN PAPER, INC.

CENTRAL ENGINEERING DEPARTMENT
EAST OPERATION
DOLBY III LANDFILL
CELL 7
DETAILS, SECTIONS & MATERIAL SPECIFICATIONS

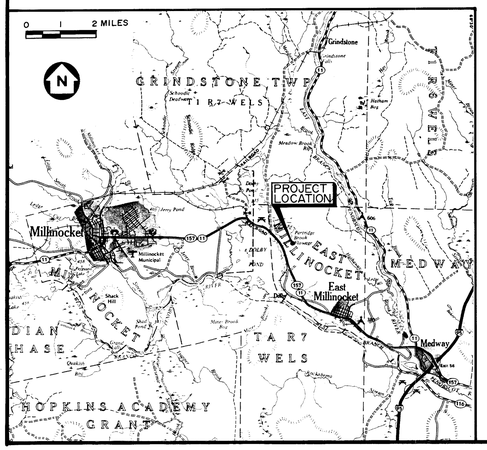
JOB NO.
ENG. REQ. NO. 95-6249
FILE NO. 2-092-4703.7082

YB-20546

07824
SPILLER'S

GREAT NORTHERN PAPER, INC.
A SUBSIDIARY OF BOWATER INCORPORATED
MILLINOCKET, MAINE
DOLBY III LANDFILL
CELL 6 CLOSURE,
CELLS 8 & 9 CONSTRUCTION

SHT NO.	TITLE	DWG NO.
1	COVER SHEET	YB-21000
2	SYMBOLS & ABBREVIATIONS	YB-21001
3	SITE LOCATION PLAN	YB-21002
4	CELL 8 - SITE DEVELOPMENT PLAN	YB-21003
5	CELL 9 - SITE DEVELOPMENT PLAN	YB-21004
6	CELLS 6 & 8 - FINAL GRADING PLAN	YB-21005
7	SECTIONS & DETAILS	YB-21006



SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE
1993

BOWATER
GREAT NORTHERN PAPER, INC.

CENTRAL ENGINEERING DEPARTMENT
EAST OPERATION
DOLBY III LANDFILL
CELL 6 CLOSURE,
CELLS 8 & 9 CONSTRUCTION
COVER SHEET

JOB NO. _____
ENG. REQ. NO. _____
FILE NO. 2-092-4703,7082

YB-21000

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			STONE WALL	TP-103	TP-103	TEST PIT & NUMBER
		NORTH ARROW (MAGNETIC)			DRAINAGE COURSES W/ DIRECTION & DITCH	□	■	CLEAN OUT STRUCTURES
N		NORTH ARROW (PLAN NORTH)	SHORE SIDE		EDGE OF WATER	○	●	MANHOLE
25	25	CONTOUR LINES			WATER ELEVATION (GROUND OR SURFACE)	⌑	⌑	WATER VALVE
25 x 63	x 25.56	SPOT ELEVATION (GRADE)			ROCK OUTCROP OR LEDGE	⌀	⌀	HYDRANT
E.G.		EXISTING GROUND (PROFILES & SECTIONS)			FENCE LINE (WOOD)	⌖	⌖	TELEPHONE OR POWER POLE
S.B.L.		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION POINT			FENCE LINE (WIRE)	◎	◎	CATCH BASIN
	0+00 1+00	CONSTRUCTION BASELINE	(STONE)	(CONC) FACE	RETAINING WALL (TYPE)	G	8" G	UNDERGROUND GAS MAIN & SIZE
P.L.		PROPERTY OR DEED LINE (NOT SURVEYED)			GUARD RAIL	T	T	UNDERGROUND TELEPHONE CABLE / CONDUIT
525.14' N35°-10'-41"E	525.14' N35°-10'-41"E	PROPERTY LINE W/ BEARING & DISTANCE			BUILDING & STRUCTURES	E	E	UNDERGROUND ELECTRIC CABLE / CONDUIT
		ROADS, EASEMENTS OR RIGHT OF WAY LINE			STEPS W/ TYPE (WOOD / CONCRETE)	OE	OE	OVERHEAD ELECTRICAL LINE
		BOUNDARY LINE (STATE, COUNTY, MUNICIPALITY)		1' 2 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)		12" ACP	SANITARY SEWER, SIZE & TYPE
□ MON.	■ MON.	SURVEY MONUMENT		TOP OF SLOPE 2	SLOPES (W/ SLOPE RATIO)		8" PVC	FORCE MAIN, SIZE & TYPE
○ I.F.	● I.F.	SURVEY IRON (FOUND)			EDGE OF TRAVELED WAY (TYPE)		8" DI	WATER MAIN, SIZE & TYPE
○ D.H. PK. STK.	● D.H. PK. STK.	DRILL HOLE, PK OR STAKE	C	F	CUT OR FILL LINE		12" RCP	STORM DRAIN, SIZE & TYPE
		WOODS OR BRUSH LINE		CLL	CONSTRUCTION LIMIT LINE	UD	8" PVC UD	UNDERDRAIN, SIZE & TYPE
		INDIVIDUAL TREE (DECIDUOUS)			BITUMINOUS PAVEMENT		12" BCCMP	CULVERT, SIZE & TYPE
		INDIVIDUAL TREE (CONIFEROUS)			GRAVEL ROAD			RAILROAD
		TREE, TO BE REMOVED			CONCRETE		S S	SILTATION FENCE
		MARSH AREA	B-12 MW-2 P-20	B-12 MW-2 P-20	TEST BORING, MONITORING WELL OR PROBE & NUMBER			

ABBREVIATIONS

A.C.C.M.P.	ASPHALT COATED C.M.P.	C.M.P.	CORRUGATED METAL PIPE	DR	DRAIN	GPD	GALLONS PER DAY	MON	MONUMENT	SF	SQUARE FEET
A.C.P.	ASBESTOS CEMENT PIPE	C.O.	CLEAN OUT	DWG	DRAWING	GPM	GALLONS PER MINUTE	N.I.T.C.	NOT IN THIS CONTRACT	SHT	SHEET
AC	ACRE	CEM. LIN.	CEMENT LINED	EA	EACH	HDPE	HIGH DENSITY POLYETHYLENE	N.T.S.	NOT TO SCALE	STA	STATION
AGG	AGGREGATE	CEN	CENTRAL ANGLE OF CURVE	EG	EXISTING GROUND OR GRADE	HP	HORSEPOWER	N/F	NOW OR FORMERLY	SY	SQUARE YARD
ALUM	ALUMINUM	CF	CUBIC FEET	ELEC	ELECTRIC	HYD	HYDRANT	NO. OR #	NUMBER	TAN	TANGENT
APPD	APPROVED	CFS	CUBIC FEET PER SECOND	ELL	ELBOW	I.D.	INSIDE DIAMETER	O.C.	ON CENTER	TDH	TOTAL DYNAMIC HEAD
APPROX	APPROXIMATE	CI	CAST IRON	EQUIP	EQUIPMENT	IN OR "	INCHES	O.D.	OUTSIDE DIAMETER	TEMP	TEMPORARY
ASB	ASBESTOS	CL	CLASS	EST	ESTIMATED	INV	INVERT	P.C.	POINT OF CURVE	TYP	TYPICAL
ASPH	ASPHALT	CONC	CONCRETE	EXC	EXCAVATE	INV. EL.	INVERT ELEVATION	P.I.	POINT OF INTERSECTION	V	VOLTS
AT2 C.M.P.	ALUMINUM TYPE 2 C.M.P.	CONST	CONSTRUCTION	EXIST	EXISTING	LB	POUND	P.T.	POINT OF TANGENT	W/	WITH
AUTO	AUTOMATIC	CONTR	CONTRACTOR	F.G.	FINISH GRADE	LC	LEACHATE COLLECTION	PERF	PERFORATED	W/O	WITHOUT
AUX	AUXILIARY	CTR	CENTER	FBRGL	FIBERGLASS	LD	LEAK DETECTION	PSI	POUNDS PER SQUARE INCH	YD	YARD
AVE	AVENUE	CY	CUBIC YARD	FDN	FOUNDATION	LIN. FT.	LINEAR FEET	PVC	POLYVINYL CHLORIDE		
AVG	AVERAGE	D	DEGREE OF CURVE (ARC DEF.)	FLEX	FLEXIBLE	LOC	LOCATION	PVMT	PAVEMENT		
AZ	AZIMUTH	DBL	DOUBLE	FLG	FLANGE	LT	LEFT	QTY	QUANTITY		
B.C.C.M.P.	BITUMINOUS COATED C.M.P.	DEG OR °	DEGREE	FLR	FLOOR	M.H.	MANHOLE	R.O.W.	RIGHT OF WAY		
B.M.	BENCH MARK	DEPT	DEPARTMENT	FPS	FEET PER SECOND	M.J.	MECHANICAL JOINT	RAD	RADIUS		
BIT	BITUMINOUS	DI	DUCTILE IRON	FT OR '	FEET	MATL	MATERIAL	REQD	REQUIRED		
BLDG	BUILDING	DIA OR Ø	DIAMETER	FTG	FOOTING	MAX.	MAXIMUM	RT	RIGHT		
BOT	BOTTOM	DIM	DIMENSION	GA	GAUGE	MFR	MANUFACTURE	RTE	ROUTE		
BRG	BEARING	DIST	DISTANCE	GAL	GALLON	MIN.	MINIMUM	S	SLOPE		
C.B.	CATCH BASIN	DN	DOWN	GALV	GALVANIZED	MISC	MISCELLANEOUS	SCH	SCHEDULE		

GENERAL NOTES:

1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.
2. CONTOURS SHOWN ON PLANS MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.
3. EXCAVATIONS ENCOUNTERING WASTE MATERIALS, I.E. SLUDGE, WILL BE DISPOSED OF IN THE ACTIVE DISPOSAL AREA.

MATERIAL SPECIFICATIONS:

DIKE EMBANKMENT SOIL:

COMPACTION - THE DIKE EMBANKMENT SOIL SHALL BE COMPACTED TO A DENSITY OF 90 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR).

STONE BEDDING - THE STONE BEDDING MATERIAL SHALL BE SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL. THE BEDDING MATERIAL SHALL MEET THE FOLLOWING GRADATION:

SIEVE DESIGNATION	PERCENT PASSING BY WEIGHT
1 INCH	100
1/4 INCH	≤5

GRUBBING:

ALL VEGETATION AND TOPSOIL SHALL BE STRIPPED FROM CELL 8 AREA PRIOR TO PLACING THE DRAINAGE OR EMBANKMENT MATERIAL. ANY TOPSOIL CLAIMED DURING THE GRUBBING OPERATION WILL BE STOCKPILED FOR THE OWNER'S USE. ALL OTHER GRUBBINGS WILL BE DISPOSED OF IN THE EXISTING LANDFILL.

SEED AND FERTILIZER:

AREAS DISTURBED BY CONSTRUCTION AND THE OUTBOARD SLOPES OF THE DIKE SHALL BE FERTILIZED AND SEEDED.

MATERIALS -

AGRICULTURAL GROUND LIMESTONE: 25 LBS PER UNIT (1,000 SF)

FERTILIZER: GRANULAR FERTILIZER 18.5, 18.5, 18.5 (N,P,K) 10 LBS PER UNIT

SEED:

TALL FESCUE	59%
RED FESCUE	25%
RED TOP	5%
LADINO CLOVER	3%
ANNUAL RYEGRASS	8%

THIS SEED MIXTURE SHALL BE APPLIED AT A RATE OF 3 LBS PER UNIT

INSTALLATION - MDOT 618.05 AND MDOT 618.06

RECOMMENDED TIME OF SEEDING IS FROM APRIL 15 TO SEPTEMBER 15.

VIEW MARKERS & IDENTIFICATION

SECTION NO. & LOCATION: 3 / C-300 — DRAWING WHERE SECTION OR DETAIL APPEARS

DETAIL IDENTIFICATION & LETTER: MANHOLE A — C-300

SECTION TITLE & NO.: ACCESS ROAD 3 — DRAWING WHERE SECTION IS TAKEN C-100

DETAIL TITLE & LETTER: MANHOLE A — DRAWING WHERE DETAIL IS CALLED OUT C-100

PROFESSIONAL ENGINEER — STATE OF MAINE — PAUL A. FRECHETTE — REGISTERED

DRAWING NO	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
B	1	8-4-93	ISSUED FOR BID	MAC			

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 93028

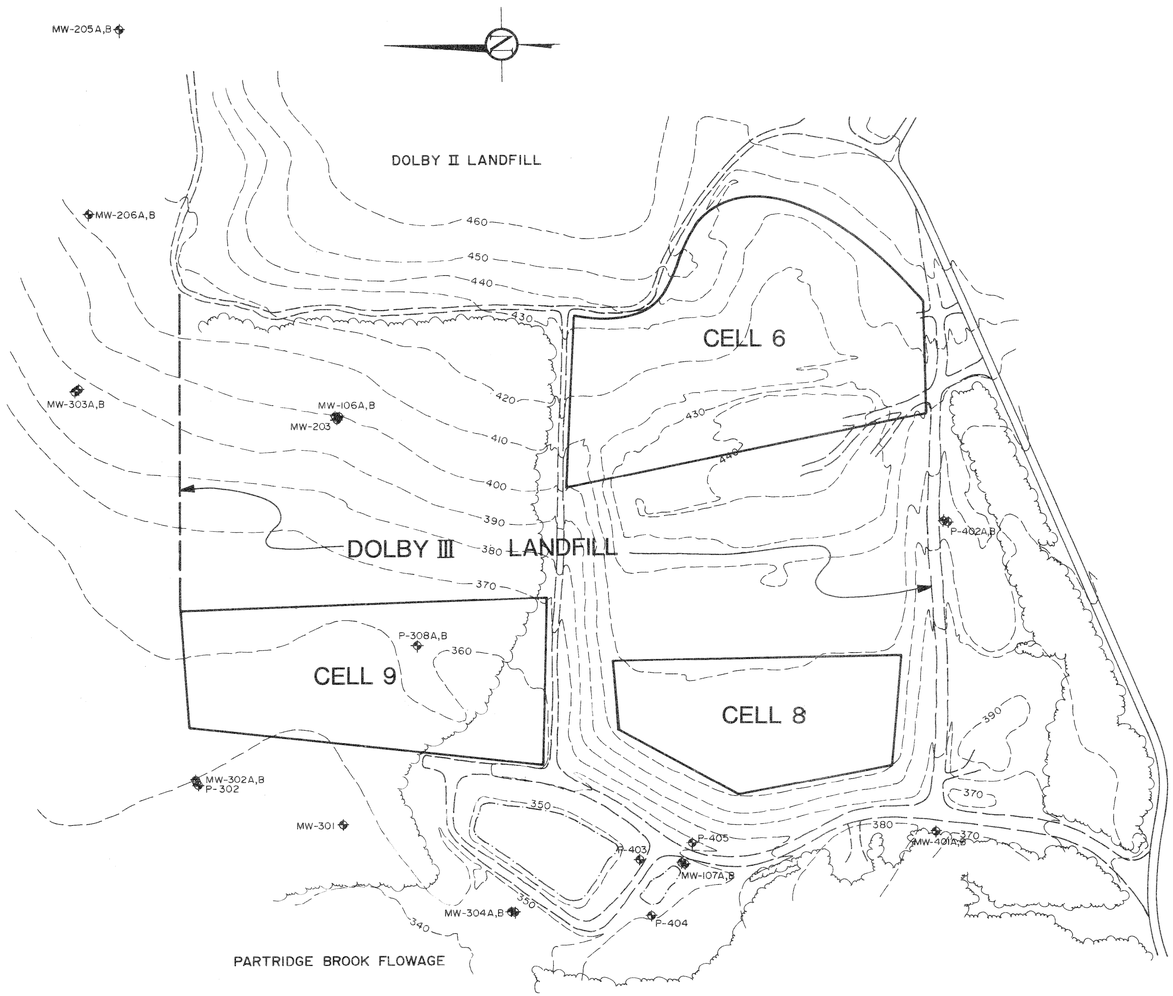
DRN	PAF	6/93
CKD	MAC	6/93
CKD		
CORR		
APPVD		
ISSUE CODE		
B - BIDS		
SCALE		

BOWATER
GREAT NORTHERN PAPER, INC.

CENTRAL ENGINEERING DEPARTMENT
EAST OPERATION
DOLBY III LANDFILL
CELL 6 CLOSURE,
CELLS 8 & 9 CONSTRUCTION
SYMBOLS & ABBREVIATIONS

JOB NO.
ENG. REQ. NO.
FILE NO 2-092-4703,7082

YB-21001



0 100 200 400 600 800 FEET

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
B	1	8-4-93	ISSUED FOR BID	HHC			

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 93028

DRN	PAF	6/93
CKD	HHC	6/93
CKD		
CORR		
APPVD		

ISSUE CODE: P - PRELIM | B - BIDS | M - MTL.T.O. | C - CONST

SCALE 1" = 200'

BOWATER
GREAT NORTHERN PAPER, INC.

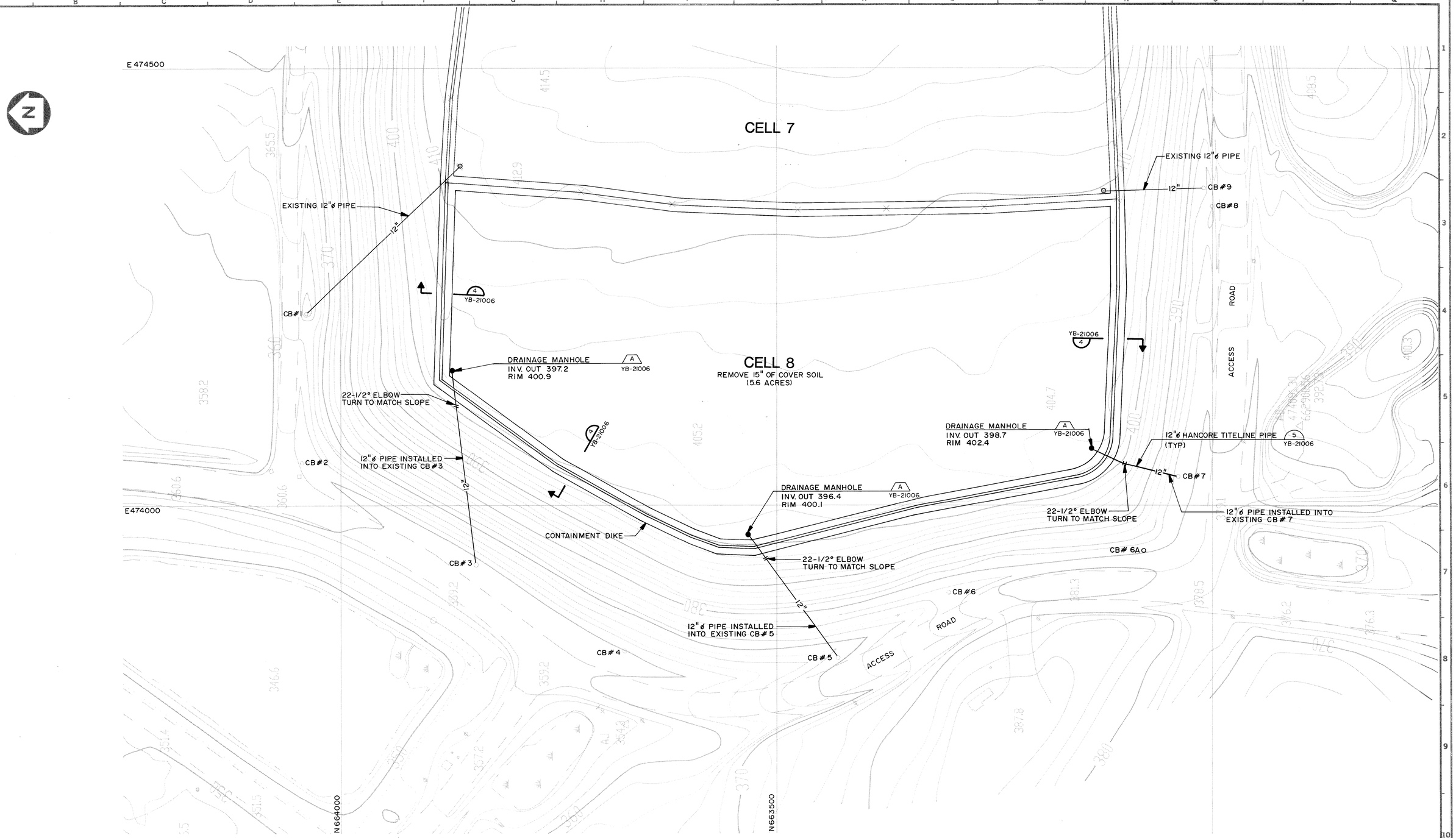
CENTRAL ENGINEERING DEPARTMENT
EAST OPERATION

DOLBY III LANDFILL CELL 6 CLOSURE, CELLS 8 & 9 CONSTRUCTION SITE LOCATION PLAN

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-21002

17202
SPILLER'S



COMPILED AND CONTROLLED BY JAMES W. SEWALL CO.
OLD TOWN, ME BY PHOTOGRAMMETRIC METHODS
FROM AERIAL PHOTOGRAPHS DATED 8/9/90

DRAWING NO	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		8-18-94	RECORD DRAWING/CELL 8 CONSTRUCTION	CJB			
B	1	8-4-93	ISSUED FOR BID	MHC			

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 93028

DRN	PAF	6-93
CKD	MHC	6-93
CKD		
CORR		
APPVD		

ISSUE CODE
P - PRELIM | B - BIDS
M - MTL T.O. | C - CONST
SCALE 1" = 50'

BOWATER
GREAT NORTHERN PAPER, INC.

CENTRAL ENGINEERING DEPARTMENT
EAST OPERATION

DOLBY III LANDFILL
CELL 8
SITE DEVELOPMENT PLAN

JOB NO.
ENG. REQ. NO. 2-092-4703, 7082
FILE NO.

YB-21003

STATE OF MAINE
PAUL F. MAHER
REGISTERED
PROFESSIONAL ENGINEER

SPILLER 3

CLEARING LIMIT LINE

LEVEL SPREADER
L = 100'

N665330
E474560

CLL

TYPE 2 DITCH (2) YB-21006

N664040
E474085

SPOILS AREA

N665320
E474355

N665105
E474370

P-308A,B

REMOVE PIEZOMETERS P-308A,B
SEE SPEC 806

CELL 9

(GRUB 12" TYPICAL
THROUGHOUT CELL 9
AND TEMPORARY SEED)

STONE CHECK DAM (3) YB-21006

N665080
E474055

MW-302A,B
P-302

N474005
E664365

LEVEL SPREADER
L = 100'

MW-301

LEACHATE POND

ROAD

ACCESS

BENCH MARK N663871.733
BRASS PLUG E473715.059
EL 356.99

WET WELL & PUMP STATION

SEDIMENT POND

1. VOLUME OF POND BELOW TOP OF DIKE WILL BE 72,900 CF.
2. VOLUME OF POND BELOW SPILLWAY WILL BE 48,000 CF.

0 50 100 200 300 400 FEET

REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE
YB-15263	DOLBY III LANDFILL AREA, TOPOGRAPHIC SURVEY AND DIGITIZATION

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
B	1	8-4-93	ISSUED FOR BID				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 93028

DRN	PAF	6-93
CKD		6-93
CKD		
CORR		
APPVD		

ISSUE CODE: P - PRELIM | B - BIDS | M - MTL T.O. | C - CONST

SCALE 1" = 100'

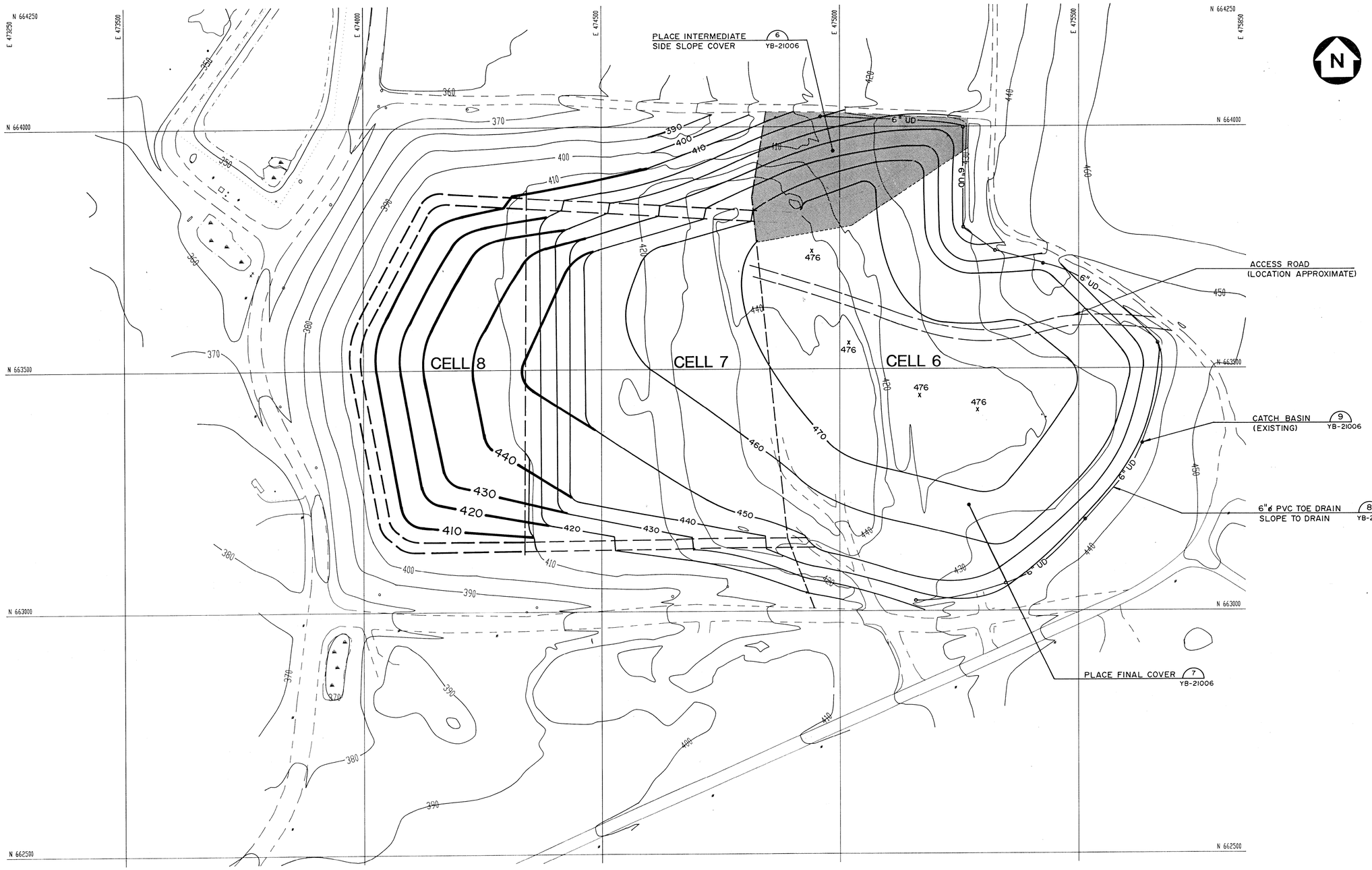
BOWATER
GREAT NORTHERN PAPER, INC.

CENTRAL ENGINEERING DEPARTMENT
EAST OPERATION

DOLBY III LANDFILL
CELL 9
SITE DEVELOPMENT PLAN

JOB NO.
ENG. REQ. NO.
FILE NO 2-092-4703,7082

YB-21004



	COMPILED AND CONTROLLED BY JAMES W. SEWALL CO.
	OLD TOWN, ME BY PHOTOGRAMMETRIC METHODS
	FROM AERIAL PHOTOGRAPHS DATED 8/9/90

DRAWING NO	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		B	1	8-4-93	ISSUED FOR BID				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 93028

DRN	PAF	6-93
CKD		6-93
CKD		
CORR		
APPVD		

ISSUE CODE

P - PRELIM	B - BIDS
M - MTL T.O.	C - CONST

SCALE 1" = 100'

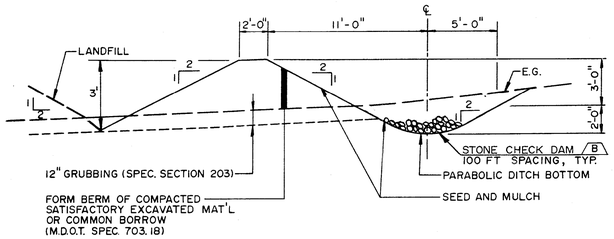
BOWATER
GREAT NORTHERN PAPER, INC.

CENTRAL ENGINEERING DEPARTMENT
EAST OPERATION

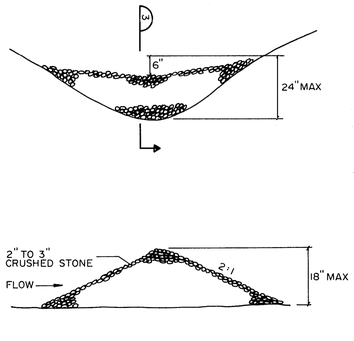
DOLBY III LANDFILL
CELL 6 CLOSURE, CELL 8
FINAL GRADING PLAN

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

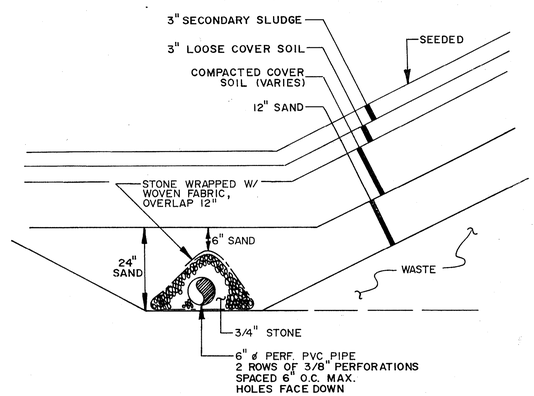
YB-21005



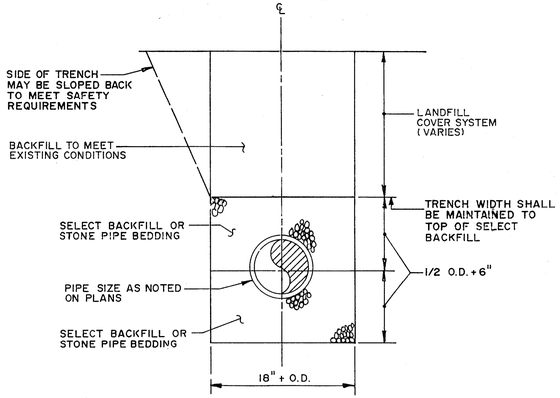
DIKE AND TYPE 2 DRAINAGE DITCH (2)
YB-21004



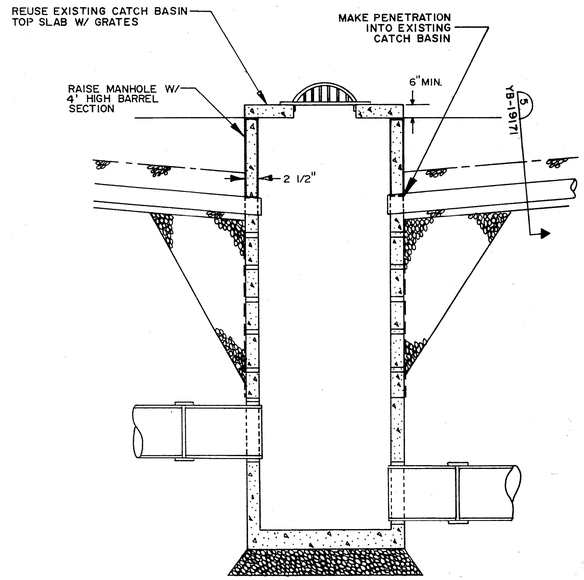
SECTION (3)
STONE CHECK DAM (B)
NTS
YB-21006
YB-21004



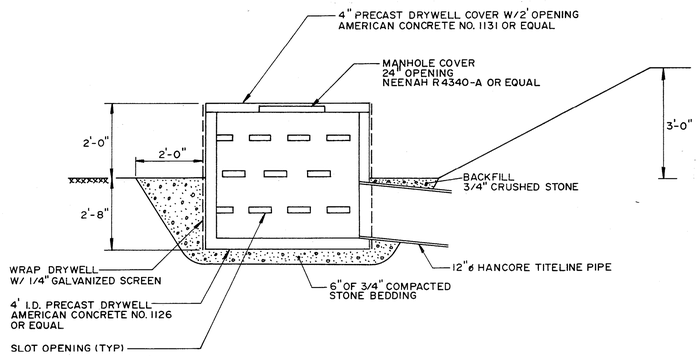
SECTION (8)
N.T.S.
YB-21006
YB-21005



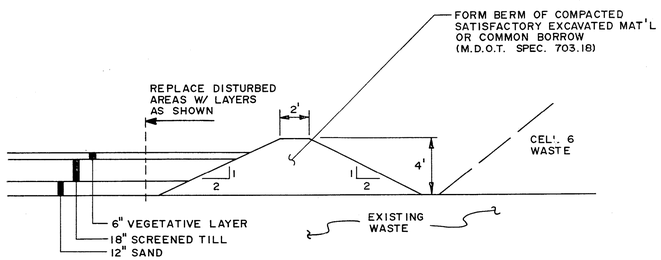
PIPE TRENCH (5)
N.T.S.
YB-21003



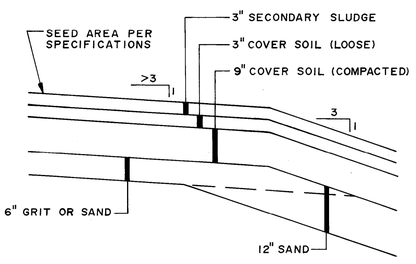
CATCH BASIN (9)
N.T.S. (EXISTING)
YB-21005



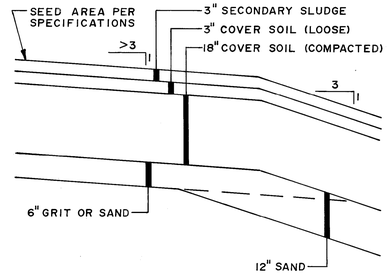
DRAINAGE MANHOLE (A)
NTS
YB-21003



TYPICAL DIKE SECTION (4)
N.T.S.
YB-21003



INTERMEDIATE SLOPE COVER SECTION (6)
NTS
YB-21005



FINAL COVER SECTION (7)
NTS
YB-21005

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
				8-18-94	RECORD DRAWING/CELL 8 CONSTRUCTION	CSB			
		B	1	8-4-93	ISSUED FOR BID	MHC			

STATE OF MAINE — PAUL A. HEVEY MAHER — REGISTERED PROFESSIONAL ENGINEER

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 93028

DRN	PAF	6-93
CKD	MHC	6-93
CKD		
CORR		
APPVD		

ISSUE CODE: P - PRELIM | B - BIDS | M - MTL T.O. | C - CONST
SCALE NTS

BOWATER
GREAT NORTHERN PAPER, INC.

CENTRAL ENGINEERING DEPARTMENT
EAST OPERATION

DOLBY III LANDFILL
CELL 6 CLOSURE,
CELLS 8 & 9 CONSTRUCTION
SECTIONS & DETAILS

JOB NO. _____
ENG. REQ. NO. _____
FILE NO. 2-092-4703,7082

YB-21006

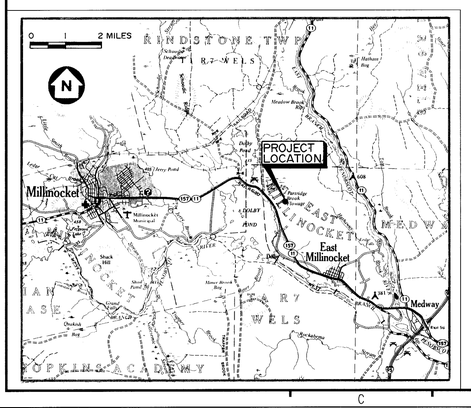
172202
SPILLER'S

GREAT NORTHERN PAPER, INC.
A SUBSIDIARY OF BOWATER INCORPORATED
MILLINOCKET, MAINE
DOLBY III LANDFILL
CELL 9 CONSTRUCTION

SHT. NO.	TITLE	DWG. NO.
1	COVER SHEET	YB-23039
2	SYMBOLS & ABBREVIATIONS	YB-23040
3	SITE LOCATION PLAN	YB-23041
4	CELL 9 - SITE DEVELOPMENT PLAN	YB-23042
5	CELL 9 - FINAL GRADING PLAN	YB-23043
6	SECTIONS & DETAILS	YB-23044 SHEET 1 OF 2
7	SECTIONS & DETAILS	YB-23044 SHEET 2 OF 2

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

1994



STATE OF MAINE PETER M. MAHER #4107 REGISTERED PROFESSIONAL ENGINEER

RECORD DRAWING

SEVEE & MAHER ENGINEERS, INC.	DRN
CONSULTING ENGINEERS	CHK
CUMBERLAND CENTER, MAINE	CHK
	CORR
	APPVD
JOB NO. 94028	ISSUE CODE: P - Prelim, B - Bids, M - Mtl T.O., C - Const.
	SCALE

BOWATER Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL
CELL 9 CONSTRUCTION
COVER SHEET

JOB NO. 94654
ENG. REQ. NO. _____ YB-23039
FILE NO. 2-092-4703.7082

D:\GNP\ACAD\GNPCOV Thu Sep 8 09:08:39 1994

C D E F G H I L M N O P Q

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			STONE WALL	TP-103	TP-103	TEST PIT & NUMBER
		NORTH ARROW (MAGNETIC)			DRAINAGE COURSES W/DIRECTION & DITCH			CLEAN OUT STRUCTURES
		NORTH ARROW (PLAN NORTH)	SHORE SIDE		EDGE OF WATER			MANHOLE
25	25	CONTOUR LINES			WATER ELEVATION (GROUND OR SURFACE)			WATER VALVE
25.63	25.56	SPOT ELEVATION (GRADE)			ROCK OUTCROP OR LEDGE			HYDRANT
E.G.		EXISTING GROUND (PROFILES & SECTIONS)			FENCE LINE (WOOD)			TELEPHONE OR POWER POLE
S.B.		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION POINT			FENCE LINE (WIRE)			CATCH BASIN
0+00	1+00	CONSTRUCTION BASELINE	(STONE)	(CONC) FACE	RETAINING WALL (TYPE)	G	8" G	UNDERGROUND GAS MAIN & SIZE
P.L.		PROPERTY OR DEED LINE (NOT SURVEYED)			GUARD RAIL	T	T	UNDERGROUND TELEPHONE CABLE/CONDUIT
525.14' N35°-10'-41"E	525.14' N35°-10'-41"E	PROPERTY LINE W/BEARING & DISTANCE			BUILDING & STRUCTURES	E	E	UNDERGROUND ELECTRIC CABLE/CONDUIT
		ROADS, EASEMENTS OR RIGHT OF WAY LINE			STEPS W/TYPE (WOOD/CONCRETE)	OE	OE	OVERHEAD ELECTRICAL LINE
		BOUNDARY LINE (STATE, COUNTY, MUNICIPALITY)		1 2 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)		12" ACP	SANITARY SEWER, SIZE & TYPE
MON.	MON.	SURVEY MONUMENT		TOP OF SLOPE 2	SLOPES (W/SLOPE RATIO)		8" PVC	FORCE MAIN, SIZE & TYPE
I.F.	I.F.	SURVEY IRON (FOUND)			EDGE OF TRAVELED WAY (TYPE)		8" DI	WATER MAIN, SIZE & TYPE
D.H. PK. STK.	D.H. PK. STK.	DRILL HOLE, PK OR STAKE	C	F	CUT OR FILL LINE		12" RCP	STORM DRAIN, SIZE & TYPE
		WOODS OR BRUSH LINE	CLL		CONSTRUCTION LIMIT LINE	UD	8" PVC UD	UNDERDRAIN, SIZE & TYPE
		INDIVIDUAL TREE (DECIDUOUS)			BITUMINOUS PAVEMENT		12" BCCMP	CULVERT, SIZE & TYPE
		INDIVIDUAL TREE (CONIFEROUS)			GRAVEL ROAD			RAILROAD
		TREE, TO BE REMOVED			CONCRETE	S	S	SILTATION FENCE
		MARSH AREA	B-12 MW-2 P-20	B-12 MW-2 P-20	TEST BORING, MONITORING WELL OR PROBE & NUMBER			

ABBREVIATIONS

A.C.C.M.P.	ASPHALT COATED C.M.P.	C.M.P.	CORRUGATED METAL PIPE	DR	DRAIN	GPD	GALLONS PER DAY	MON	MONUMENT	SF	SQUARE FEET
A.C.P.	ASBESTOS CEMENT PIPE	C.O.	CLEAN OUT	DWG	DRAWING	GPM	GALLONS PER MINUTE	N.I.T.C.	NOT IN THIS CONTRACT	SHT	SHEET
AC	ACRE	CEM. LIN.	CEMENT LINED	EA	EACH	HDPE	HIGH DENSITY POLYETHYLENE	N.T.S.	NOT TO SCALE	STA	STATION
AGG	AGGREGATE	CEN	CENTRAL ANGLE OF CURVE	EG	EXISTING GROUND OR GRADE	HP	HORSEPOWER	N/F	NOW OR FORMERLY	SY	SQUARE YARD
ALUM	ALUMINUM	CF	CUBIC FEET	ELEC	ELECTRIC	HYD	HYDRANT	NO. OR #	NUMBER	TAN	TANGENT
APPD	APPROVED	CFS	CUBIC FEET PER SECOND	ELL	ELBOW	I.D.	INSIDE DIAMETER	O.C.	ON CENTER	TDH	TOTAL DYNAMIC HEAD
APPROX	APPROXIMATE	CI	CAST IRON	EQUIP	EQUIPMENT	IN OR "	INCHES	O.D.	OUTSIDE DIAMETER	TEMP	TEMPORARY
ASB	ASBESTOS	CL	CLASS	EST	ESTIMATED	INV	INVERT	P.C.	POINT OF CURVE	TYP	TYPICAL
ASPH	ASPHALT	CONC	CONCRETE	EXC	EXCAVATE	INV. EL.	INVERT ELEVATION	P.I.	POINT OF INTERSECTION	V	VOLTS
AT2 C.M.P.	ALUMINUM TYPE 2 C.M.P.	CONST	CONSTRUCTION	EXIST	EXISTING	LB	POUND	P.T.	POINT OF TANGENT	W/	WITH
AUTO	AUTOMATIC	CONTR	CONTRACTOR	F.G.	FINISH GRADE	LC	LEACHATE COLLECTION	PERF	PERFORATED	W/O	WITHOUT
AUX	AUXILIARY	CTR	CENTER	FBRGL	FIBERGLASS	LD	LEAK DETECTION	PSI	POUNDS PER SQUARE INCH	YD	YARD
AVE	AVENUE	CY	CUBIC YARD	FDN	FOUNDATION	LIN. FT.	LINEAR FEET	PVC	POLYVINYL CHLORIDE		
AVG	AVERAGE	D	DEGREE OF CURVE (ARC DEF.)	FLEX	FLEXIBLE	LOC	LOCATION	PVMT	PAVEMENT		
AZ	AZIMUTH	DBL	DOUBLE	FLG	FLANGE	LT	LEFT	QTY	QUANTITY		
B.C.C.M.P.	BITUMINOUS COATED C.M.P.	DEG OR °	DEGREE	FLR	FLOOR	M.H.	MANHOLE	R.O.W.	RIGHT OF WAY		
B.M.	BENCH MARK	DEPT	DEPARTMENT	FPS	FEET PER SECOND	M.J.	MECHANICAL JOINT	RAD	RADIUS		
BIT	BITUMINOUS	DI	DUCTILE IRON	FT OR '	FEET	MATL	MATERIAL	REQD	REQUIRED		
BLDG	BUILDING	DIA OR Ø	DIAMETER	FTG	FOOTING	MAX.	MAXIMUM	RT	RIGHT		
BOT	BOTTOM	DIM	DIMENSION	GA	GAUGE	MFR	MANUFACTURE	RTE	ROUTE		
BRG	BEARING	DIST	DISTANCE	GAL	GALLON	MIN.	MINIMUM	S	SLOPE		
C.B.	CATCH BASIN	DN	DOWN	GALV	GALVANIZED	MISC	MISCELLANEOUS	SCH	SCHEDULE		

GENERAL NOTES:

1. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.
2. CONTOURS SHOWN ON PLANS MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.

MATERIAL SPECIFICATION:

COMMON BORROW - MDOT SPECIFICATION - 703.18

ROADWAY SUBBASE - MDOT SPECIFICATION - 703.06 TYPE "D"

ROADWAY SUBBASE - MDOT SPECIFICATION - 703.06 TYPE "G"

ROADWAY SURFACE COURSE - MDOT SPECIFICATION - 703.10

STONE BEDDING - THE STONE BEDDING MATERIAL SHALL BE 3/4 INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL.

PIPE BEDDING - THE PIPE BEDDING MATERIAL SHALL BE 3/4 INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL.

BASAL BLANKET - MDOT SPECIFICATION - 703.05

COMPACTION - DIKE EMBANKMENT SOIL SHALL BE COMPACTED TO A DENSITY OF 90 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR).

6" AND 8" PVC PIPE - SDR 21

18" PVC PIPE - SDR 26

GRUBBING:

ALL VEGETATION AND TOPSOIL SHALL BE STRIPPED FROM THE CELL 9 ROADWAY AND SEDIMENTATION POND AREA PRIOR TO PLACING ADDITIONAL MATERIAL. ANY TOPSOIL CLAIMED DURING THE GRUBBING OPERATION WILL BE STOCKPILED FOR THE OWNER'S USE. ALL OTHER GRUBBINGS WILL BE DISPOSED OF IN THE EXISTING LANDFILL.

SEED AND FERTILIZER:

AREAS DISTURBED BY CONSTRUCTION AND THE OUTBOARD SLOPES OF THE DIKE SHALL BE FERTILIZED AND SEEDED.

MATERIALS -

AGRICULTURAL GROUND LIMESTONE: 25 LBS PER UNIT (1,000 SF)

FERTILIZER: GRANULAR FERTILIZER 18.5, 18.5, 18.5 (N,P,K) 10 LBS PER UNIT

SEED:

TALL FESCUE	59%
RED FESCUE	25%
RED TOP	5%
LADINO CLOVER	3%
ANNUAL RYEGRASS	8%

THIS SEED MIXTURE SHALL BE APPLIED AT A RATE OF 3 LBS PER UNIT

MULCH - THE MULCH APPLICATION RATE SHALL BE 2 TONS PER ACRE.

INSTALLATION - MDOT 618.05 AND MDOT 618.06

RECOMMENDED TIME OF SEEDING IS FROM APRIL 15 TO SEPTEMBER 15.

VIEW MARKERS & IDENTIFICATION

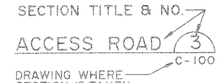
SECTION NO. & LOCATION



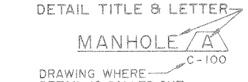
DETAIL IDENTIFICATION & LETTER



SECTION TITLE & NO.



DETAIL TITLE & LETTER



STATE OF MAINE — JAMES W. MILLER — NO. 5082 — REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		7/95	RECORD DRAWING	JWC			
		9/8/94	ISSUED FOR BID				
		9/7/94	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

JOB NO. 94028

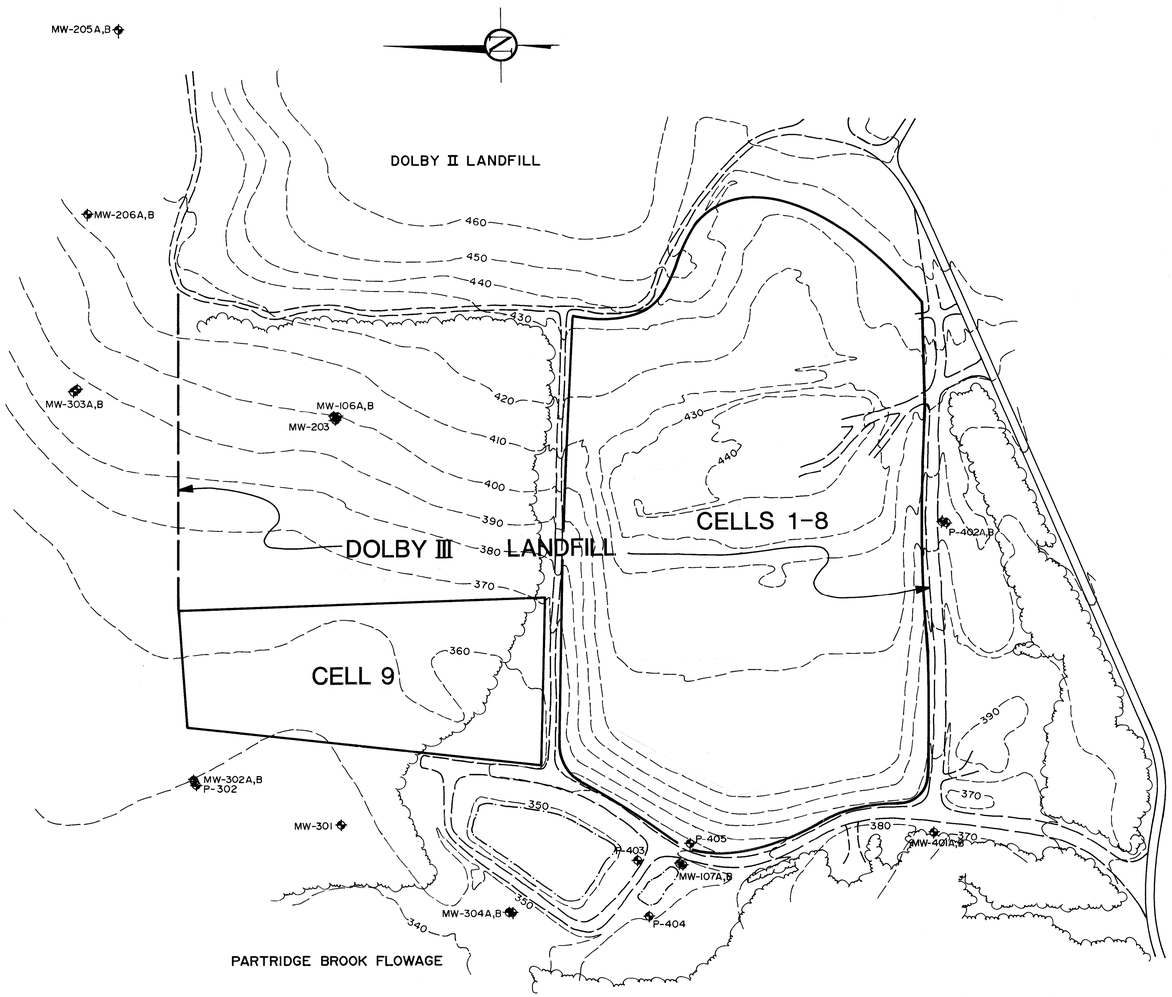
DRN | CKD | CKD | CORR | APPVD | ISSUE CODE: B-Bids | SCALE

BOWATER
GREAT NORTHERN PAPER, INC.

EAST OPERATION
DOLBY III LANDFILL
CELL 9 CONSTRUCTION
SYMBOLS & ABBREVIATIONS

JOB NO. 94654
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

YB-23040



0 100 200 400 600 800 FEET

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
				7/95	RECORD DRAWING				
				9/8/94	ISSUED FOR BID				
				9/7/94	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 94028

DRN	
CKD	
CKD	
CORR	
APPVD	
ISSUE CODE	
P - PRELIM	B - BIDS
M - MTL T.O.	C - CONST
SCALE 1" = 200'	

BOWATER
GREAT NORTHERN PAPER, INC.

EAST OPERATION
DOLBY III LANDFILL
CELL 9 CONSTRUCTION
SITE LOCATION PLAN

JOB NO. 94654
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-23041

172202
SPILLER'S

CELL 9

END CAP
INV 356.5

N 665000

N 665115.61
E 474450.50

EXISTING TYPE 1 DITCH

370

N 664000

E 474500

CONTAINMENT DIKES TO BE BUILT PRIOR TO LANDFILLING IN CELL 9 NTC

EXISTING SPOIL STOCKPILE

360

CLL

BRANCH CONNECTOR A YB-23044

END CAP (TYP)

REMOVE EXISTING ROAD PRIOR TO LANDFILLING IN CELL 9 NTC

TYPE 1 DRAINAGE DITCH 5 YB-23044

358

STRIP EXISTING COVER MATERIAL PRIOR TO LANDFILLING IN CELL 9 NTC

6-IN AND 8-IN LEACHATE COLLECTION PIPES 6 YB-23044

STONE CHECK DAM (TYP) F YB-23044

PERFORATED LEACHATE COLLECTION PIPE 4 YB-23044

356

REMOVE EXISTING CATCH BASIN COVER REPLACE WITH SOLID H-20 LOADING MANHOLE COVER AS MANUF. BY AMERICAN CONCRETE, OR EQUAL NTC

CB #28
18" INV IN 352.03
8" INV IN 353.65
18" INV OUT 352.03
8" INV OUT 353.65
RIM ELEV 359.7

CB #30
18" INV IN 353.03
18" INV OUT 353.03
RIM ELEV 359.7

PERFORATED LEACHATE COLLECTION MAIN 4 YB-23044

CB #29
18" INV IN 352.55
18" INV OUT 352.55
RIM ELEV 359.2

CB #26
18" INV IN 351.08
18" INV OUT 351.08
RIM ELEV 357.75

LANDFILL ACCESS ROAD 1 YB-23044

STONE CHECK DAM (TYP)

355

CATCH BASIN 2 YB-23044

CB #27
18" INV IN 351.55
18" INV OUT 351.55
RIM ELEV 358.2

SILTATION FENCE E YB-23044

8" PVC (SOLID)

LEVEL SPREADER L= 35 FEET D YB-23044

48" BCCMP W/ RIPRAP B YB-23044
INV IN 352.0
INV OUT 349.5

REMOVE EXISTING STUB AND INSTALL 18" LC PIPE 18" INV IN 350.88

N 665074.47
E 473997.07

INV 348.3
BASE AT 347.5

RIPRAP (TYP)

GATE VALVE MANHOLE 3 YB-23044
SHUT OFF UNTIL CELL 9 LANDFILLING BEGINS
INV IN 350.88
INV OUT 350.88

E 474000

30" BCCMP

SEDIMENT POND

N 664498.11
E 474403.88

N 664506.62
E 473930.05

N 664351.47
E 474018.42

N 665094.05
E 473997.07

N 665094.05
E 473978.61

N 665003.13
E 473955.71

350

POND SPILLWAY C YB-23044

STATE OF MAINE
PETER MAHER
#4107
REGISTERED
PROFESSIONAL ENGINEER

25 0 50 100 FEET

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		7/95	RECORD DRAWING				
		9/8/94	ISSUED FOR BID				
		9/7/94	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 94028

DRN	
CHK	
CHK	
CORR	
APPVD	

ISSUE CODE
P – Prelim | B – Bids
M – Mtl T.O. | C – Const.
SCALE AS SHOWN

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL
CELL 9 CONSTRUCTION
SITE DEVELOPMENT PLAN

JOB NO. 94654
ENG. REQ. NO. _____ YB-23042
FILE NO. 2-092-4703.7082

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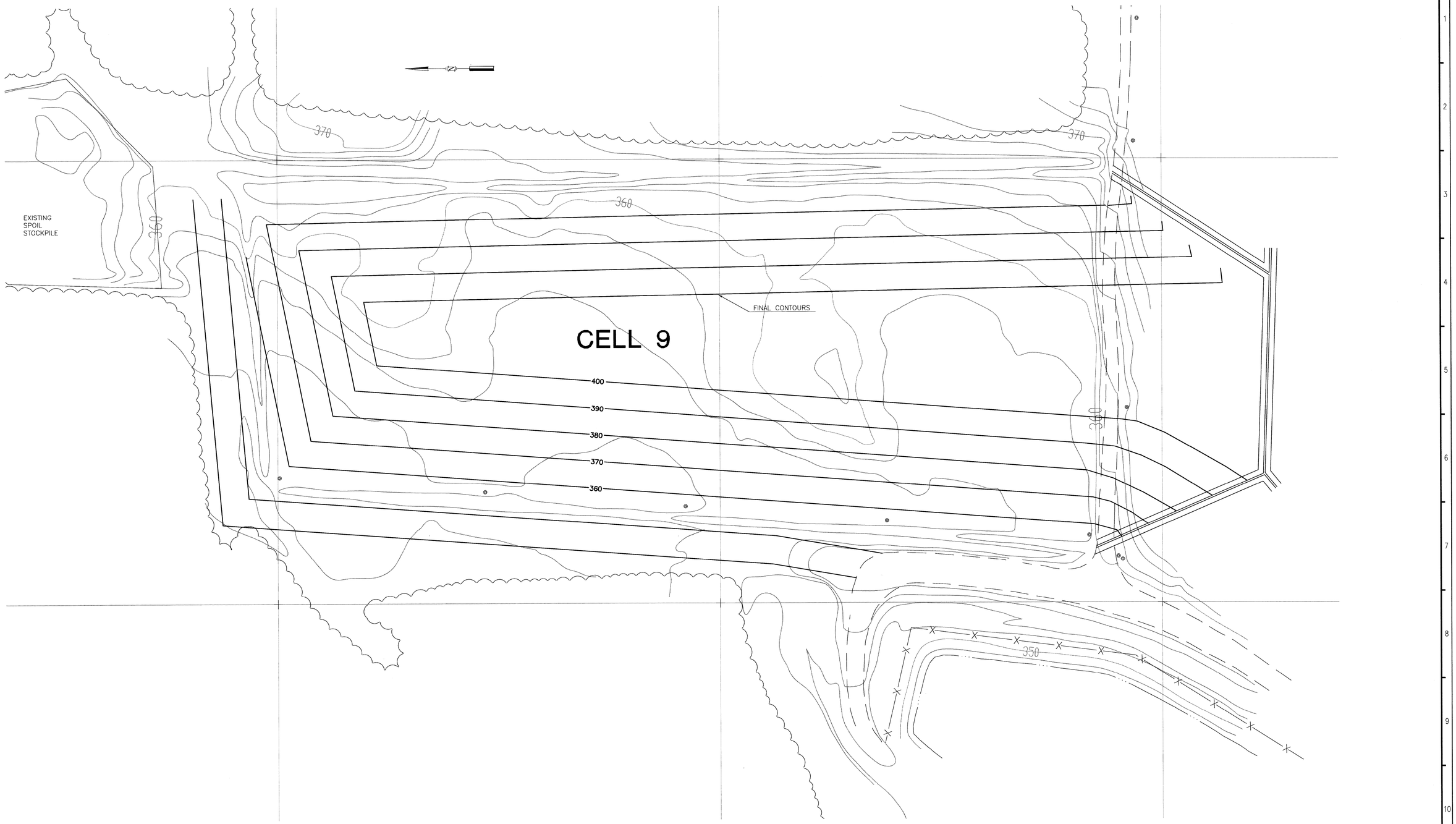

STATE OF MAINE
PETER M. MAHER
#4107
REGISTERED PROFESSIONAL ENGINEER

25 0 50 100 FEET

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		7/95	RECORD DRAWING				
		9/8/94	ISSUED FOR BID				
		9/7/94	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 94028

DRN	
CHK	
CHK	
CORR	
APPVD	

ISSUE CODE

P – Prelim	B – Bids
M – Mtl T.O.	C – Const.

SCALE AS SHOWN

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL
CELL 9 CONSTRUCTION
FINAL GRADING PLAN

JOB NO. 94654
ENG. REQ. NO. _____ YB-23043
FILE NO. 2-092-4703.7082

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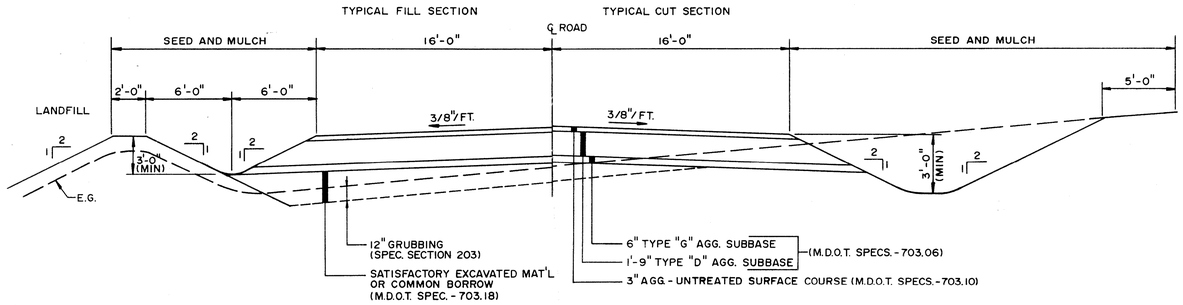
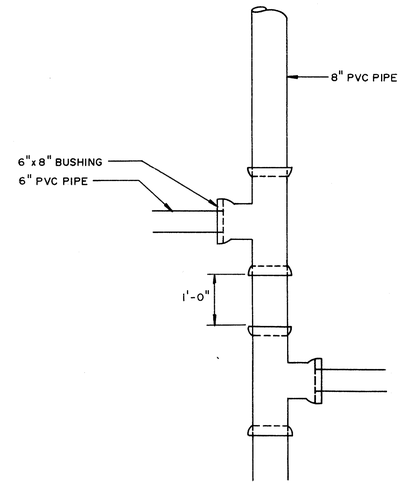


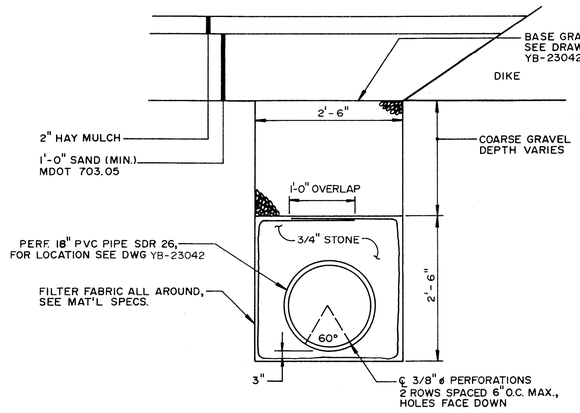
TYPICAL SECTION LANDFILL ACCESS ROAD (1)

N.T.S. YB-23042



BRANCH CONNECTOR (A)

N.T.S. YB-23042



PERF. LEACHATE COLLECTION MAIN (4)

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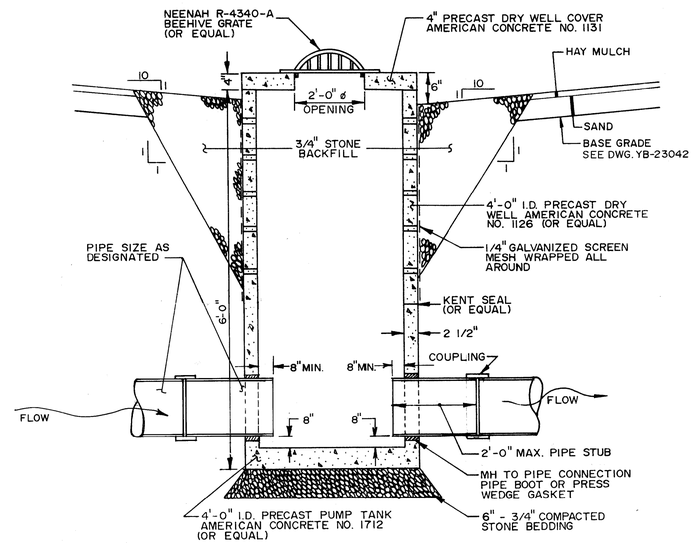
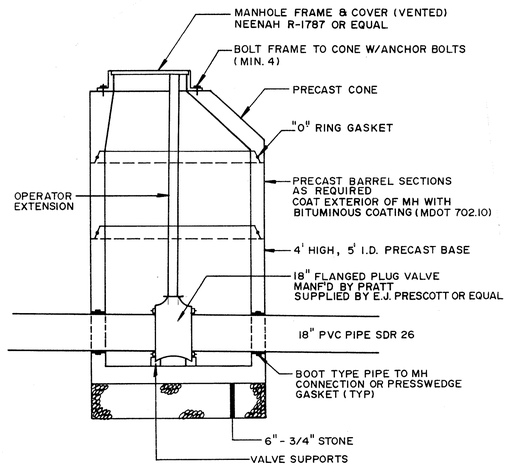


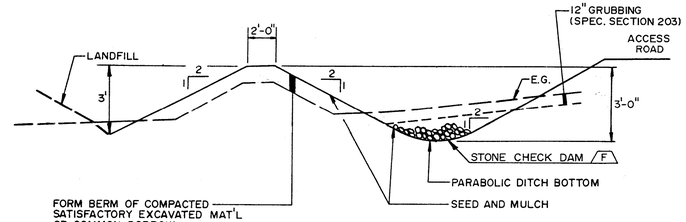
CATCH BASIN (2)

N.T.S. YB-23042



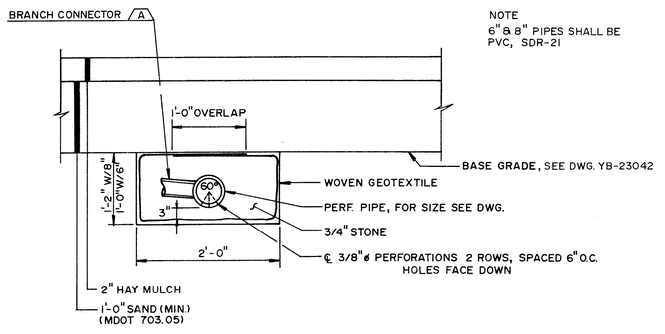
VALVE MANHOLE (3)

N.T.S. YB-23042



DIKE AND TYPE I DRAINAGE DITCH (5)

N.T.S. YB-23042



6-IN. 8-IN. LEACHATE COLLECTION PIPES (6)

N.T.S. YB-23042

STATE OF MAINE PETER M MAHER #4107 REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
				7/95	RECORD DRAWING				
				9/8/94	ISSUED FOR BID				
				9/7/94	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 94028

DRN	
CKD	
CKD	
CORR	
APPVD	
ISSUE CODE	
P - PRELIM	B - BIDS
M - MTL T.O.	C - CONST
SCALE N.T.S.	

BOWATER
GREAT NORTHERN PAPER, INC.

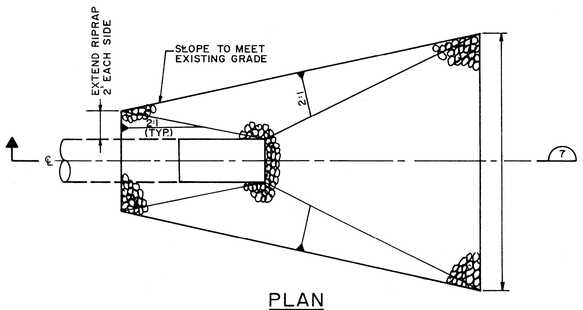
EAST OPERATION

DOLBY III LANDFILL
CELL 9 CONSTRUCTION
SECTIONS & DETAILS

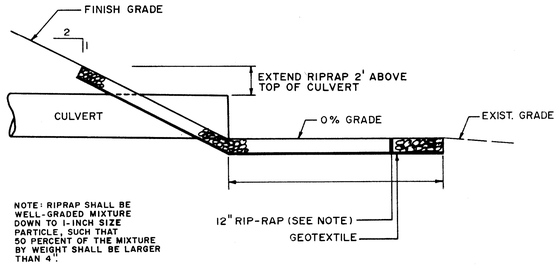
JOB NO. 94654
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

YB-23044
SHEET 1 OF 2

172202
SPILLER'S

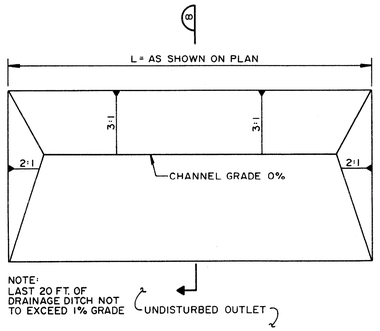


PLAN
N.T.S.

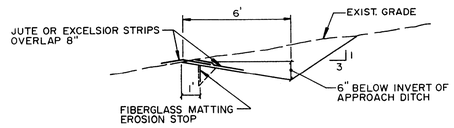


SECTION 7
N.T.S.

CULVERT W/RIPRAP B
YB-23042

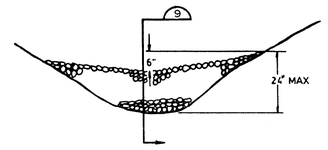


PLAN
NTS

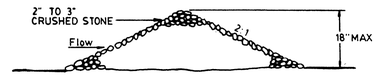


SECTION 8

LEVEL SPREADER D
NTS
YB-23042



STONE CHECK DAM F
N.T.S.
YB-23042



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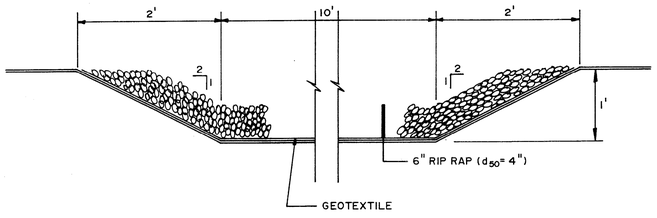
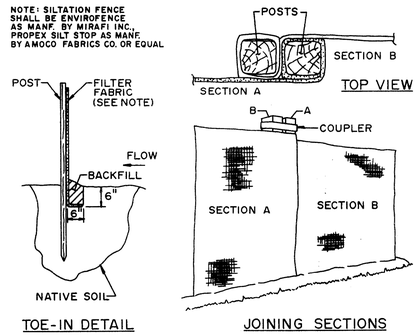


POND SPILLWAY C
N.T.S.
YB-23042



SILTATION FENCE E
N.T.S.
YB-23042

STATE OF MAINE PETER M. MAHER 6107 REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
				7/95	RECORD DRAWING	PMM			
				9/8/94	ISSUED FOR BID				
				9/7/94	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 94028

DRN	
CKD	
CKD	
CORR	
APPVD	
ISSUE CODE	
P - PRELIM	B - BIDS
M - MTL T.O.	C - CONST
SCALE N.T.S.	

BOWATER
GREAT NORTHERN PAPER, INC.

EAST OPERATION
DOLBY III LANDFILL
CELL 9 CONSTRUCTION
SECTIONS & DETAILS

JOB NO. 94654
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

YB-23044
SHEET 2 OF 2

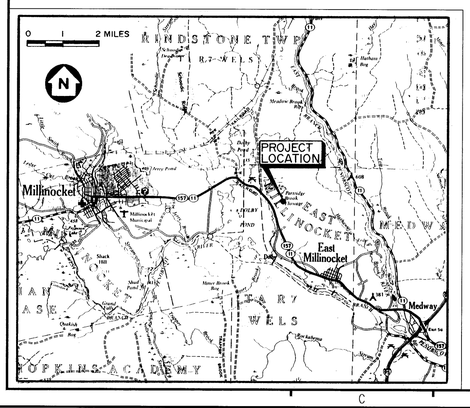
172202
SPILLER'S

GREAT NORTHERN PAPER, INC.
A SUBSIDIARY OF BOWATER INCORPORATED
MILLINOCKET, MAINE
DOLBY III LANDFILL
CELL 10 CONSTRUCTION

SHT. NO.	TITLE	DWG. NO.
1	COVER SHEET	YB-23378
2	SYMBOLS & ABBREVIATIONS	YB-23379
3	SITE LOCATION PLAN	YB-23380
4	CELL 10 – SITE DEVELOPMENT PLAN	YB-23381
5	CELLS 7 & 8 CLOSURE – FINAL GRADING PLAN	YB-23382
6	CELL 10 – FINAL GRADING PLAN	YB-23383
7	SECTIONS & DETAILS	YB-23384 SHEET 1 OF 2
8	SECTIONS & DETAILS	YB-23384 SHEET 2 OF 2

SEVEE & MAHER ENGINEERS, INC.
CUMBERLAND, MAINE

1995



STATE OF MAINE
PETER J. MAHER
#4107
REGISTERED PROFESSIONAL ENGINEER

SEVEE & MAHER ENGINEERS, INC.	DRN
CONSULTING ENGINEERS	CHK
CUMBERLAND CENTER, MAINE	CHK
	CORR
	APPVD
JOB NO. 95019	ISSUE CODE: P – Prelim, B – Bids, M – Mtl T.O., C – Const.
	SCALE

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL
CELL 10 CONSTRUCTION
COVER SHEET

JOB NO. _____
ENG. REQ. NO. _____ YB-23378
FILE NO. 2-092-4703.7082

D:\GNP\ACAD\CELL10\GNPCOV10 Tue May 23 09:35:02 1995

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (MAGNETIC)			STONE WALL	○	●	MANHOLE
		NORTH ARROW (PLAN NORTH)			DRAINAGE COURSE (WITH DIRECTION)	◎	⊙	CATCH BASIN
25	25	CONTOUR LINES	SHORE SIDE		EDGE OF WATER	⋈	⧓	WATER VALVE
25 x 63	25.56 x	SPOT ELEVATION (GRADE)			WATER ELEVATION (GROUND OR SURFACE)			HYDRANT
		EXISTING GROUND			FENCE LINE (WOOD)			UTILITY POLE
		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION PT.	x x	x x	FENCE LINE (WIRE)		⊘	CLEAN OUT STRUCTURE
		PROPERTY LINE OR R.O.W.			RETAINING WALL	G	G	UNDERGROUND GAS MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			GUARD RAIL	T	T	UNDERGROUND TELEPHONE LINE
	0+00 1+00	CONSTRUCTION BASELINE			BUILDING AND STRUCTURES	E	E	UNDERGROUND ELECTRICAL LINE
		BOUNDARY LINE (State, County, Municipality)		2 1 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)	OE	OE	OVERHEAD ELECTRICAL LINE
⊡	■	SURVEY MONUMENT		TOP OF SLOPE	SLOPES (WITH SLOPE RATIO)		12" ACP	SANITARY SEWER, SIZE & TYPE
○IF	●IF	SURVEY IRON			EDGE OF TRAVELLED WAY	FM	8" PVC	FORCE MAIN, SIZE & TYPE
○	●	DRILL HOLE, PK, OR STAKE	C	F	CUT OR FILL LINE	W	8" D.I.	WATER MAIN, SIZE & TYPE
		WOODS OR BRUSH LINE		CLL	CONSTRUCTION LIMIT LINE		12" RCP	STORM DRAIN, SIZE & TYPE
		INDIVIDUAL TREE (Deciduous)			BITUMINOUS PAVEMENT	UD	8" UD	UNDERDRAIN, SIZE & TYPE
		INDIVIDUAL TREE (Coniferous)			CONCRETE			CULVERT
		TREE, TO BE REMOVED	B-12 MW-12 P-12	B-12 MW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER			RAILROAD
		MARSH AREA	TP-12	TP-12	TEST PIT AND NUMBER		S	SILTATION FENCE

GENERAL NOTES:

THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.

CONTOURS SHOWN ON PLANS MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.

MATERIAL SPECIFICATIONS:

COMMON BORROW – MDOT SPECIFICATION 703.18
ROADWAY SUBBASE – MDOT SPECIFICATION 703.06 TYPE "D"
ROADWAY SUBBASE – MDOT SPECIFICATION 703.06 TYPE "G"
ROADWAY SURFACE COURSE – MDOT SPECIFICATION 703.10

STONE BEDDING – THE STONE BEDDING MATERIAL SHALL BE 3/4 INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL

3/4" STONE – THE PIPE BEDDING MATERIAL SHALL BE 3/4–INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL

BASAL BLANKET – MDOT SPECIFICATION 703.05

COMPACTION – DIKE EMBANKMENT SOIL SHALL BE COMPACTED TO A DENSITY OF 90 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR)

6" AND 8" PVC PIPE – SDR 21

12" PVC PIPE – SDR 26

GRUBBING:

ALL VEGETATION AND TOPSOIL SHALL BE STRIPPED FROM THE CELL 10 ROADWAY AND CELL AREA PRIOR TO PLACING ADDITIONAL MATERIAL. ANY TOPSOIL CLAIMED DURING THE GRUBBING OPERATION WILL BE STOCKPILED FOR THE OWNER'S USE. ALL OTHER GRUBBINGS WILL BE DISPOSED OF IN THE EXISTING SPOIL PILE.

SEED AND FERTILIZER:

AREAS DISTURBED BY CONSTRUCTION AND THE OUTBOARD SLOPES OF THE DIKE SHALL BE FERTILIZED AND SEEDED.

MATERIAL:

AGRICULTURAL GROUND LIMESTONE: 25 LBS PER UNIT (1,000 SF)

FERTILIZER: GRANULAR FERTILIZER 18.5, 18.5, 18.5 (N,P,K) 10 LBS PER UNIT

SEED:

TALL FESCUE	59%
RED FESCUE	25%
RED TOP	5%
LADINO CLOVER	3%
ANNUAL RYEGRASS	8%

THIS SEED MIXTURE SHALL BE APPLIED AT A RATE OF 3 LBS PER UNIT

MULCH – THE MULCH APPLICATION RATE SHALL BE 2 TONS PER ACRE

INSTALLATION – MDOT 618.05 AND MDOT 618.06

RECOMMENDED TIME OF SEEDING IS FROM APRIL 15 TO SEPTEMBER 15.

VIEW MARKERS & IDENTIFICATION



A.C.C.M.P	ASPHALT COATED C.M.P.	D	DEGREE OF CURVE (ARC DEF.)	HDPE	HIGH DENSITY POLYETHYLENE	P.C.	POINT ON CURVE
A.C.P.	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HP	HORSEPOWER	P.I.	POINT OF INTERSECTION
AC	ACRE	DEG OR °	DEGREE	HYD	HYDRANT	P.T.	POINT OF TANGENT
AGG	AGGREGATE	DEPT	DEPARTMENT			PERF	PERFORATED
ALUM	ALUMINUM	DI	DUCTILE IRON	I.D.	INSIDE DIAMETER	PSI	POUNDS PER SQUARE INCH
APPD	APPROVED	DIA OR ø	DIAMETER	IN OR "	INCHES	PVC	POLYVINYL CHLORIDE
APPROX	APPROXIMATE	DIM	DIMENSION	INV	INVERT	PVMT	PAVEMENT
ASB	ASBESTOS	DIST	DISTANCE	INV. EL	INVERT ELEVATION		
ASPH	ASPHALT	DN	DOWN			QTY	QUANTITY
AUTO	AUTOMATIC	DR	DRAIN	LB	POUND		
AUX	AUXILIARY	DWG	DRAWING	LC	LEACHATE COLLECTION	R.O.W.	RIGHT OF WAY
AVE	AVENUE			LD	LEAK DETECTION	RAD	RADIUS
AZ	AZIMUTH	EA	EACH	LIN FT.	LINEAR FEET	REQD	REQUIRED
		EG	EXISTING GROUND OR GRADE	LOC	LOCATION	RT	RIGHT
B.C.C.M.P.	BITUMINOUS COATED C.M.P.	ELEC	ELECTRIC	LT	LEFT	RTE	ROUTE
B.M.	BENCH MARK	EL	ELEVATION				
BIT	BITUMINOUS	ELB	ELBOW	M.H.	MANHOLE	S	SLOPE
BLDG	BUILDING	EQUIP	EQUIPMENT	M.J.	MECHANICAL JOINT	SCH	SCHEDULE
BOT	BOTTOM	EST	ESTIMATED	MATL	MATERIAL	SF	SQUARE FEET
BRG	BEARING	EXC	EXCAVATE	MAX	MAXIMUM	SD	STORM DRAIN
		EXIST	EXISTING	MFR	MANUFACTURE	SDR	STANDARD DIMENSION RATIO
C.B.	CATCH BASIN			MIN	MINIMUM	SHT	SHEET
CEN	CENTER	F.G.	FINISH GRADE	MISC	MISCELLANEOUS	STA	STATION
CEM. LIN.	CEMENT LINED	FBRGL	FIBERGLASS	MON	MONUMENT	SY	SQUARE YARD
C.M.P.	CORRUGATED METAL PIPE	FDN	FOUNDATION				
C.O.	CLEAN OUT	FLEX	FLEXIBLE	N.I.T.C.	NOT IN THIS CONTRACT	TAN	TANGENT
CF	CUBIC FEET	FLG	FLANGE	N.T.S.	NOT TO SCALE	TDH	TOTAL DYNAMIC HEAD
CFS	CUBIC FEET PER SECOND	FLR	FLOOR	N/F	NOW OR FORMERLY	TEMP	TEMPORARY
CI	CAST IRON	FPS	FEET PER SECOND	NO. OR #	NUMBER	TYP	TYPICAL
CL	CLASS	FT OR '	FEET				
CONC	CONCRETE	FTG	FOOTING	O.C.	ON CENTER	V	VOLTS
CONST	CONSTRUCTION			O.D.	OUTSIDE DIAMETER		
CONTR	CONTRACTOR	GA	GAUGE			W/	WITH
CTR	CENTER	GAL	GALLON			W/O	WITHOUT
CY	CUBIC YARD	GALV	GALVANIZED				
		GPD	GALLONS PER DAY			YD	YARD
		GPM	GALLONS PER MINUTE				

STATE OF MAINE PETER M. MAHER #4107 REGISTERED PROFESSIONAL ENGINEER

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95019

DRN	
CHK	
CHK	
CORR	
APPVD	
ISSUE CODE	
P – Prelim	B – Bids
M – Mtl T.O.	C – Const.
SCALE	

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL CELL 10 CONSTRUCTION

SYMBOLS & ABBREVIATIONS

JOB NO. _____
ENG. REQ. NO. _____
FILE NO. 2-092-4703.7082

YB-23379

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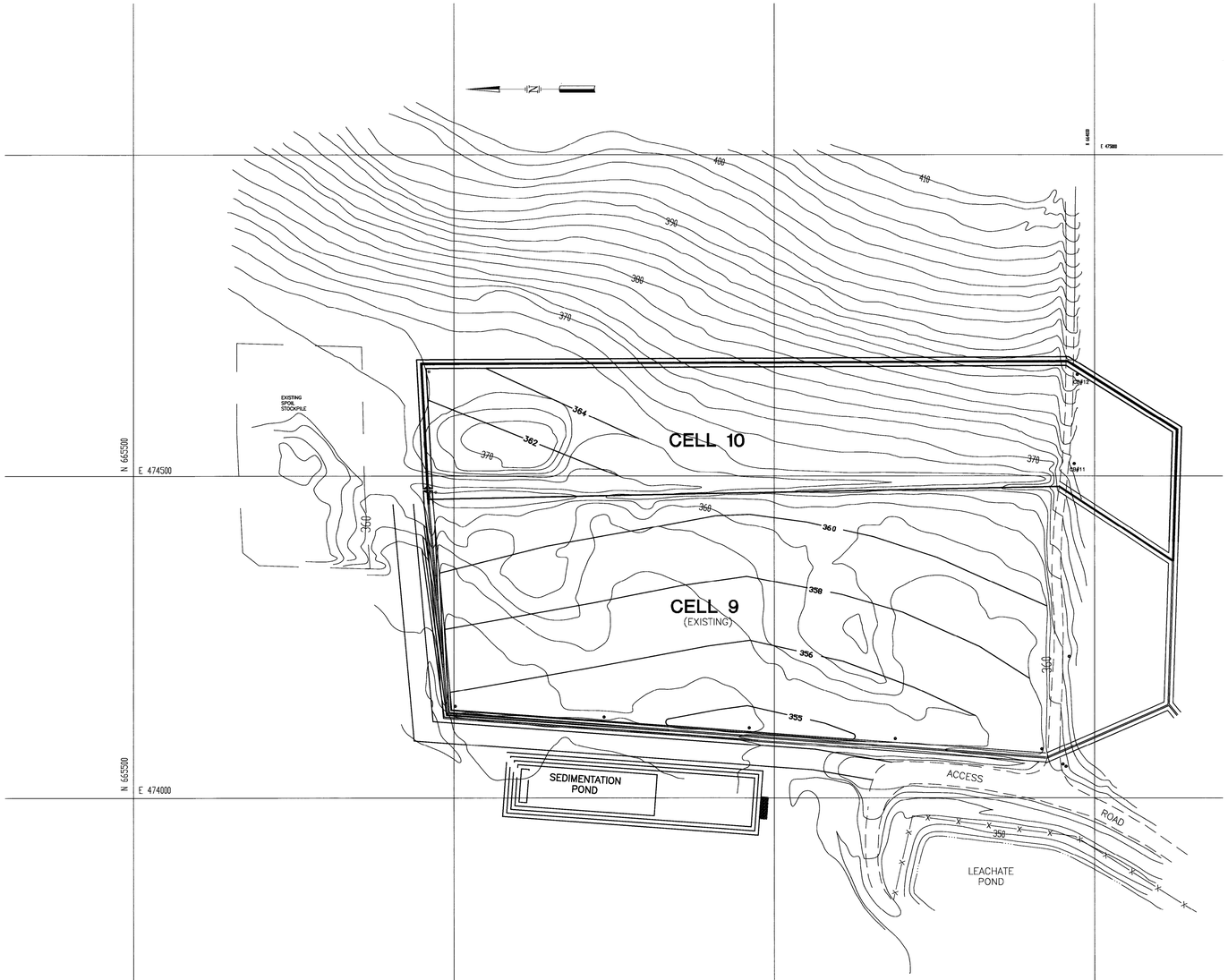

50 0 100 200 FEET

DRAWING NO.	REFERENCE DRAWING TITLE
YB–15263	DOLBY III LANDFILL AREA, TOPOGRAPHIC SURVEY AND DIGITIZATION
YB–23042	DOLBY III LANDFILL AREA, CELL 9 CONSTRUCTION, SITE DEVELOPMENT PLAN

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		5/95	SUBMITTED FOR BID				
		4/95	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95019

DRN	
CHK	
CHK	
CORR	
APPVD	

ISSUE CODE

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M – Mtl T.O.	C – Const.

SCALE AS SHOWN

STATE OF MAINE
PETER W. MAHER
#4107
REGISTERED
PROFESSIONAL ENGINEER

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL CELL 10 CONSTRUCTION SITE LOCATION PLAN

JOB NO. _____
ENG. REQ. NO. _____ YB–23380
FILE NO. 2–092–4703,7082

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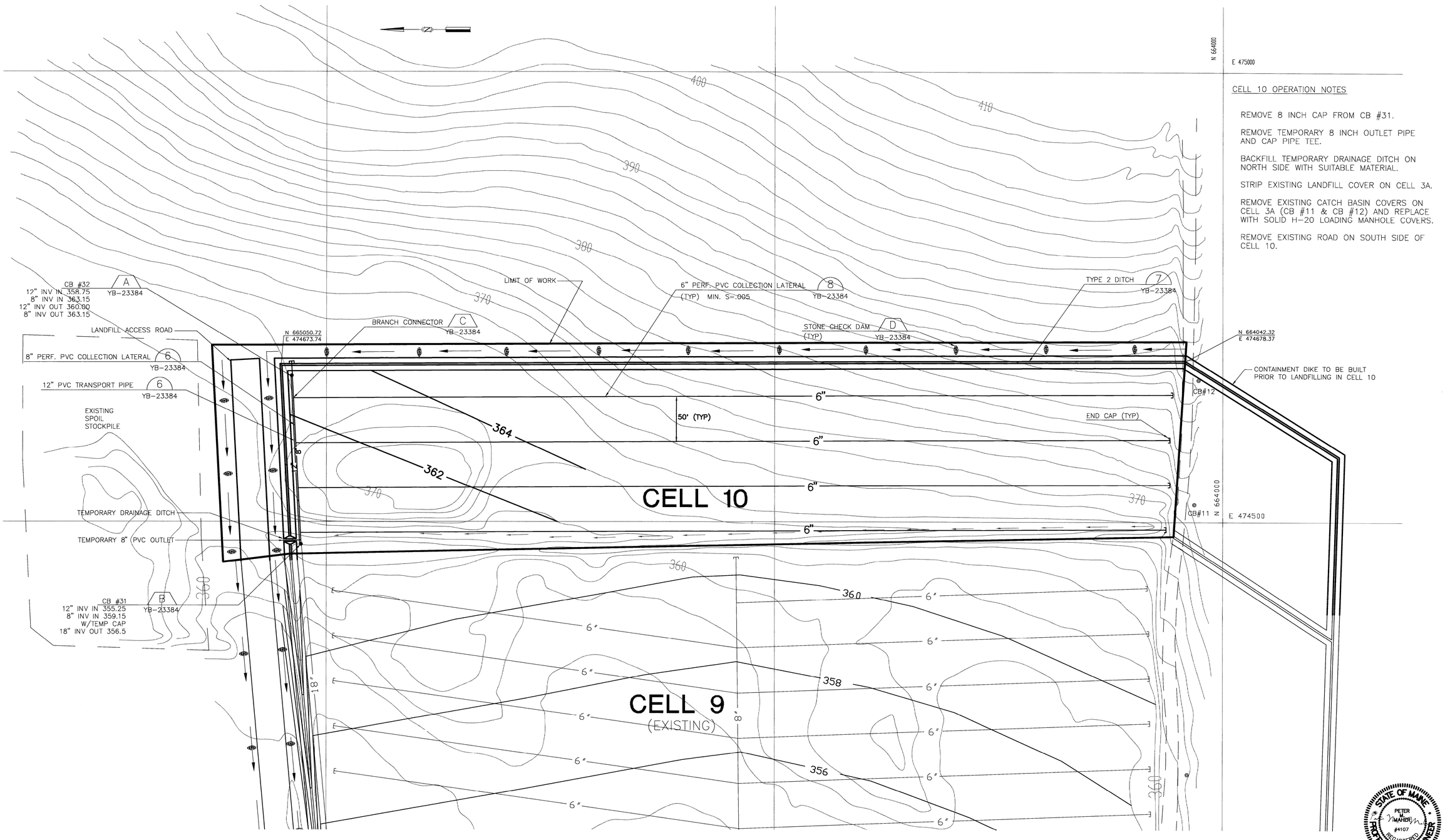

CELL 10 OPERATION NOTES

REMOVE 8 INCH CAP FROM CB #31.

REMOVE TEMPORARY 8 INCH OUTLET PIPE AND CAP PIPE TEE.

BACKFILL TEMPORARY DRAINAGE DITCH ON NORTH SIDE WITH SUITABLE MATERIAL.

STRIP EXISTING LANDFILL COVER ON CELL 3A.

REMOVE EXISTING CATCH BASIN COVERS ON CELL 3A (CB #11 & CB #12) AND REPLACE WITH SOLID H-20 LOADING MANHOLE COVERS.

REMOVE EXISTING ROAD ON SOUTH SIDE OF CELL 10.

STATE OF MAINE
PETER M. MAHER
#4107
REGISTERED PROFESSIONAL ENGINEER

85 0 50 100 FEET

DRAWING NO.	REFERENCE DRAWING TITLE
YB-15263	DOLBY III LANDFILL AREA, TOPOGRAPHIC SURVEY AND DIGITIZATION
YB-23042	DOLBY III LANDFILL AREA, CELL 9 CONSTRUCTION, SITE DEVELOPMENT PLAN

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		5/95	SUBMITTED FOR BID				
		4/95	SUBMITTED TO CLIENT				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95019

DRN	
CHK	
CHK	
CORR	
APPVD	

ISSUE CODE: P – Prelim; B – Bids; M – Mtl T.O.; C – Const.

SCALE AS SHOWN

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL
CELL 10 CONSTRUCTION
SITE DEVELOPMENT PLAN

JOB NO. YB-23381
ENG. REQ. NO.
FILE NO. 2-092-4703.7082

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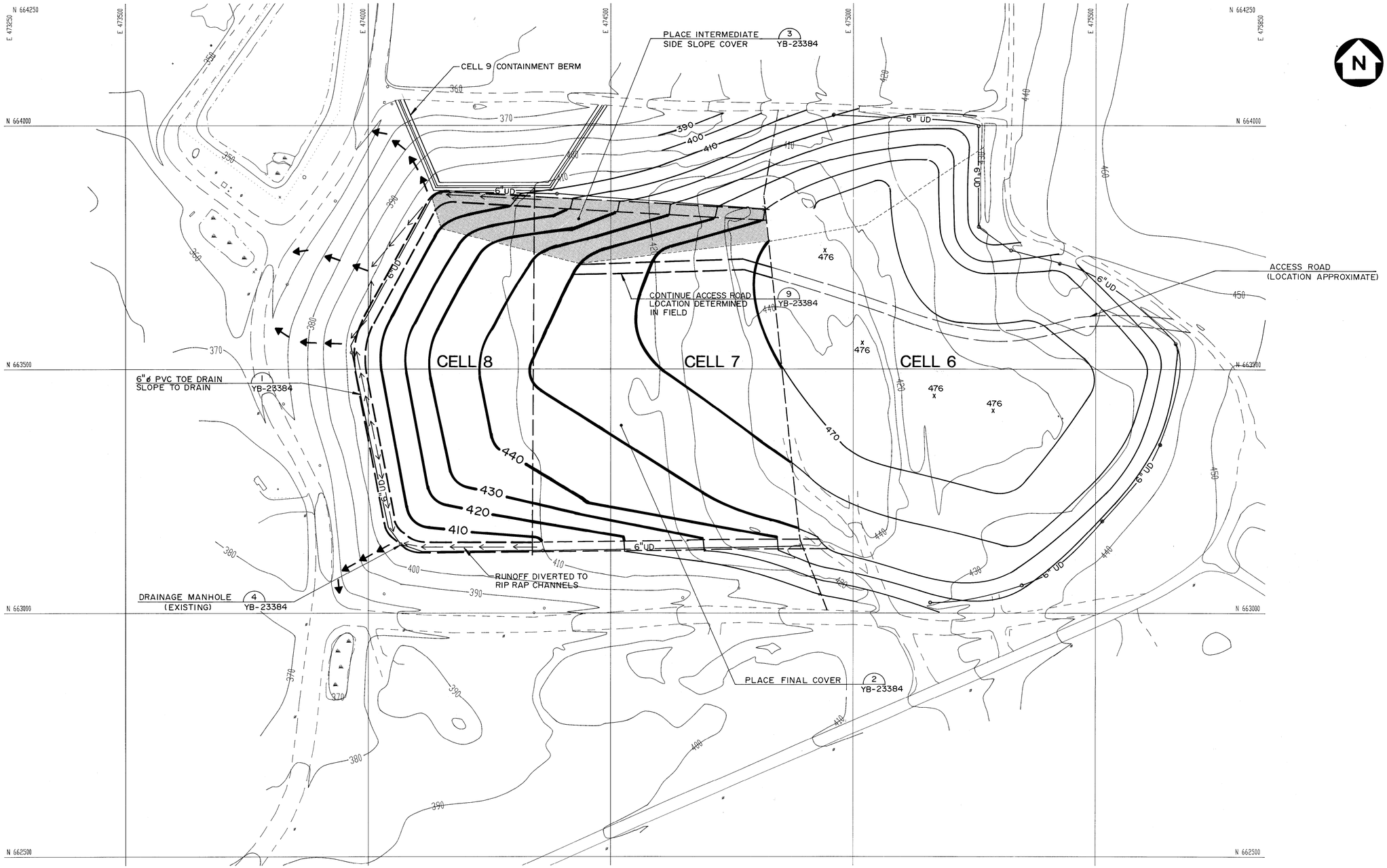


DRAWING NO.	REFERENCE DRAWING TITLE
	COMPILED AND CONTROLLED BY JAMES W. SEWALL CO.
	OLD TOWN, ME BY PHOTOGRAMMETRIC METHODS
	FROM AERIAL PHOTOGRAPHS DATED 8/9/90

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		10/97	RECORD DRAWING	MHC			
C		8/95	ISSUED FOR CONSTRUCTION	MHC			
B		5/95	SUBMITTED FOR BID				

STATE OF MAINE — PETER M. MAHER 4107 — REGISTERED PROFESSIONAL ENGINEER

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 95019

DRN	PAF
CKD	MHC
CKD	
CORR	
APPVD	

ISSUE CODE: P - PRELIM | B - BIDS | M - MTL T.O. | C - CONST

SCALE 1" = 100'

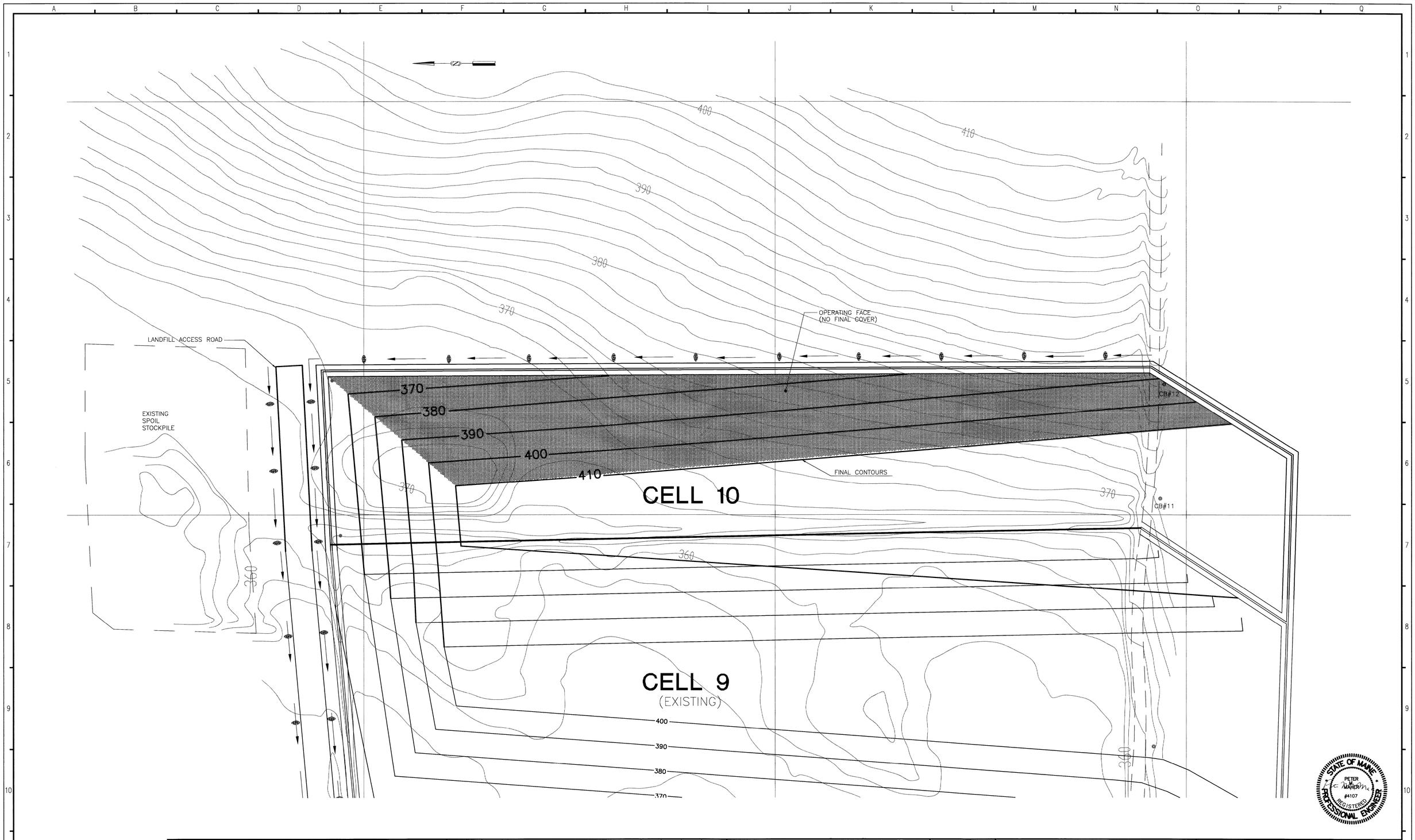
BOWATER
GREAT NORTHERN PAPER

EAST OPERATION
DOLBY III LANDFILL
CELLS 7 & 8 CLOSURE
FINAL GRADING PLAN

JOB NO. 94678
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-23382

SPILLER'S



DRAWING NO.	REFERENCE DRAWING TITLE
YB-15263	DOLBY III LANDFILL AREA, TOPOGRAPHIC SURVEY AND DIGITIZATION
YB-23042	DOLBY III LANDFILL AREA, CELL 9 CONSTRUCTION, SITE DEVELOPMENT PLAN

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		5/95	SUBMITTED FOR BID				
		4/95	SUBMITTED TO CLIENT				

25 0 50 100 FEET

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND CENTER, MAINE

JOB NO. 95019

DRN
CHK
CHK
CORR
APPVD

ISSUE CODE
P – Prelim | B – Bids
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SCALE AS SHOWN

BOWATER
Great Northern Paper

EAST OPERATION

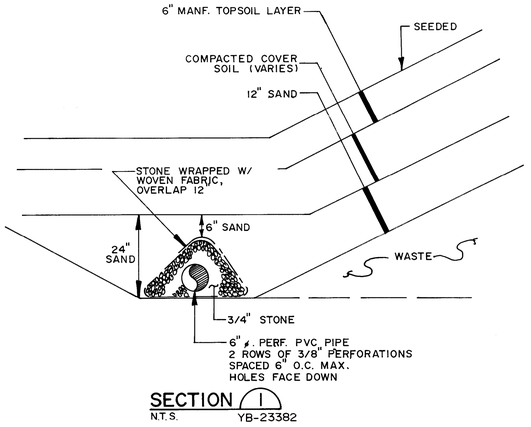
DOLBY III LANDFILL
CELL 10 CONSTRUCTION
FINAL GRADING PLAN

JOB NO.
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

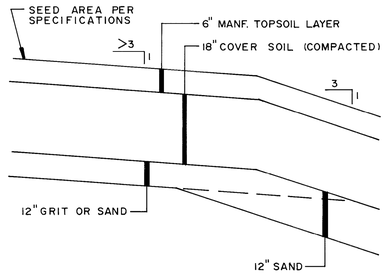
YB-23383

STATE OF MAINE
PETER M. MAHER
#4107
REGISTERED
PROFESSIONAL ENGINEER

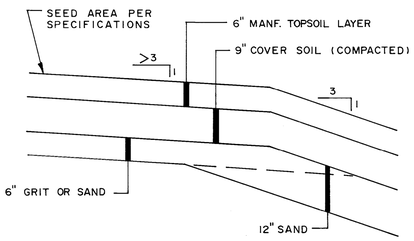
D:\GNP\ACAD\CELL10\GNPCEL10 Tue May 23 11:19:14 1995



SECTION 1
N.T.S. YB-23382

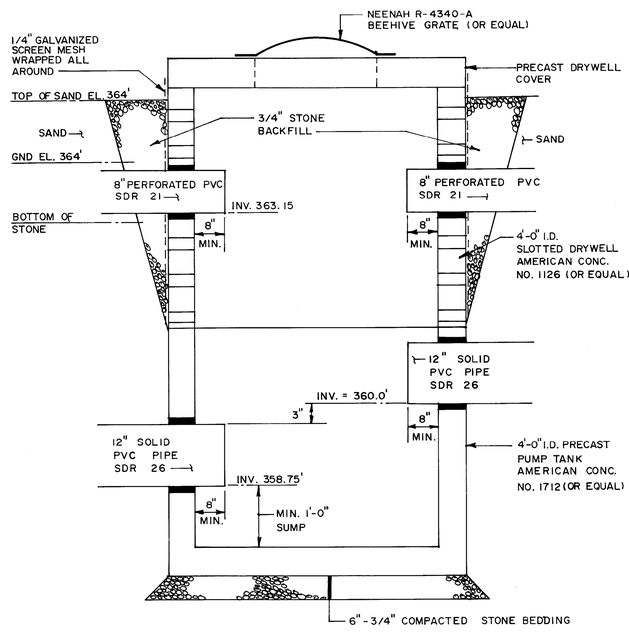


FINAL COVER SECTION 2
N.T.S. YB-23382

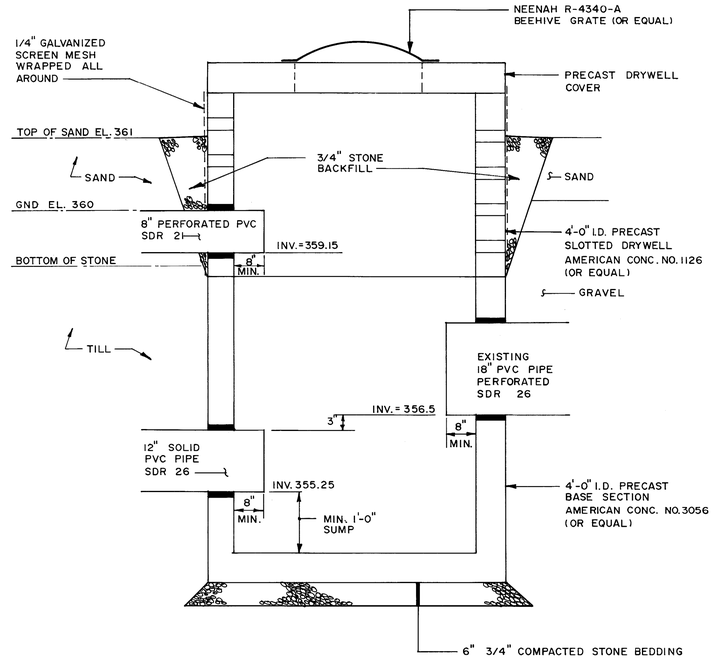


INTERMEDIATE SLOPE COVER SECTION 3
N.T.S. YB-23382

DRAINAGE MANHOLE 4
N.T.S. (EXISTING) YB-23382



CATCH BASIN # 32 A
N.T.S. YB-23381



CATCH BASIN # 31 B
N.T.S. YB-23381

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C		8/95	ISSUED FOR CONSTRUCTION	MHC			
B		5/95	SUBMITTED FOR BID				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 95019

DRN	HAH
CKD	MHC
CKD	
CORR	
APPVD	
ISSUE CODE	
P - PRELIM	B - BIDS
M - MTL T.O.	C - CONST
SCALE N.T.S.	

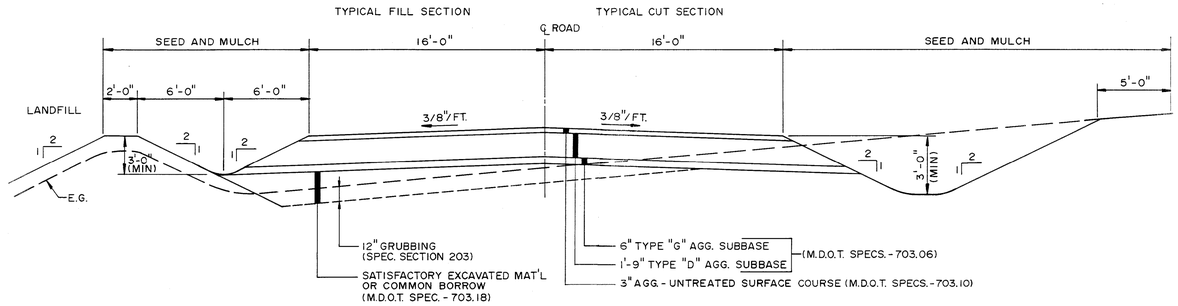
BOWATER
GREAT NORTHERN PAPER

EAST OPERATION
DOLBY III LANDFILL
CELL 10 CONSTRUCTION
SECTIONS & DETAILS

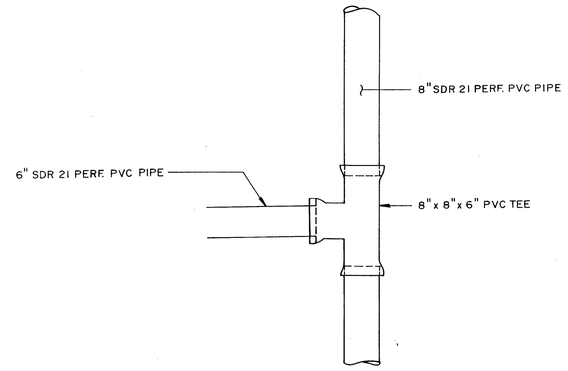
JOB NO. 94678
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-23384
SHEET 1 OF 2

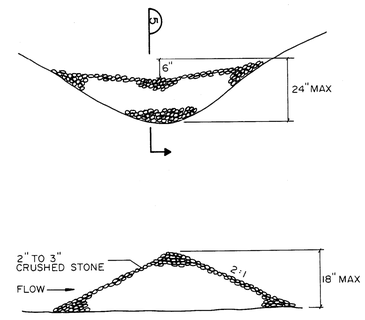
172303
SPILLER'S



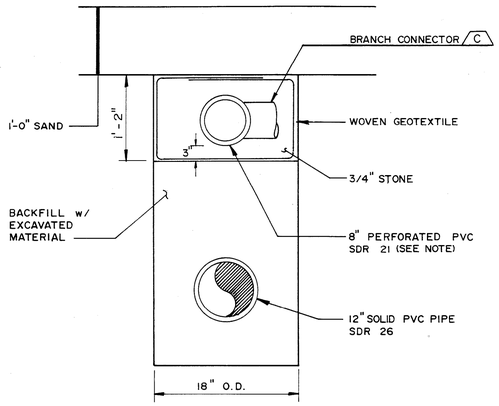
TYPICAL SECTION
LANDFILL ACCESS ROAD
NTS



BRANCH CONNECTOR (C)
N.T.S.
YB-23381

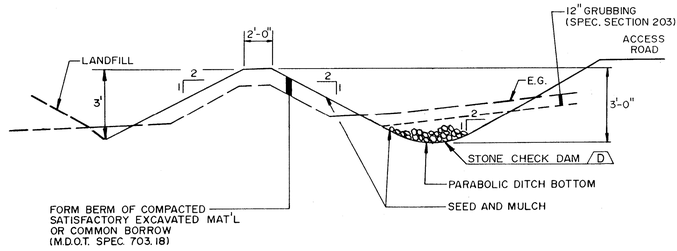


SECTION (5)
STONE CHECK DAM (D)
NTS
YB-23381

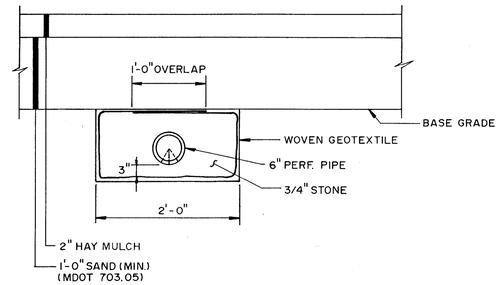


NOTE
PIPE PERFORATIONS SHALL BE 3/8" ø HOLES, 6" O.C., 2 ROWS. ROWS SHALL BE MINIMUM 45°, MAXIMUM 60° FROM INVERT OF PIPE. HOLES SHALL FACE DOWN.

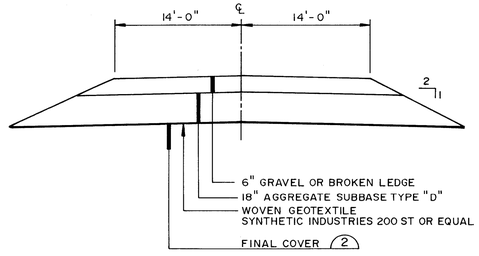
12-IN., 8-IN. LEACHATE COLLECTION PIPES (6)
NTS
YB-23381



DIKE AND TYPE 2 DRAINAGE DITCH (7)
N.T.S.
YB-23381



6-IN. LEACHATE COLLECTION PIPE (8)
N.T.S.
YB-23381



ACCESS ROAD (9)
N.T.S.
YB-23382

STATE OF MAINE — REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C		8/95	ISSUED FOR CONSTRUCTION	MHL			
B		5/95	SUBMITTED FOR BID				

SEVEE & MAHER ENGINEERS, INC.
CONSULTING ENGINEERS
CUMBERLAND, MAINE

JOB NO. 95019

DRN	HAM
CKD	MHL
CKD	
CORR	
APPVD	
ISSUE CODE	
P - PRELIM	B - BIDS
M - MTL T.O.	C - CONST
SCALE	N.T.S.

BOWATER
GREAT NORTHERN PAPER

EAST OPERATION
DOLBY III LANDFILL
CELL 10 CONSTRUCTION
SECTIONS & DETAILS

JOB NO. 94678
ENG. REQ. NO.
FILE NO. 2-092-4703,7082

YB-23384
SHEET 2 OF 2

172202
SPILLER'S

GREAT NORTHERN PAPER, INC.
A SUBSIDIARY OF BOWATER INCORPORATED
MILLINOCKET, MAINE
DOLBY III LANDFILL
CELL 11 CONSTRUCTION

SHT. NO.	TITLE	DWG. NO.
1	COVER SHEET	YB-25219
2	SYMBOLS & ABBREVIATIONS	YB-25220
3	EXISTING CONDITIONS PLAN	YB-25221
4	CELL 11 - SITE DEVELOPMENT PLAN	YB-25222
5	FINAL GRADING PLAN	YB-25223
6	SECTIONS & DETAILS	YB-25224

SME

Sevee & Maher Engineers, Inc.

Waste Management and Hydrogeologic Consultants

Cumberland Center, Maine

7/19/99

DRN	MSB
CHK	GHC
CHK	
CORR	
APPVD	
ISSUE CODE	
P - Prelim	B - Bids
M - Mtl T.O.	C - Const.
SCALE	NONE

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL
CELL 11 CONSTRUCTION
COVER SHEET

JOB NO. 94744
ENG. REQ. NO.
FILE NO. 2-092-7082

YB-25219

99070.00

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C D E F G H I L M N O P Q

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (MAGNETIC)			STONE WALL	○	●	MANHOLE
(N)		NORTH ARROW (PLAN NORTH)			DRAINAGE COURSE (WITH DIRECTION)	◎	⊙	CATCH BASIN
25	25	CONTOUR LINES	SHORE SIDE		EDGE OF WATER	⋈	⋈	WATER VALVE
25 x 63	25.56 x	SPOT ELEVATION (GRADE)			WATER ELEVATION (GROUND OR SURFACE)			HYDRANT
		EXISTING GROUND			FENCE LINE (WOOD)			UTILITY POLE
		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION PT.			FENCE LINE (WIRE)		⊘	CLEAN OUT STRUCTURE
		PROPERTY LINE OR R.O.W.			RETAINING WALL	G	G	UNDERGROUND GAS MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			GUARD RAIL	T	T	UNDERGROUND TELEPHONE LINE
	0+00 1+00	CONSTRUCTION BASELINE			BUILDING AND STRUCTURES	E	E	UNDERGROUND ELECTRICAL LINE
		BOUNDARY LINE (State, County, Municipality)		1' 2 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)	OE	OE	OVERHEAD ELECTRICAL LINE
⊡	■	SURVEY MONUMENT		TOP OF SLOPE 2:1	SLOPES (WITH SLOPE RATIO)		12" ACP	SANITARY SEWER (SIZE & TYPE)
○IF	●IF	SURVEY IRON			EDGE OF TRAVELED WAY	FM	8" PVC	FORCE MAIN (SIZE & TYPE)
○	●	DRILL HOLE, PK, OR STAKE		P	CUT OR FILL LINE	W	8" D.I.	WATER MAIN (SIZE & TYPE)
		WOODS OR BRUSH LINE		CLL	CLEARING LIMIT LINE		12" RCP	STORM DRAIN (SIZE & TYPE)
		INDIVIDUAL TREE (Deciduous)			BITUMINOUS PAVEMENT	UD	8" UD	UNDERDRAIN (SIZE & TYPE)
		INDIVIDUAL TREE (Coniferous)			CONCRETE			CULVERT
		TREE, TO BE REMOVED	B-12 MW-12 P-12	B-12 MW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER			RAILROAD
		MAPPED WETLAND	TP-12	TP-12	TEST PIT AND NUMBER		S	SILTATION FENCE
						PD	6" PD	PERIMETER DRAIN (SIZE & TYPE)
						LT	6" LT	LEACHATE TRANSPORT (SIZE & TYPE)
						LC	6" LC	LEACHATE COLLECTION (SIZE & TYPE)
						LD	6" LD	LEAK DETECTION, SIZE & TYPE
								TERRACE DRAINAGE SWALE
							4" GS	GRAVITY SEWER
							6" SWP	SOLID WALL PIPE

A.C.C.M.P	ASPHALT COATED C.M.P.	D	DEGREE OF CURVE	HDPE	HIGH DENSITY POLYETHYLENE	P.C.	POINT ON CURVE
A.C.P.	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HP	HORSEPOWER	PD	PERIMETER DRAIN
AC	ACRE	DEG OR °	DIAMETER	HYD	HYDRANT	P.I.	POINT OF INTERSECTION
AGG	AGGREGATE	DEPT	DEPARTMENT			P.T.	POINT OF TANGENT
ALUM	ALUMINUM	DI	DUCTILE IRON	I.D.	INSIDE DIAMETER	PERF	PERFORATED
APPD	APPROVED	DIA OR ø	DIAMETER	IN OR "	INCHES	PSI	POUNDS PER SQUARE INCH
APPROX	APPROXIMATE	DIM	DIMENSION	INV	INVERT	PVC	POLYVINYL CHLORIDE
ARMH	AIR RELEASE MANHOLE	DIST	DISTANCE	INV. EL	INVERT ELEVATION	PVMT	PAVEMENT
ASB	ASBESTOS	DN	DOWN				
ASPH	ASPHALT	DR	DRAIN	LB	POUND	QTY	QUANTITY
AUTO	AUTOMATIC	DWG	DRAWING	LC	LEACHATE COLLECTION		
AUX	AUXILIARY			LD	LEAK DETECTION	R.O.W.	RIGHT OF WAY
AVE	AVENUE	EA	EACH	LIN FT.	LINEAR FEET	RAD	RADIUS
AZ	AZIMUTH	EG	EXISTING GROUND OR GRADE	LOC	LOCATION	REQD	REQUIRED
		ELEC	ELECTRIC	LT	LEACHATE TRANSPORT	RT	RIGHT
B.C.C.M.P.	BITUMINOUS COATED C.M.P.	EL	ELEVATION			RTE	ROUTE
B.M.	BENCH MARK	ELB	ELBOW	M.H.	MANHOLE		
BIT	BITUMINOUS	EQUIP	EQUIPMENT	M.J.	MECHANICAL JOINT	S	SLOPE
BLDG	BUILDING	EST	ESTIMATED	MATL	MATERIAL	SCH	SCHEDULE
BOT	BOTTOM	EXC	EXCAVATE	MAX	MAXIMUM	SF	SQUARE FEET
BRG	BEARING	EXIST	EXISTING	MFR	MANUFACTURE	SHT	SHEET
				MIN	MINIMUM	STA	STATION
C.B.	CATCH BASIN	F.G.	FINISH GRADE	MISC	MISCELLANEOUS	SY	SQUARE YARD
CEN	CENTER	FBRGL	FIBERGLASS	MON	MONUMENT		
CEM. LIN.	CEMENT LINED	FDN	FOUNDATION			TAN	TANGENT
C.M.P.	CORRUGATED METAL PIPE	FLEX	FLEXIBLE	N.I.T.C.	NOT IN THIS CONTRACT	TDH	TOTAL DYNAMIC HEAD
C.O.	CLEAN OUT	FLG	FLANGE	N.T.S.	NOT TO SCALE	TEMP	TEMPORARY
CF	CUBIC FEET	FLR	FLOOR	N/F	NOW OR FORMERLY	TYP	TYPICAL
CFS	CUBIC FEET PER SECOND	FPS	FEET PER SECOND	NO. OR #	NUMBER		
CI	CAST IRON	FT OR '	FEET			V	VOLTS
CL	CLASS	FTG	FOOTING	O.C.	ON CENTER		
CONC	CONCRETE			O.D.	OUTSIDE DIAMETER	W/	WITH
CONST	CONSTRUCTION	GA	GAUGE			W/O	WITHOUT
CONTR	CONTRACTOR	GAL	GALLON				
CTR	CENTER	GALV	GALVANIZED			YD	YARD
CY	CUBIC YARD	GPD	GALLONS PER DAY				
		GPM	GALLONS PER MINUTE				

VIEW MARKERS & IDENTIFICATION

SECTION TITLE & NO. — ACCESS ROAD 3 — C-100 — DRAWING WHERE SECTION APPEARS

DETAIL TITLE & LETTER — MANHOLE A — C-100 — DRAWING WHERE DETAIL APPEARS

GENERAL NOTES:

THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.

CONTOURS SHOWN ON PLANS MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.

MATERIAL SPECIFICATIONS:

COMMON BORROW – MDOT SPECIFICATION 703.18

STONE BEDDING – THE STONE BEDDING MATERIAL SHALL BE 3/4 INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL

3/4" STONE – THE PIPE BEDDING MATERIAL SHALL BE 3/4-INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL

BASAL BLANKET – MDOT SPECIFICATION 703.05

COMPACTION – DIKE EMBANKMENT SOIL SHALL BE COMPACTED TO A DENSITY OF 90 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR)

6" AND 8" PVC PIPE – SDR 21

GRUBBING:

ALL VEGETATION AND TOPSOIL SHALL BE STRIPPED FROM THE CELL 11 ROADWAY AND CELL AREA PRIOR TO PLACING ADDITIONAL MATERIAL. ANY TOPSOIL CLAIMED DURING THE GRUBBING OPERATION WILL BE STOCKPILED FOR THE OWNER'S USE. ALL OTHER GRUBBINGS WILL BE DISPOSED OF IN THE EXISTING SPOIL PILE.

SEED AND FERTILIZER:

AREAS DISTURBED BY CONSTRUCTION AND THE OUTBOARD SLOPES OF THE DIKE SHALL BE FERTILIZED AND SEEDED.

MATERIAL:

AGRICULTURAL GROUND LIMESTONE: 25 LBS PER UNIT (1,000 SF)

FERTILIZER: GRANULAR FERTILIZER 18.5, 18.5, 18.5 (N,P,K) 10 LBS PER UNIT

SEED:

TALL FESCUE	59%
RED FESCUE	25%
RED TOP	5%
LADINO CLOVER	3%
ANNUAL RYEGRASS	8%

THIS SEED MIXTURE SHALL BE APPLIED AT A RATE OF 3 LBS PER UNIT

MULCH – THE MULCH APPLICATION RATE SHALL BE 2 TONS PER ACRE

INSTALLATION – MDOT 618.05 AND MDOT 618.06

RECOMMENDED TIME OF SEEDING IS FROM APRIL 15 TO SEPTEMBER 15.

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		7/30/99	SUBMITTED TO CLIENT				

STATE OF MAINE — JOHN E. — REGISTERED PROFESSIONAL ENGINEER

SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine

DRN	MSB
CHK	GHC
CHK	
CORR	
APPVD	
ISSUE CODE	
P – Prelim	B – Blds
M – Mtl T.O.	C – Const.
SCALE AS SHOWN	

BOWATER
Great Northern Paper

CENTRAL ENGINEERING

DOLBY III LANDFILL
CELL 11 CONSTRUCTION
SYMBOLS & ABBREVIATIONS

JOB NO. 94744
ENG. REQ. NO.
FILE NO. 2-092-7082

YB-25220

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CELL 11

CELL 10
(EXISTING)

CELL 9
(EXISTING)

CELL 1
THROUGH
CELL 8
(EXISTING)

Existing Leachate
Collection Pipes (TYP)

EXISTING
SPOIL
STOCKPILE

Sedimentation
Pond

Leachate
Pond

Exist. Spoil
Area

Access
Road

GROUND
OBSCURED

N 662500
E 475000
N 662500
E 474500
N 662500
E 474000

GENERAL NOTES:

1. BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, INC. NORRIDGEWOCK, MAINE, PHOTOGRAPH DATED 5/1/99.
2. GROUND CONTROL PROVIDED BY PLISGA & DAY, BANGOR, MAINE.
3. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
4. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL REMAIN IN COMPLIANCE WITH MDEP BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENTATION CONTROL AND EXISTING PERMITTING REQUIREMENTS FOR THE SITE INCLUDING FEDERAL, STATE, AND LOCAL PERMITS.

50 0 100 200

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		7/30/99	SUBMITTED TO CLIENT				

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 99070

DRN	MSB
CHK	GHC
CHK	
CORR	
APPVD	

ISSUE CODE

P – Prelim	B – Bids
M – MH T.O.	C – Const.

SCALE AS SHOWN

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL CELL 11 CONSTRUCTION EXISTING CONDITIONS PLAN

JOB NO. 94744
ENG. REQ. NO.
FILE NO. 2-092-7082

YB-25221

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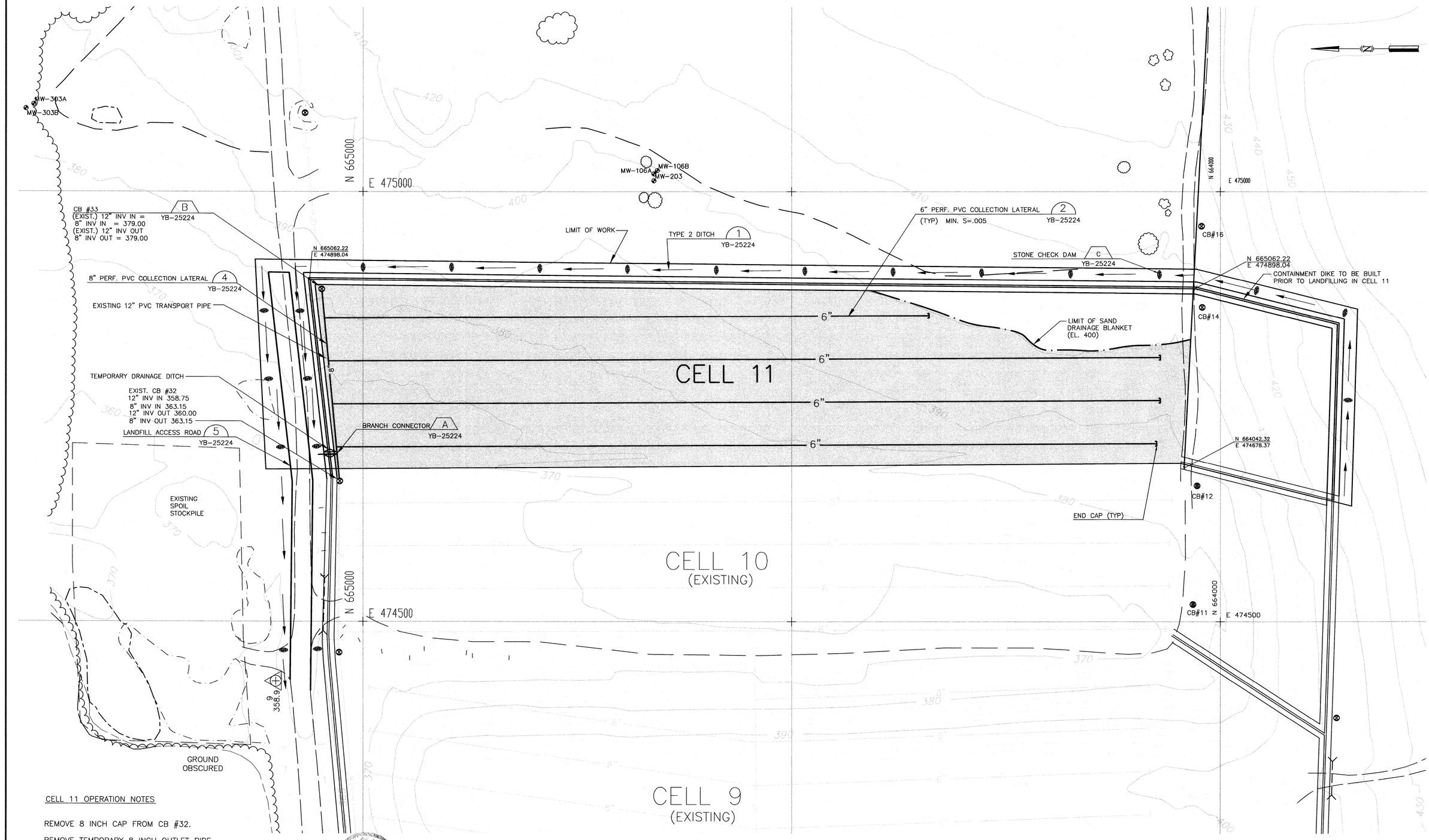

CELL 11 OPERATION NOTES

REMOVE 8 INCH CAP FROM CB #32.

REMOVE TEMPORARY 8 INCH OUTLET PIPE AND CAP PIPE TEE.

BACKFILL TEMPORARY DRAINAGE DITCH ON NORTH SIDE WITH SUITABLE MATERIAL.

STRIP EXISTING LANDFILL COVER ON CELL 3B.

REMOVE EXISTING CATCH BASIN COVER ON CELL 3B (CB #14) AND REPLACE WITH SOLID H-20 LOADING MANHOLE COVER.

25 0 50 100

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		12/27/99	RECORD DRAWING				
		7/30/99	SUBMITTED TO CLIENT				

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 99070

DRN	MSB
CHK	GHC
CHK	
CORR	
APPVD	
ISSUE CODE	
P – Prelim	B – Bids
M – Mtl T.O.	C – Const.
SCALE AS SHOWN	

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL
CELL 11 CONSTRUCTION
SITE DEVELOPMENT PLAN

JOB NO. 94744
ENG. REQ. NO.
FILE NO. 2-092-7082

YB-25222

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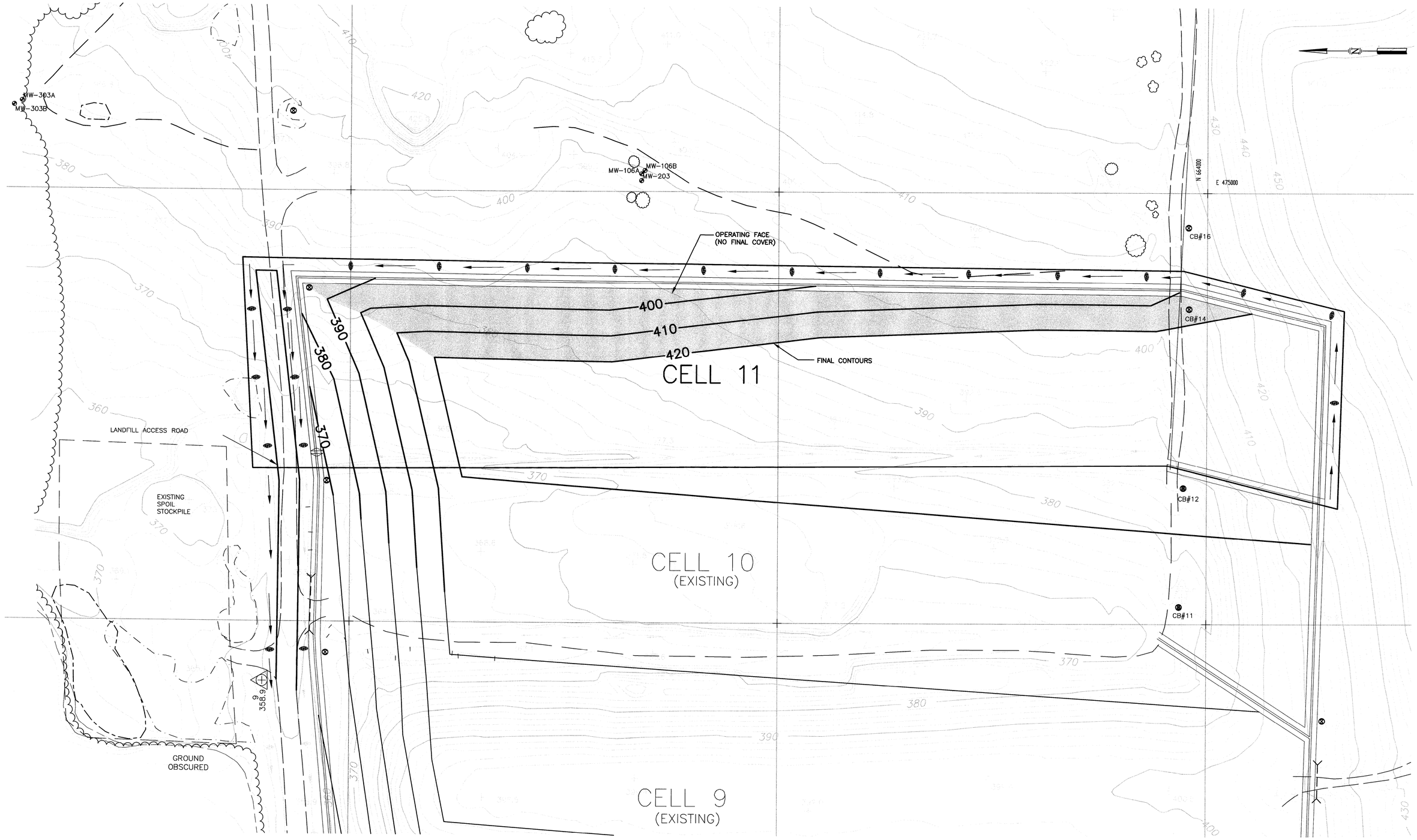

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		7/30/99	SUBMITTED TO CLIENT				

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

DRN	MSB
CHK	GHC
CHK	
CORR	
APPVD	

ISSUE CODE: P – Prelim | B – Bids | M – Mtl T.O. | C – Const.

SCALE AS SHOWN

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL
CELL 11 CONSTRUCTION
FINAL GRADING PLAN

JOB NO. 94744
ENG. REQ. NO.
FILE NO. 2-092-7087

YB-25223

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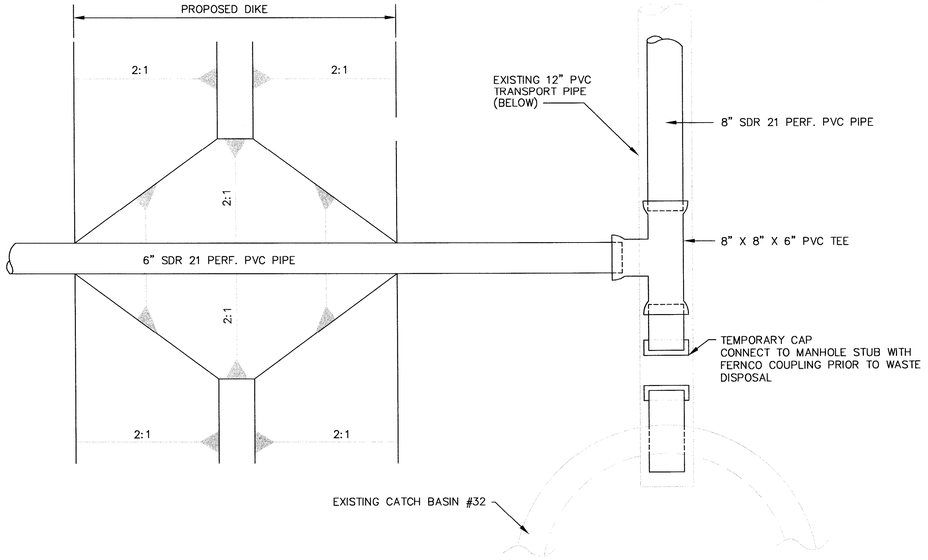
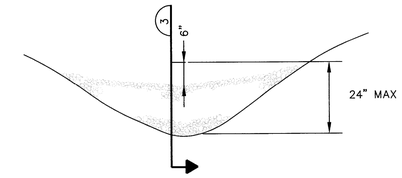


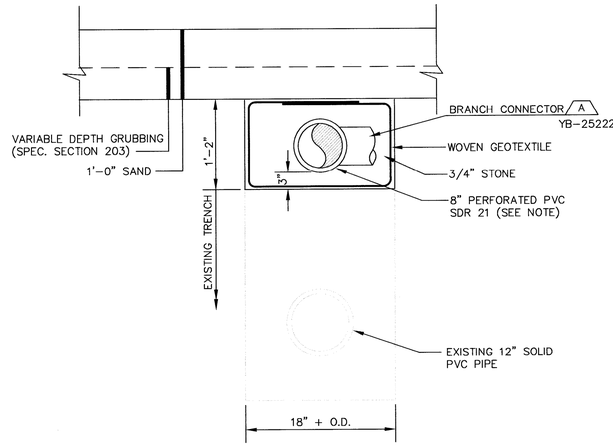




SECTION 3

STONE CHECK DAM C

N.T.S. YB-25222



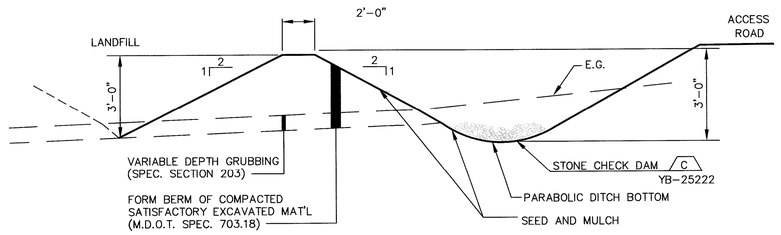
NOTE:
PIPE PERFORATIONS SHALL BE 3/8" DIA. HOLES, 6" O.C., 2 ROWS. ROWS SHLL BE MINIMUM 45°, MAXIMUM 60° FROM INVERT OF PIPE. HOLES SHALL FACE DOWN.

8" LEACHATE COLLECTION PIPES 4

N.T.S. YB-25222

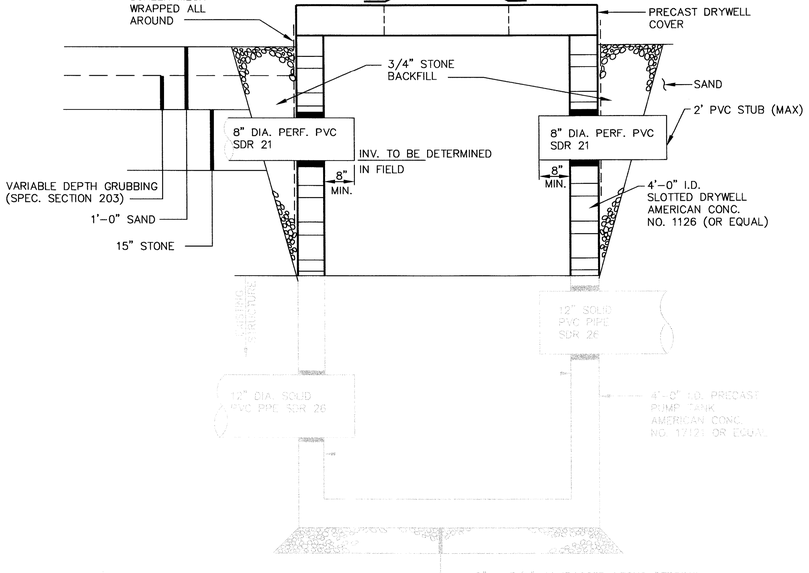
BRANCH CONNECTOR A

N.T.S. YB-25222



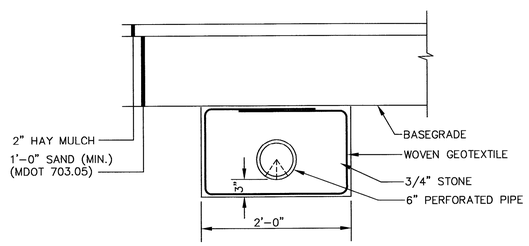
DIKE AND TYPE 2 DRAINAGE DITCH 1

N.T.S. YB-25222



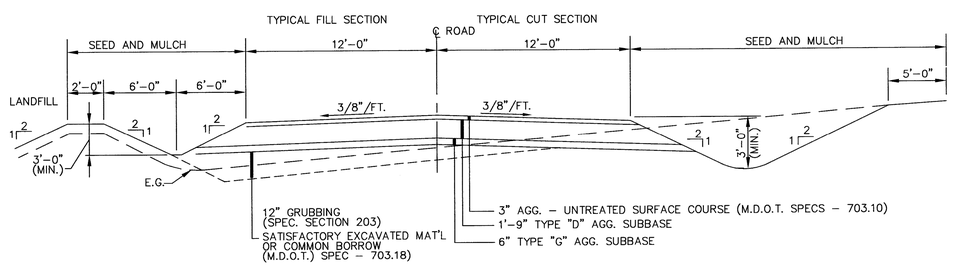
CATCH BASIN # 33 B

N.T.S. YB-25222



6" LEACHATE COLLECTION PIPE 2

N.T.S. YB-25222



LANDFILL ACCESS ROAD 4

N.T.S. YB-25222

STATE OF MAINE — PETER M. MAHER — 10172 — REGISTERED PROFESSIONAL ENGINEER

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		12/27/99	RECORD DRAWING				
		7/30/99	SUBMITTED TO CLIENT				

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 99070

DRN	MSB
CHK	GHC
CHK	
CORR	
APPVD	
ISSUE CODE	
P - Prelim	B - Bids
M - Mtl T.O.	C - Const.
SCALE	AS SHOWN

BOWATER
Great Northern Paper

EAST OPERATION

DOLBY III LANDFILL
CELL 11 CONSTRUCTION
SECTIONS & DETAILS

JOB NO. 94744
ENG. REQ. NO.
FILE NO. 2-092-7082

YB-25224

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C D E F G H I L M N O P Q

GREAT NORTHERN PAPER, INC.
MILLINOCKET, MAINE
DOLBY III LANDFILL
CELL 12 CONSTRUCTION
CELL 10 CLOSURE

SHT. NO.	TITLE	DWG. NO.
1	COVER SHEET	YB-25539
2	SYMBOLS & ABBREVIATIONS	YB-25540
3	EXISTING CONDITIONS PLAN	YB-25541
4	CELL 12 – SITE DEVELOPMENT PLAN	YB-25542
5	OPERATIONAL GRADING PLAN	YB-25543
6	SECTIONS & DETAILS (SHEET 1 OF 2)	YB-25544
7	SECTIONS & DETAILS (SHEET 2 OF 2)	YB-25544

SME

Sevee & Maher Engineers, Inc.

Waste Management and Hydrogeologic Consultants

Cumberland Center, Maine

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	–	
5	–	
4	–	
3	–	
2	–	
1	–	

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	– –						
	– –						
	– –						
	– –						
	6/8/00	C	ISSUED FOR CONSTRUCTION				
	5/31/00	P	SUBMITTED TO CLIENT				

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	– –						
	– –						
	– –						
	– –						
	– –						
	– –						

DRN	DRD	5/31/00
CHKD	GHC	5/31/00
APPVD		– –

ISSUE CODE

P - Preliminary

B - Bids

C - Construction

ASB - As Built

SCALE NONE

Great Northern PAPER, INC.

CAD FILE: GNPCOV12.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 12 CONSTRUCTION
CELL 10 CLOSURE
COVER SHEET

JOB NO. 94744
FILE NO. 2-092-7082
LOC. NO. _____

YB-25539

G:\GNP\DOL\ACAD\CELL12\Gnpcov12.dwg Thu Jun 08 09:06:36 2000

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (MAGNETIC)			STONE WALL	○	●	MANHOLE
N		NORTH ARROW (PLAN NORTH)			DRAINAGE COURSE (WITH DIRECTION)	◎	◉	CATCH BASIN
25	25	CONTOUR LINES	SHORE SIDE		EDGE OF WATER	⋈	⧓	WATER VALVE
25 x 63	25.56 x	SPOT ELEVATION (GRADE)			WATER ELEVATION (GROUND OR SURFACE)			HYDRANT
		EXISTING GROUND			FENCE LINE (WOOD)			UTILITY POLE
A S B		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION PT.			FENCE LINE (WIRE)		⊘	CLEAN OUT STRUCTURE
		PROPERTY LINE OR R.O.W.			RETAINING WALL	G	G	UNDERGROUND GAS MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			GUARD RAIL	T	T	UNDERGROUND TELEPHONE LINE
	0+00 1+00	CONSTRUCTION BASELINE			BUILDING AND STRUCTURES	E	E	UNDERGROUND ELECTRICAL LINE
		BOUNDARY LINE (State, County, Municipality)		1' 2 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)	OE	OE	OVERHEAD ELECTRICAL LINE
⊡	■	SURVEY MONUMENT		TOP OF SLOPE 2:1	SLOPES (WITH SLOPE RATIO)		12" ACP	SANITARY SEWER (SIZE & TYPE)
○IF	●IF	SURVEY IRON			EDGE OF TRAVELED WAY	FM	8" PVC	FORCE MAIN (SIZE & TYPE)
○	●	DRILL HOLE, PK, OR STAKE		FL	CUT OR FILL LINE	W	8" D.I.	WATER MAIN (SIZE & TYPE)
		WOODS OR BRUSH LINE		CLL	CLEARING LIMIT LINE		12" RCP	STORM DRAIN (SIZE & TYPE)
		INDIVIDUAL TREE (Deciduous)			BITUMINOUS PAVEMENT	UD	8" UD	UNDERDRAIN (SIZE & TYPE)
		INDIVIDUAL TREE (Coniferous)			CONCRETE			CULVERT
		TREE, TO BE REMOVED	B-12 MW-12 P-12	B-12 MW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER			RAILROAD
		MAPPED WETLAND	TP-12	TP-12	TEST PIT AND NUMBER		S	SILTATION FENCE
						PD	6" PD	PERIMETER DRAIN (SIZE & TYPE)
						LT	6" LT	LEACHATE TRANSPORT (SIZE & TYPE)
						LC	6" LC	LEACHATE COLLECTION (SIZE & TYPE)
						LD	6" LD	LEAK DETECTION, SIZE & TYPE
								TERRACE DRAINAGE SWALE
							4" GS	GRAVITY SEWER
							6" SWP	SOLID WALL PIPE

A.C.C.M.P	ASPHALT COATED C.M.P.	D	DEGREE OF CURVE	HDPE	HIGH DENSITY POLYETHYLENE	P.C.	POINT ON CURVE
A.C.P.	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HP	HORSEPOWER	PD	PERIMETER DRAIN
AC	ACRE	DEG OR °	DIAMETER	HYD	HYDRANT	P.I.	POINT OF INTERSECTION
AGG	AGGREGATE	DEPT	DEPARTMENT			P.T.	POINT OF TANGENT
ALUM	ALUMINUM	DI	DUCTILE IRON	I.D.	INSIDE DIAMETER	PERF	PERFORATED
APPD	APPROVED	DIA OR ø	DIAMETER	IN OR "	INCHES	PSI	POUNDS PER SQUARE INCH
APPROX	APPROXIMATE	DIM	DIMENSION	INV	INVERT	PVC	POLYVINYL CHLORIDE
ARMH	AIR RELEASE MANHOLE	DIST	DISTANCE	INV. EL	INVERT ELEVATION	PVMT	PAVEMENT
ASB	ASBESTOS	DN	DOWN				
ASPH	ASPHALT	DR	DRAIN	LB	POUND	QTY	QUANTITY
AUTO	AUTOMATIC	DWG	DRAWING	LC	LEACHATE COLLECTION		
AUX	AUXILIARY			LD	LEAK DETECTION	R.O.W.	RIGHT OF WAY
AVE	AVENUE	EA	EACH	LIN FT.	LINEAR FEET	RAD	RADIUS
AZ	AZIMUTH	EG	EXISTING GROUND OR GRADE	LOC	LOCATION	REQD	REQUIRED
		ELEC	ELECTRIC	LT	LEACHATE TRANSPORT	RT	RIGHT
B.C.C.M.P.	BITUMINOUS COATED C.M.P.	EL	ELEVATION			RTE	ROUTE
B.M.	BENCH MARK	ELB	ELBOW	M.H.	MANHOLE		
BIT	BITUMINOUS	EQUIP	EQUIPMENT	M.J.	MECHANICAL JOINT	S	SLOPE
BLDG	BUILDING	EST	ESTIMATED	MATL	MATERIAL	SCH	SCHEDULE
BOT	BOTTOM	EXC	EXCAVATE	MAX	MAXIMUM	SF	SQUARE FEET
BRG	BEARING	EXIST	EXISTING	MFR	MANUFACTURE	SHT	SHEET
				MIN	MINIMUM	STA	STATION
C.B.	CATCH BASIN	F.G.	FINISH GRADE	MISC	MISCELLANEOUS	SY	SQUARE YARD
CEN	CENTER	FBRGL	FIBERGLASS	MON	MONUMENT		
CEM. LIN.	CEMENT LINED	FDN	FOUNDATION			TAN	TANGENT
C.M.P.	CORRUGATED METAL PIPE	FLEX	FLEXIBLE	N.I.T.C.	NOT IN THIS CONTRACT	TDH	TOTAL DYNAMIC HEAD
C.O.	CLEAN OUT	FLG	FLANGE	N.T.S.	NOT TO SCALE	TEMP	TEMPORARY
CF	CUBIC FEET	FLR	FLOOR	N/F	NOW OR FORMERLY	TYP	TYPICAL
CFS	CUBIC FEET PER SECOND	FPS	FEET PER SECOND	NO. OR #	NUMBER		
CI	CAST IRON	FT OR '	FEET			V	VOLTS
CL	CLASS	FTG	FOOTING	O.C.	ON CENTER		
CONC	CONCRETE			O.D.	OUTSIDE DIAMETER	W/	WITH
CONST	CONSTRUCTION	GA	GAUGE			W/O	WITHOUT
CONTR	CONTRACTOR	GAL	GALLON				
CTR	CENTER	GALV	GALVANIZED			YD	YARD
CY	CUBIC YARD	GPD	GALLONS PER DAY				
		GPM	GALLONS PER MINUTE				

VIEW MARKERS & IDENTIFICATION

SECTION TITLE & NO. — ACCESS ROAD 3 — C-100 — DRAWING WHERE SECTION APPEARS

DETAIL TITLE & LETTER — MANHOLE A — C-100 — DRAWING WHERE DETAIL APPEARS

GENERAL NOTES:

THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.

CONTOURS SHOWN ON PLANS MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.

MATERIAL SPECIFICATIONS:

COMMON BORROW – MDOT SPECIFICATION 703.18

STONE BEDDING – THE STONE BEDDING MATERIAL SHALL BE 3/4 INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL

3/4" STONE – THE PIPE BEDDING MATERIAL SHALL BE 3/4–INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL

BASAL BLANKET – MDOT SPECIFICATION 703.05

COMPACTION – DIKE EMBANKMENT SOIL SHALL BE COMPACTED TO A DENSITY OF 90 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR)

6" AND 8" PVC PIPE – SDR 21

GRUBBING:

ALL VEGETATION AND TOPSOIL SHALL BE STRIPPED FROM THE CELL 11 ROADWAY AND CELL AREA PRIOR TO PLACING ADDITIONAL MATERIAL. ANY TOPSOIL CLAIMED DURING THE GRUBBING OPERATION WILL BE STOCKPILED FOR THE OWNER'S USE. ALL OTHER GRUBBINGS WILL BE DISPOSED OF IN THE EXISTING SPOIL PILE.

SEED AND FERTILIZER:

AREAS DISTURBED BY CONSTRUCTION AND THE OUTBOARD SLOPES OF THE DIKE SHALL BE FERTILIZED AND SEEDED.

MATERIAL:

AGRICULTURAL GROUND LIMESTONE: 25 LBS PER UNIT (1,000 SF)

FERTILIZER: GRANULAR FERTILIZER 18.5, 18.5, 18.5 (N,P,K) 10 LBS PER UNIT

SEED:

TALL FESCUE	59%
RED FESCUE	25%
RED TOP	5%
LADINO CLOVER	3%
ANNUAL RYEGRASS	8%

THIS SEED MIXTURE SHALL BE APPLIED AT A RATE OF 3 LBS PER UNIT

MULCH – THE MULCH APPLICATION RATE SHALL BE 2 TONS PER ACRE

INSTALLATION – MDOT 618.05 AND MDOT 618.06

RECOMMENDED TIME OF SEEDING IS FROM APRIL 15 TO SEPTEMBER 15.

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
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CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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6/8/00	C	ISSUED FOR CONSTRUCTION					
5/31/00	P	SUBMITTED TO CLIENT					

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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SME

Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine

DRN	DRD	5/31/00
CHKD	GHC	5/31/00
APPVD		– –

ISSUE CODE
P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE NONE

Great Northern PAPER, INC.

CAD FILE: SYMSHT.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 12 CONSTRUCTION
CELL 10 CLOSURE
SYMBOLS & ABBREVIATIONS

JOB NO. 94744
FILE NO. 2-092-7082
LOC. NO.

YB-25540

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CELL 11
(EXISTING)

CELL 10
(EXISTING)

CELL 9
(EXISTING)

CELL 1
THROUGH
CELL 8
(EXISTING)

Existing Leachate
Collection Pipes (TYP)

EXISTING
SPOIL
STOCKPILE

Exist. Spoil
Area

Sedimentation
Pond

Sedimentation
Pond

Leachate
Pond

Access
Road

GROUND
OBSCURED

N 662500
E 475000
N 662000
E 474500
E 474000

GENERAL NOTES:

1. BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, INC. NORRIDGEWOCK, MAINE, PHOTOGRAPH DATED 5/1/99.

2. GROUND CONTROL PROVIDED BY PLISGA & DAY, BANGOR, MAINE.

3. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

4. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL REMAIN IN COMPLIANCE WITH MDEP BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENTATION CONTROL AND EXISTING PERMITTING REQUIREMENTS FOR THE SITE INCLUDING FEDERAL, STATE, AND LOCAL PERMITS.

5. GREAT NORTHERN PAPER IS ACTIVELY FILLING CELL 10. EXISTING GRADES MAY NOT REPRESENT CURRENT CONDITIONS.

50 0 100 200

STATE OF MAINE
PETER
REGISTERED
PROFESSIONAL
ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REVISION	BY	CKD	APPVD	JOB
6	-			- -					
5	-			- -					
4	-			- -					
3	-			- -					
2	-			6/8/00	C ISSUED FOR CONSTRUCTION				
1	-			5/31/00	P SUBMITTED TO CLIENT				

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 00044

DRN	DRD	5/31/00
CHKD	GHC	5/31/00
APPVD		

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SCALE NONE

Great Northern PAPER, INC.

EAST OPERATION

DOLBY III LANDFILL
CELL 12 CONSTRUCTION
CELL 10 CLOSURE
EXISTING CONDITIONS PLAN

JOB NO. 94744
FILE NO. 2-092-7082
LOC. NO.

YB-25541

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REGRADE

LIMIT OF WORK

TYPE 2 DITCH (1) YB-25544

STONE CHECK DAM (C) 100' O.C. (TYP) YB-25544

CONTAINMENT DIKE TO BE BUILT PRIOR TO LANDFILLING IN CELL 12

CATCH BASIN #34 (B) YB-25544
(EXIST) 12" INV IN = 391.2
8" INV IN = 397.0
(EXIST) 12" INV OUT = 391.1
8" INV OUT = 397.0

MW-303A
MW-303B

8" LEACHATE TRANSPORT PIPE (4) YB-25544

EXISTING 12" PVC TRANSPORT PIPE

ABANDON EXISTING MONITORING WELLS (BY OTHERS)

MW-106A
MW-106B
MW-203

LEACHATE COLLECTION PIPE (2) YB-25544

LIMIT OF SAND BLANKET (EL: 400)

LANDFILL ACCESS ROAD (5) YB-25544

TEMPORARY DRAINAGE DITCH

END CAP (TYP)

BRANCH CONNECTOR (A) YB-25544

EXISTING CATCH BASIN #33
(EXIST) 12" INV IN = 373.25
8" INV IN = 379.00
(EXIST) 12" INV OUT = 373.15
8" INV OUT = 379.00

CB#15

CB#14

CB#12

CB#11

N 559000

E 475000

CELL 11
(EXISTING)

CELL 10

EXISTING
SPOIL
STOCKPILE

388.9

CELL 12 OPERATION NOTES (PRIOR TO FILLING)

REMOVE 8 INCH CAP FROM CB #33.
REMOVE TEMPORARY 8 INCH OUTLET PIPE AND CAP PIPE TEE.
BACKFILL TEMPORARY DRAINAGE DITCH ON NORTH SIDE WITH SUITABLE MATERIAL.
STRIP EXISTING LANDFILL COVER AND CONSTRUCT CONTAINMENT BERM ON CELL 4.
REMOVE EXISTING CATCH BASIN COVER ON CELL 4 (CB #16) AND REPLACE WITH SOLID H-20 LOADING MANHOLE COVER.

25 0 50 100

STATE OF MAINE
PETER M. ANNIS
REGISTERED PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
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CODE	DATE		REVISION	BY	CKD	APPVD	JOB
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	10/16/01	ASB	RECORD DRAWING				
	6/8/00	C	ISSUED FOR CONSTRUCTION	GHC			
	5/31/00	P	SUBMITTED TO CLIENT				

CODE	DATE	REVISION	BY	CKD	APPVD	JOB
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SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 00044

DRN	DRD	5/31/00
CHKD	GHC	5/31/00
APPVD		

ISSUE CODE
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ASB - As Built
SCALE NONE

Great Northern PAPER, INC.

CAD FILE: SITEDEV.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 12 CONSTRUCTION
CELL 10 CLOSURE
CELL 12 - SITE DEVELOPMENT PLAN

JOB NO. 94744
FILE NO. 2-092-7082
LOC. NO.

YB-25542

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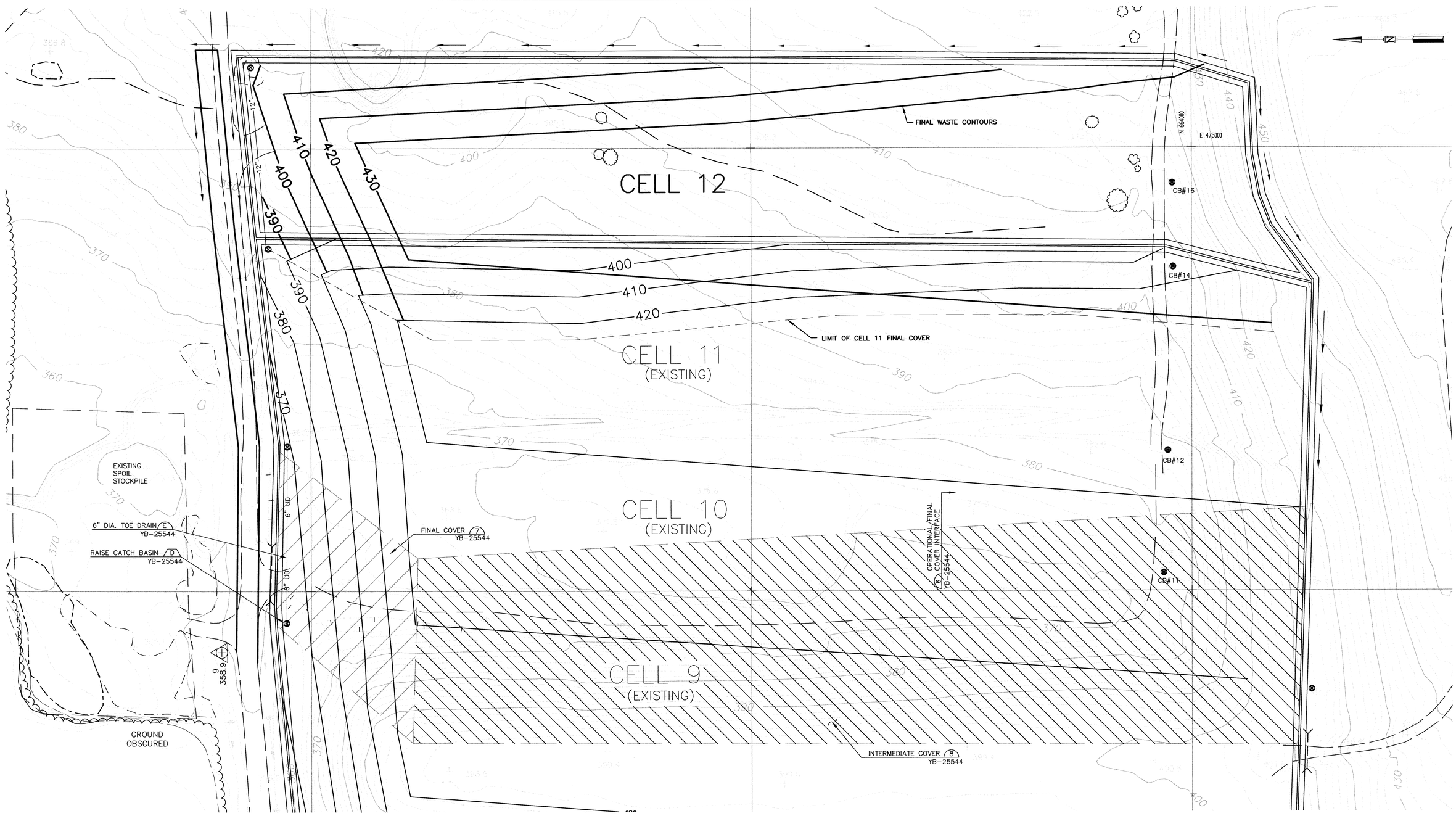

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CODE	DATE		REVISION	BY	CKD	APPVD	JOB
C	6/8/00	C	ISSUED FOR CONSTRUCTION				
P	5/31/00	P	SUBMITTED TO CLIENT				

SME

Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

DRN	DRD	5/31/00
CHKD	GHC	5/31/00
APPVD		

ISSUE CODE
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ASB - As Built
SCALE NONE

Great Northern PAPER, INC.

EAST OPERATION

DOLBY III LANDFILL
CELL 12 CONSTRUCTION
CELL 10 CLOSURE
OPERATIONAL GRADING PLAN

JOB NO. 94744
FILE NO. 2-092-7082
LOC. NO.

YB-25543

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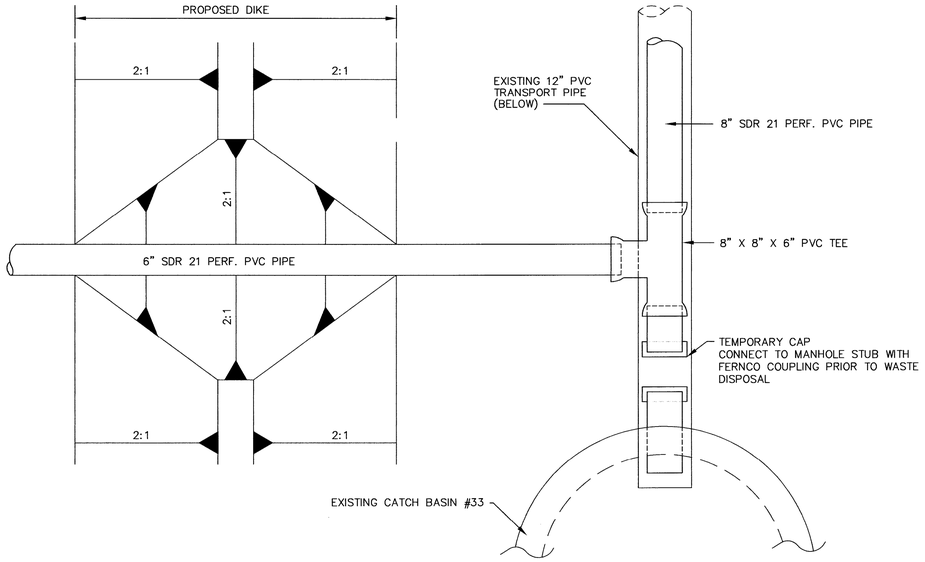
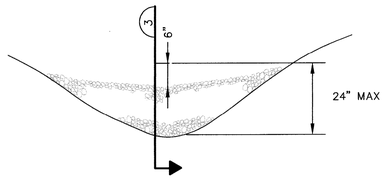


BRANCH CONNECTOR A

N.T.S. YB-25542

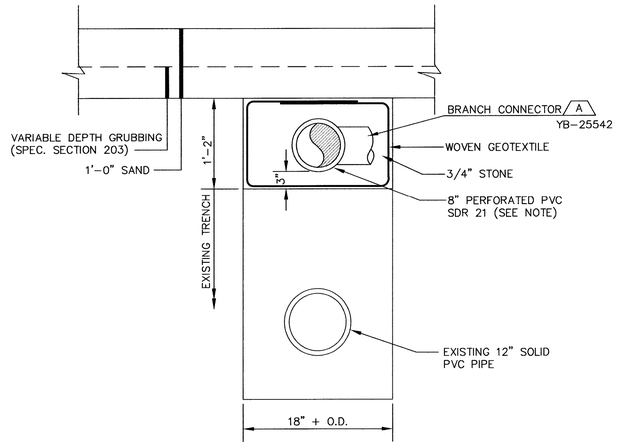




SECTION 3

STONE CHECK DAM C

N.T.S. YB-25542

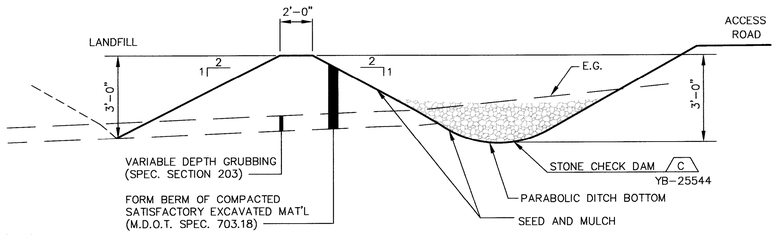


NOTE:

PIPE PERFORATIONS SHALL BE 3/8" DIA. HOLES, 6" O.C., 2 ROWS. ROWS SHALL BE MINIMUM 45°, MAXIMUM 60° FROM INVERT OF PIPE. HOLES SHALL FACE DOWN.

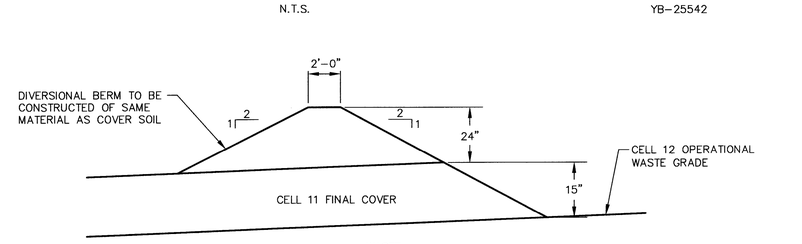
8" LEACHATE TRANSPORT PIPES 4

N.T.S. YB-25542



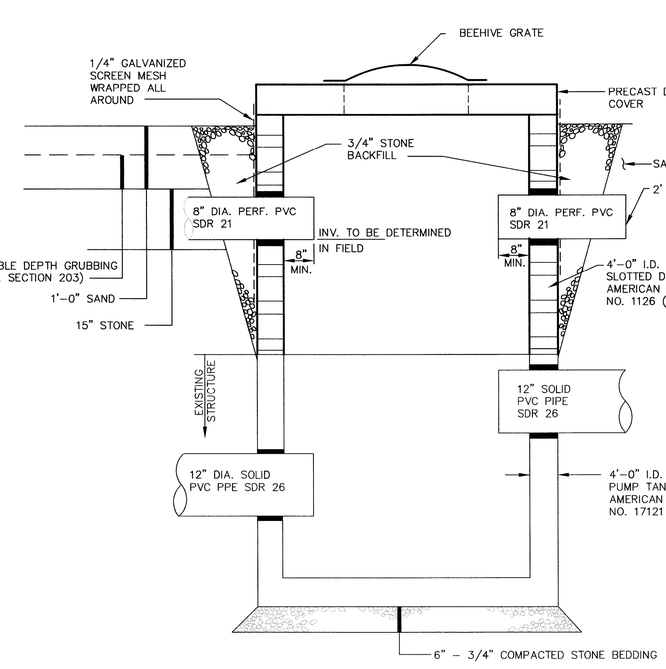
DIKE AND TYPE 2 DRAINAGE DITCH 1

N.T.S. YB-25542



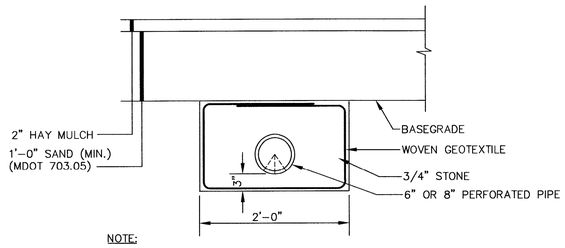
OPERATIONAL/FINAL COVER INTERFACE 6

N.T.S. YB-25543



CATCH BASIN # 34 B

N.T.S. YB-25542

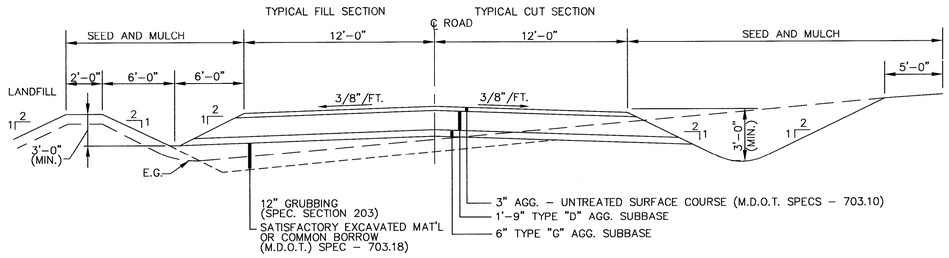


NOTE:

PIPE PERFORATIONS SHALL BE 3/8" DIA. HOLES, 6" O.C., 2 ROWS. ROWS SHALL BE MINIMUM 45°, MAXIMUM 60° FROM INVERT OF PIPE. HOLES SHALL FACE DOWN.

LEACHATE COLLECTION PIPE 2

N.T.S. YB-25542



LANDFILL ACCESS ROAD 5

N.T.S. YB-25542

STATE OF MAINE — PETER W. MAHER — REGISTERED PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
6	-			- -						
5	-			- -						
4	-			- -						
3	-			- -						
2	-			6/8/00	C	ISSUED FOR CONSTRUCTION				
1	-			5/31/00	P	SUBMITTED TO CLIENT				

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

DRN	MBISK	5/31/00
CHKD	GHC	5/31/00
APPVD		- -

ISSUE CODE
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ASB - As Built
SCALE NONE

Great Northern PAPER, INC.

CAD FILE: DETAILS.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 12 CONSTRUCTION
CELL 10 CLOSURE
SECTIONS & DETAILS

JOB NO. 94744
FILE NO. 2-092-7082
LOC. NO.

YB-25544
SHEET 1 OF 2

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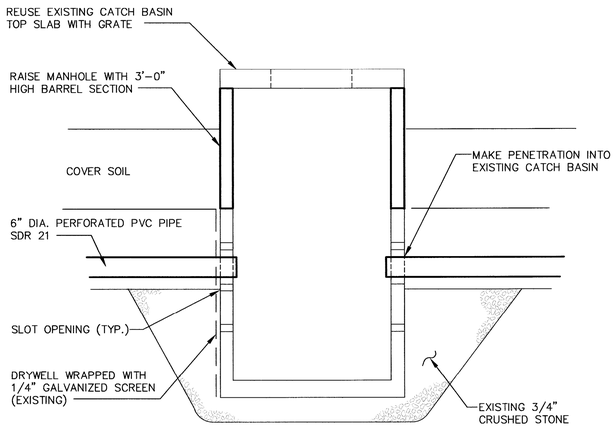
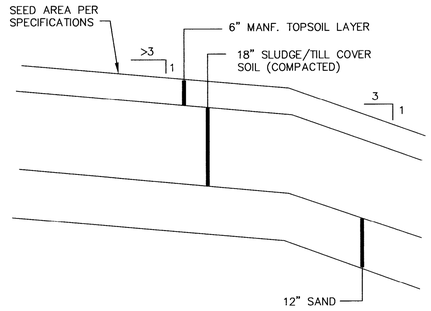
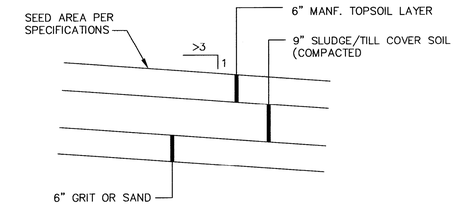


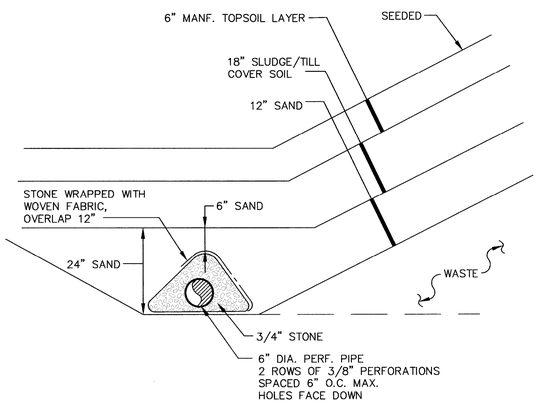
RAISE CATCH BASIN D
N.T.S. (EXISTING) YB-25543



FINAL COVER 7
N.T.S. YB-25543



INTERMEDIATE COVER 8
N.T.S. YB-25543



TOE DRAIN E
N.T.S. YB-25543

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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5	–			– –						
4	–			– –						
3	–			– –						
2	–			6/8/00	C	ISSUED FOR CONSTRUCTION				
1	–			5/31/00	P	SUBMITTED TO CLIENT				

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	– –						

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

DRN	MBISK	5/31/00
CHKD	GHC	5/31/00
APPVD		– –

ISSUE CODE
P – Preliminary
B – Bids
C – Construction
ASB – As Built
SCALE NONE

Great Northern PAPER, INC.

CAD FILE: DETAILS.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 12 CONSTRUCTION
CELL 10 CLOSURE
SECTIONS & DETAILS

JOB NO. 94744
FILE NO. 2-092-7082
LOC. NO.

YB-25544
SHEET 2 OF 2

G:\GAP\Dol\ACAD\CELL12\DETAILS.dwg Thu Jun 08 10:14:33 2000

KATAHDIN PAPER COMPANY, LLC.
MILLINOCKET, MAINE
DOLBY III LANDFILL
CELL 13 CONSTRUCTION
CELL 11 CLOSURE

SHT. NO.	TITLE	DWG. NO.
1	COVER SHEET	YB-26077
2	SYMBOLS & ABBREVIATIONS	YB-26078
3	EXISTING CONDITIONS PLAN	YB-26079
4	CELL 13 – SITE DEVELOPMENT PLAN	YB-26080
5	OPERATIONAL GRADING PLAN	YB-26081
6	SECTIONS & DETAILS (SHEET 1 OF 3)	YB-26082
7	SECTIONS & DETAILS (SHEET 2 OF 3)	YB-26083
8	SECTIONS & DETAILS (SHEET 3 OF 3)	YB-26084

SME

Sevee & Maher Engineers, Inc.

Waste Management and Hydrogeologic Consultants

Cumberland Center, Maine

STATE OF MAINE
PETER M. MAHER
NO. 4107
REGISTERED PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	–	
5	–	
4	–	
3	–	
2	–	
1	–	

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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	5/03	ASB	RECORD DRAWING				
	4/29/02	C	ISSUED FOR CONSTRUCTION	GHC			
		P	SUBMITTED TO CLIENT	GHC			

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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	– –						
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JOB NO. 02021

DRN	KLC	3/6/02
CHKD	GHC	3/8/02
APPVD		– –

ISSUE CODE
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B – Bids
C – Construction
ASB – As Built
SCALE NONE

KATAHDIN PAPER COMPANY, LLC.
MILLINOCKET, MAINE

CAD FILE: GNPCOV13.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 13 CONSTRUCTION
CELL 11 CLOSURE
COVER SHEET

JOB NO. 94768
FILE NO. 2-092-7082
LOC. NO.

YB-26077

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SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (MAGNETIC)			STONE WALL	○	●	MANHOLE
		NORTH ARROW (PLAN NORTH)			DRAINAGE COURSE (WITH DIRECTION)	◎	◉	CATCH BASIN
25	25	CONTOUR LINES	SHORE SIDE		EDGE OF WATER	⋈	⋈	WATER VALVE
25 x 63	25.56	SPOT ELEVATION (GRADE)			WATER ELEVATION (GROUND OR SURFACE)			HYDRANT
		EXISTING GROUND			FENCE LINE (WOOD)			UTILITY POLE
		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION P.T.			FENCE LINE (WIRE)		⊘	CLEAN OUT STRUCTURE
		PROPERTY LINE OR R.O.W.			RETAINING WALL	G	G	UNDERGROUND GAS MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			GUARD RAIL	T	T	UNDERGROUND TELEPHONE LINE
	0+00 1+00	CONSTRUCTION BASELINE			BUILDING AND STRUCTURES	E	E	UNDERGROUND ELECTRICAL LINE
		BOUNDARY LINE (State, County, Municipality)		1:2 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)	OE	OE	OVERHEAD ELECTRICAL LINE
⊟	■	SURVEY MONUMENT		TOP OF SLOPE	SLOPES (WITH SLOPE RATIO)		12" ACP	SANITARY SEWER (SIZE & TYPE)
○IF	●IF	SURVEY IRON			EDGE OF TRAVELED WAY	FM	8" PVC	FORCE MAIN (SIZE & TYPE)
○	●	DRILL HOLE, PK, OR STAKE		F	CUT OR FILL LINE	W	8" D.I.	WATER MAIN (SIZE & TYPE)
		WOODS OR BRUSH LINE		CLL	CLEARING LIMIT LINE		12" RCP	STORM DRAIN (SIZE & TYPE)
		INDIVIDUAL TREE (Deciduous)			BITUMINOUS PAVEMENT	UD	8" UD	UNDERDRAIN (SIZE & TYPE)
		INDIVIDUAL TREE (Coniferous)			CONCRETE			CULVERT
		TREE, TO BE REMOVED	B-12 MW-12 P-12	B-12 MW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER			RAILROAD
		MAPPED WETLAND	TP-12	TP-12	TEST PIT AND NUMBER		S	SILTATION FENCE
						PD	6" PD	PERIMETER DRAIN (SIZE & TYPE)
						LT	6" LT	LEACHATE TRANSPORT (SIZE & TYPE)
						LC	6" LC	LEACHATE COLLECTION (SIZE & TYPE)
						LD	6" LD	LEAK DETECTION, SIZE & TYPE
								TERRACE DRAINAGE SWALE
							4" GS	GRAVITY SEWER
							6" SWP	SOLID WALL PIPE

A.C.C.M.P	ASPHALT COATED C.M.P.	D	DEGREE OF CURVE	HDPE	HIGH DENSITY POLYETHYLENE	P.C.	POINT ON CURVE
A.C.P.	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HP	HORSEPOWER	PD	PERIMETER DRAIN
AC	ACRE	DEG OR °	DIAMETER	HYD	HYDRANT	P.I.	POINT OF INTERSECTION
AGG	AGGREGATE	DEPT	DEPARTMENT			P.T.	POINT OF TANGENT
ALUM	ALUMINUM	DI	DUCTILE IRON	I.D.	INSIDE DIAMETER	PERF	PERFORATED
APPD	APPROVED	DIA OR ø	DIAMETER	IN OR "	INCHES	PSI	POUNDS PER SQUARE INCH
APPROX	APPROXIMATE	DIM	DIMENSION	INV	INVERT	PVC	POLYVINYL CHLORIDE
ARMH	AIR RELEASE MANHOLE	DIST	DISTANCE	INV. EL	INVERT ELEVATION	PVMT	PAVEMENT
ASB	ASBESTOS	DN	DOWN			QTY	QUANTITY
ASPH	ASPHALT	DR	DRAIN	LB	POUND		
AUTO	AUTOMATIC	DWG	DRAWING	LC	LEACHATE COLLECTION	R.O.W.	RIGHT OF WAY
AUX	AUXILIARY			LD	LEAK DETECTION	RAD	RADIUS
AVE	AVENUE	EA	EACH	LIN FT.	LINEAR FEET	REQD	REQUIRED
AZ	AZIMUTH	EG	EXISTING GROUND OR GRADE	LOC	LOCATION	RT	RIGHT
		ELEC	ELECTRIC	LT	LEACHATE TRANSPORT	RTE	ROUTE
B.C.C.M.P.	BITUMINOUS COATED C.M.P.	EL	ELEVATION				
B.M.	BENCH MARK	ELB	ELBOW	M.H.	MANHOLE	S	SLOPE
BIT.	BITUMINOUS	EQUIP	EQUIPMENT	M.J.	MECHANICAL JOINT	SCH	SCHEDULE
BLDG	BUILDING	EST	ESTIMATED	MATL	MATERIAL	SF	SQUARE FEET
BOT	BOTTOM	EXC	EXCAVATE	MAX	MAXIMUM	SHT	SHEET
BRG	BEARING	EXIST	EXISTING	MFR	MANUFACTURE	STA	STATION
				MIN	MINIMUM	SY	SQUARE YARD
C.B.	CATCH BASIN	F.G.	FINISH GRADE	MISC	MISCELLANEOUS		
CEN	CENTER	FBRGL	FIBERGLASS	MON	MONUMENT	TAN	TANGENT
CEM. LIN.	CEMENT LINED	FDN	FOUNDATION			TDH	TOTAL DYNAMIC HEAD
C.M.P.	CORRUGATED METAL PIPE	FLEX	FLEXIBLE	N.I.T.C.	NOT IN THIS CONTRACT	TEMP	TEMPORARY
C.O.	CLEAN OUT	FLG	FLANGE	N.T.S.	NOT TO SCALE	TYP	TYPICAL
CF	CUBIC FEET	FLR	FLOOR	N/F	NOW OR FORMERLY		
CFS	CUBIC FEET PER SECOND	FPS	FEET PER SECOND	NO. OR #	NUMBER	V	VOLTS
CI	CAST IRON	FT OR '	FEET				
CL	CLASS	FTG	FOOTING	O.C.	ON CENTER	W/	WITH
CONC	CONCRETE			O.D.	OUTSIDE DIAMETER	W/O	WITHOUT
CONST	CONSTRUCTION	GA	GAUGE				
CONTR	CONTRACTOR	GAL	GALLON			YD	YARD
CTR	CENTER	GALV	GALVANIZED				
CY	CUBIC YARD	GPD	GALLONS PER DAY				
		GPM	GALLONS PER MINUTE				

VIEW MARKERS & IDENTIFICATION

SECTION TITLE & NO. — ACCESS ROAD / 3 / C-100 — DRAWING WHERE SECTION APPEARS

DETAIL TITLE & LETTER — MANHOLE / A / C-100 — DRAWING WHERE DETAIL APPEARS

GENERAL NOTES:

THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.

CONTOURS SHOWN ON PLANS MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.

MATERIAL SPECIFICATIONS:

COMMON BORROW – MDOT SPECIFICATION 703.18

STONE BEDDING – THE STONE BEDDING MATERIAL SHALL BE 3/4 INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL

3/4" STONE – THE PIPE BEDDING MATERIAL SHALL BE 3/4–INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL

SAND BLANKET – MDOT SPECIFICATION 703.05

COMPACTION – DIKE EMBANKMENT SOIL SHALL BE COMPACTED TO A DENSITY OF 90 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR)

6" PVC PIPE – SDR 35

6" PVC PIPE – SDR 21

GRUBBING:

ALL VEGETATION AND TOPSOIL SHALL BE STRIPPED FROM THE CELL 13 ROADWAY AND CELL AREA PRIOR TO PLACING ADDITIONAL MATERIAL. ANY TOPSOIL CLAIMED DURING THE GRUBBING OPERATION WILL BE STOCKPILED FOR THE OWNER'S USE. ALL OTHER GRUBBINGS WILL BE DISPOSED OF IN THE EXISTING SPOIL PILE.

SEED AND FERTILIZER:

AREAS DISTURBED BY CONSTRUCTION AND THE OUTBOARD SLOPES OF THE DIKE SHALL BE FERTILIZED AND SEEDED.

MATERIAL:

AGRICULTURAL GROUND LIMESTONE: 25 LBS PER UNIT (1,000 SF)

FERTILIZER: GRANULAR FERTILIZER 18.5, 18.5, 18.5 (N,P,K) 10 LBS PER UNIT

SEED:

TALL FESCUE	59%
RED FESCUE	25%
RED TOP	5%
LADINO CLOVER	3%
ANNUAL RYEGRASS	8%

THIS SEED MIXTURE SHALL BE APPLIED AT A RATE OF 3 LBS PER UNIT

MULCH – THE MULCH APPLICATION RATE SHALL BE 2 TONS PER ACRE

INSTALLATION – MDOT 618.05 AND MDOT 618.06

RECOMMENDED TIME OF SEEDING IS FROM APRIL 15 TO SEPTEMBER 15.

STATE OF MAINE — PETER M. MAHER — NO. 7107 — REGISTERED PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	–	
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CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	5/03	ASB	RECORD DRAWING				
	4/29/02	C	ISSUED FOR CONSTRUCTION	GHC			
		P	SUBMITTED TO CLIENT	GHC			

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB

SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine
JOB NO. 02021

DRN	KLC	3/6/02
CHKD	GHC	3/8/02
APPVD	–	–

ISSUE CODE
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C – Construction
ASB – As Built
SCALE NONE

KATAHDIN PAPER COMPANY, LLC.
MILLINOCKET, MAINE

CAD FILE: SYMSHT.DWG

EAST OPERATION
DOLBY III LANDFILL
CELL 13 CONSTRUCTION
CELL 11 CLOSURE
SYMBOLS & ABBREVIATIONS

JOB NO. 94768
FILE NO. 2-092-7082
LOC. NO.

YB-26078

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CELL 13

CELL 12
(EXISTING)

Existing Leachate Collection Pipes (TYP)

CELL 11
(EXISTING)

CELL 10
(EXISTING)

CELL 9
(EXISTING)

CELL 1
THROUGH
CELL 8
(EXISTING)

EXISTING SPOIL STOCKPILE

GROUND OBSCURED

Exist. Spoil Area

Sedimentation Pond

Leachate Pond

Access Road

GENERAL NOTES:

1. BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, INC. NORRIDGEWOCK, MAINE, PHOTOGRAPH DATED 5/1/99.

2. GROUND CONTROL PROVIDED BY PLISGA & DAY, BANGOR, MAINE.

3. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

4. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL REMAIN IN COMPLIANCE WITH MDEP BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENTATION CONTROL AND EXISTING PERMITTING REQUIREMENTS FOR THE SITE INCLUDING FEDERAL, STATE, AND LOCAL PERMITS.

5. GREAT NORTHERN PAPER IS ACTIVELY FILLING CELL 12. EXISTING GRADES MAY NOT REPRESENT CURRENT CONDITIONS.

50 0 100 200

STATE OF MAINE
PETER M. MANER
NO. 10107
REGISTERED PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	-	
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CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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	4/29/02	C	ISSUED FOR CONSTRUCTION	GHC			
		P	SUBMITTED TO CLIENT	GHC			

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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	- -						
	- -						
	- -						

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

DRN	KLC	3/6/02
CHKD	GHC	3/8/02
APPVD		

ISSUE CODE
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SCALE NONE

KATAHDIN PAPER COMPANY, LLC.
MILLINOCKET, MAINE

CAD FILE: CELL13-SITEDEV.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 13 CONSTRUCTION
CELL 11 CLOSURE
EXISTING CONDITIONS PLAN

JOB NO. 94768
FILE NO. 2-092-7082
LOC. NO.

YB-26079

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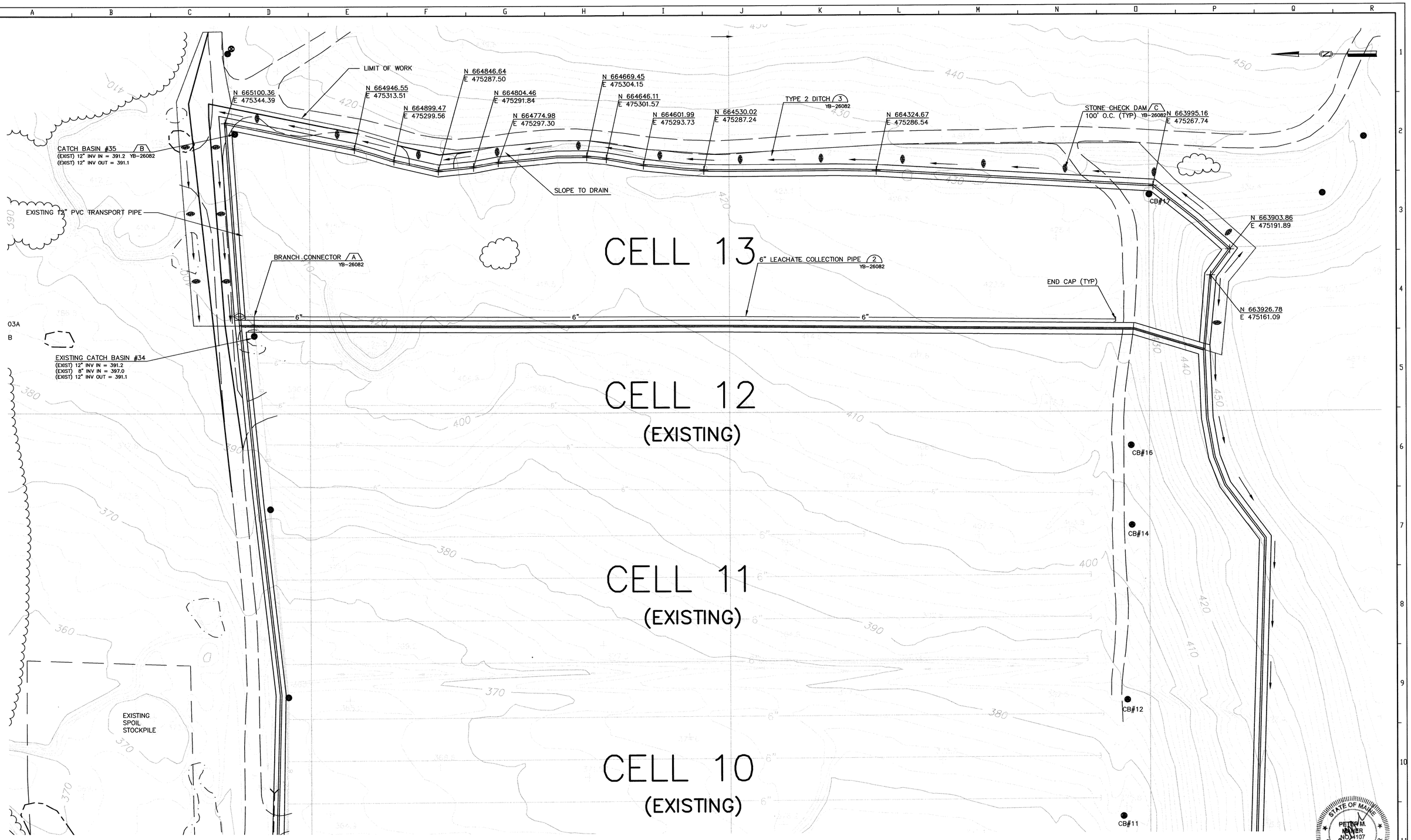

CELL 13 OPERATION NOTES (PRIOR TO FILLING)

STRIP EXISTING LANDFILL COVER AND CONSTRUCT CONTAINMENT BERM ON CELL 5.

25 0 50 100

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
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CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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	- -						- -
	- -						- -
	5/03	ASB	RECORD DRAWING				- -
	4/29/02	C	ISSUED FOR CONSTRUCTION	GHC			- -
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CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	- -						- -

SME

Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 02021

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CHKD	GHC	3/8/02
APPVD		

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KATAHDIN PAPER COMPANY, LLC.
MILLINOCKET, MAINE

CAD FILE: CELL13-OPERGRADING.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 13 CONSTRUCTION
CELL 11 CLOSURE
CELL 13 - SITE DEVELOPMENT PLAN

JOB NO. 94768
FILE NO. 2-092-7082
LOC. NO.

YB-26080

STATE OF MAINE
PETER M. MAHER
NO. 4107
REGISTERED PROFESSIONAL ENGINEER

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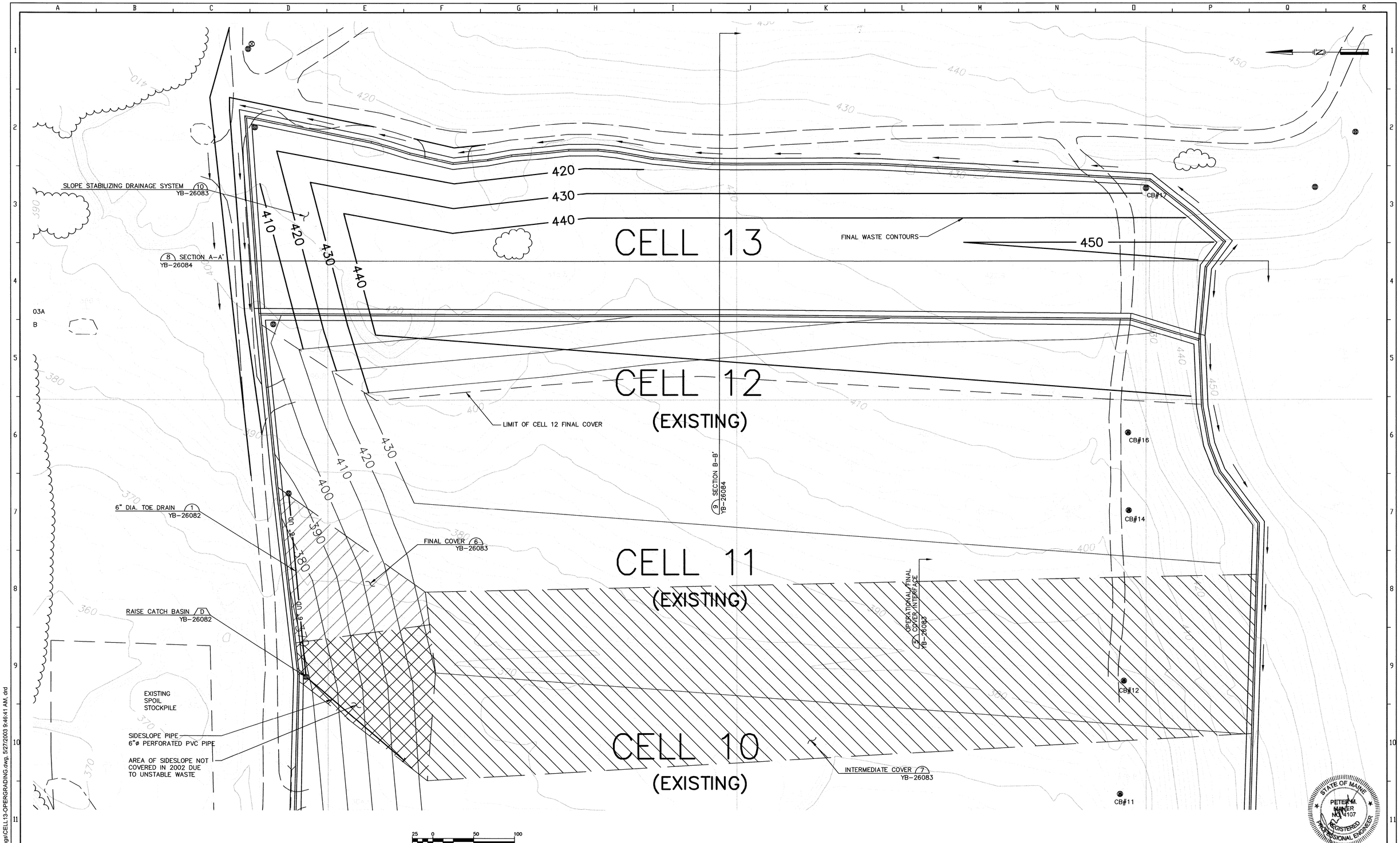

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2	-			4/29/02	C	ISSUED FOR CONSTRUCTION	GHC					- -						
1	-				P	SUBMITTED TO CLIENT	GHC					- -						

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

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SCALE	NONE	

KATAHDIN PAPER COMPANY, LLC.
MILLINOCKET, MAINE

CAD FILE: CELL13-OPERGRADING.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 13 CONSTRUCTION
CELL 11 CLOSURE
OPERATIONAL GRADING PLAN

JOB NO. 94768
FILE NO. 2-092-7082
LOC. NO.

YB-26081

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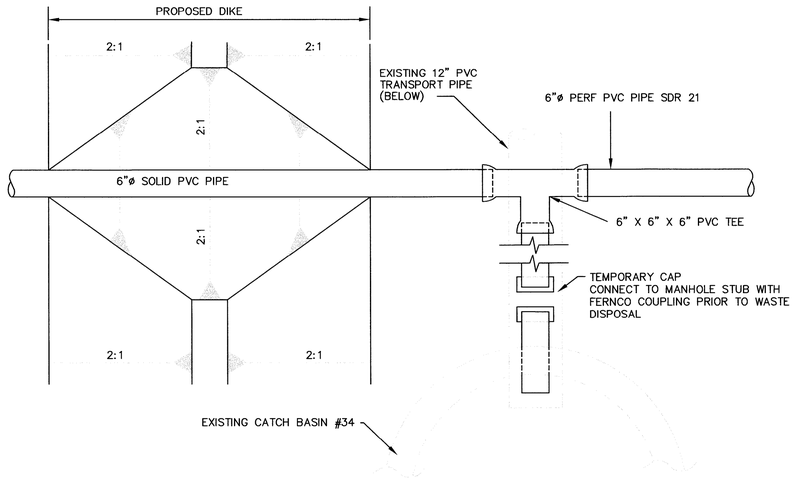
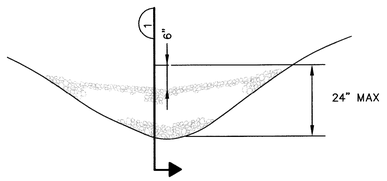


BRANCH CONNECTOR A

N.T.S. YB-26080

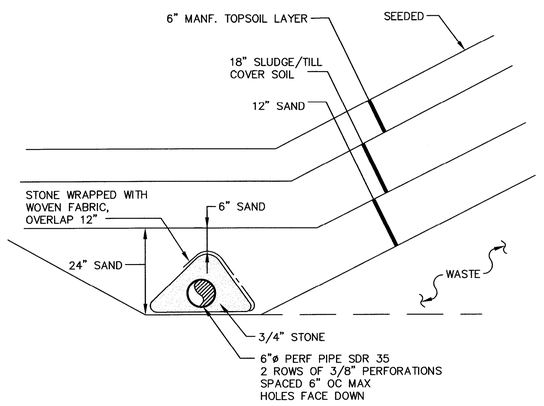




SECTION 1

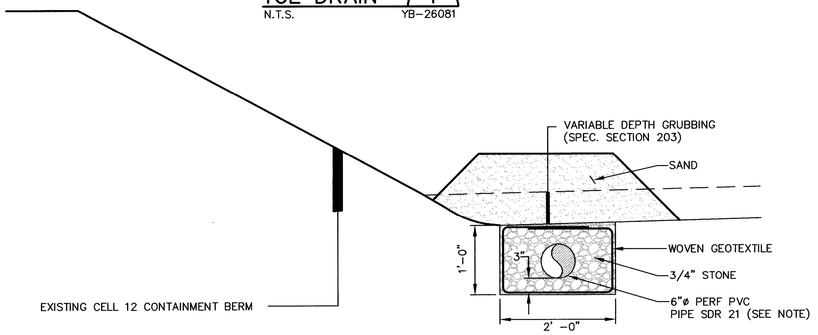
STONE CHECK DAM C

N.T.S. YB-26080



TOE DRAIN 1

N.T.S. YB-26081

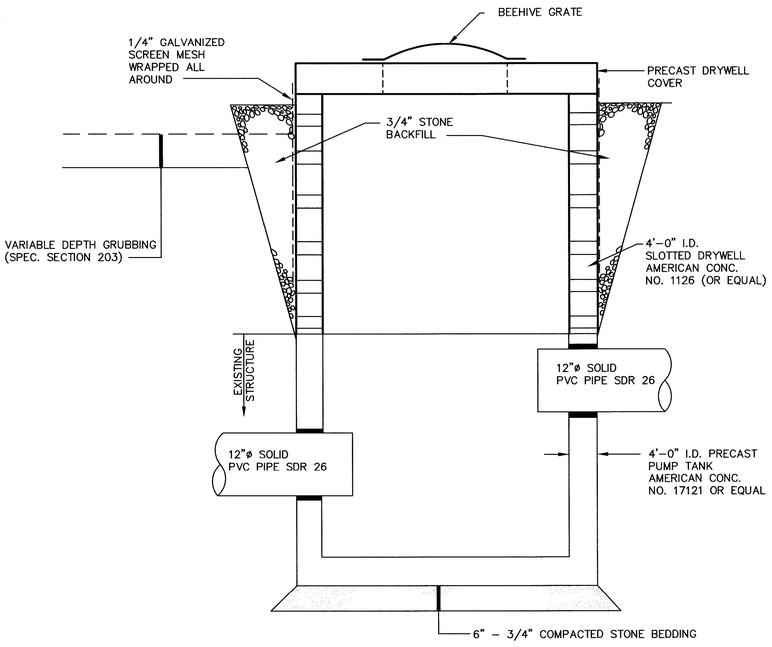


NOTE:

PIPE PERFORATIONS SHALL BE 3/8" DIA. HOLES, 6" O.C., 2 ROWS. ROWS SHALL BE MINIMUM 45°, MAXIMUM 60° FROM INVERT OF PIPE. HOLES SHALL FACE DOWN.

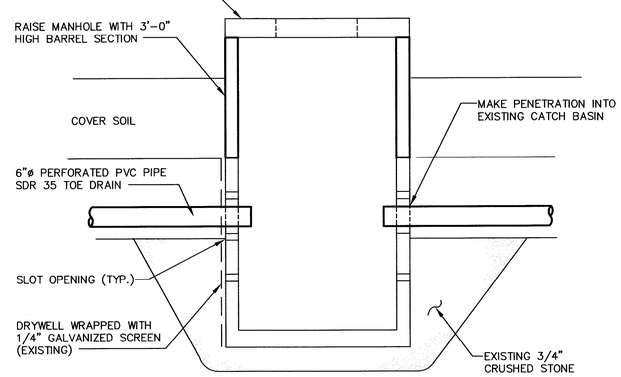
6" LEACHATE COLLECTION PIPE 2

N.T.S. YB-26080



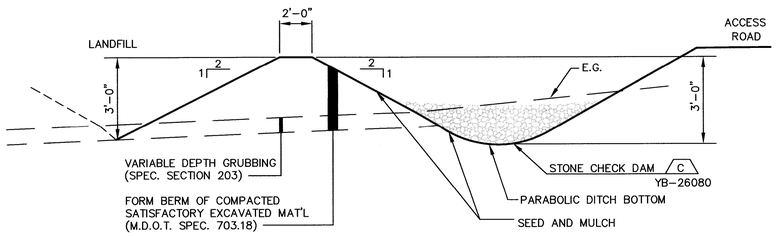
CATCH BASIN # 35 B

N.T.S. YB-26080



RAISE CATCH BASIN D

N.T.S. (EXISTING) YB-26081



DIKE AND TYPE 2 DRAINAGE DITCH 3

N.T.S. YB-26080

STATE OF MAINE — PETER M. MAHER — NO. 4107 — REGISTERED PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
6	–			– –								– –						
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4	–			– –								– –						
3	–			5/03	ASB	RECORD DRAWING						– –						
2	–			4/29/02	C	ISSUED FOR CONSTRUCTION	GHC					– –						
1	–				P	SUBMITTED TO CLIENT	GHC					– –						

SME

Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
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JOB NO. 02021

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ASB – As Built
SCALE NONE

KATAHDIN PAPER COMPANY, LLC.
MILLINOCKET, MAINE

CAD FILE: DETAILS.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 13 CONSTRUCTION
CELL 11 CLOSURE
SECTIONS & DETAILS

JOB NO. 94768
FILE NO. 2-092-7092
LOC. NO.

YB-26082
SHEET 1 OF 3

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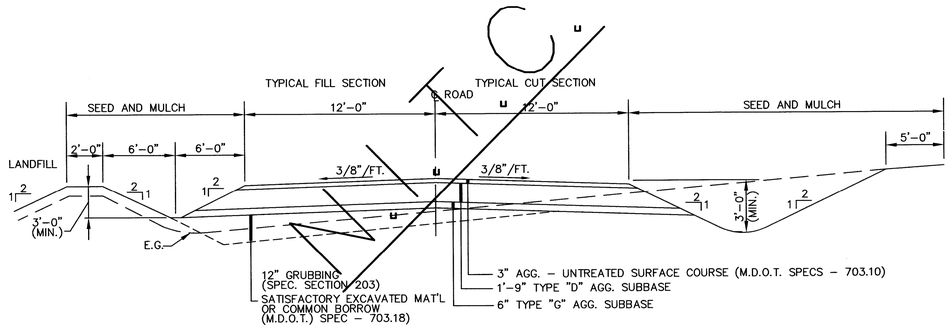
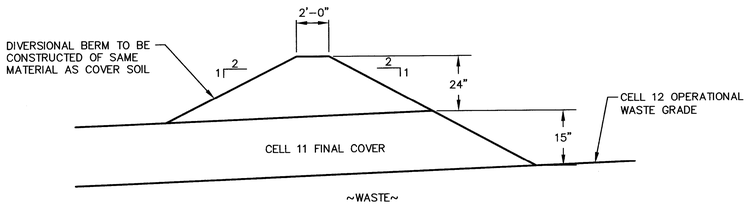


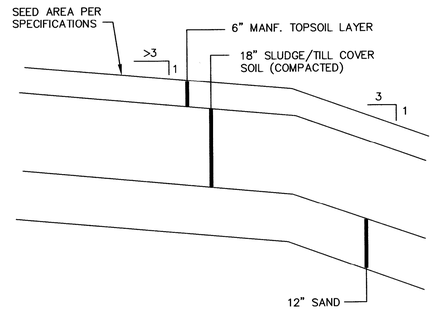
LANDFILL ACCESS ROAD (4)

N.T.S. YB-26080



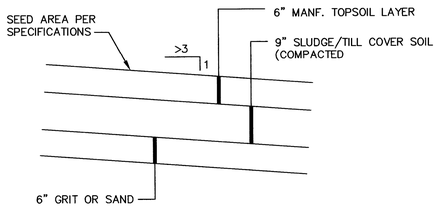
OPERATIONAL/FINAL COVER INTERFACE (5)

N.T.S. YB-26081



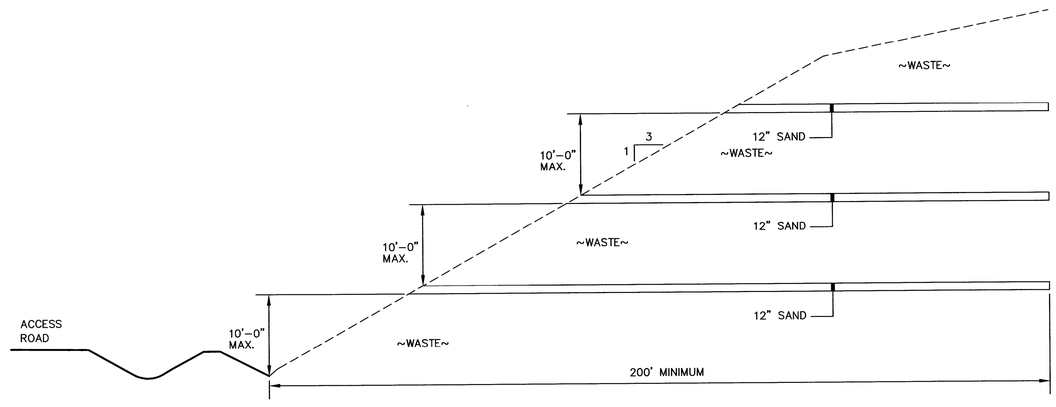
FINAL COVER (6)

N.T.S. YB-26081



INTERMEDIATE COVER (7)

N.T.S. YB-26081



NOTE: SAND DRAINAGE LAYERS TO BE INSTALLED ON NORTH SLOPE OF CELL 13

SLOPE STABILIZING DRAINAGE SYSTEM (10)

N.T.S. YB-26081

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
6	-			- -						
5	-			- -						
4	-			- -						
3	-			5/03	ASB	RECORD DRAWING				
2	-			4/29/02	C	ISSUED FOR CONSTRUCTION	GHC			
1	-				P	SUBMITTED TO CLIENT	GHC			

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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	- -						
	- -						

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 02021

DRN	KLC	3/6/02
CHKD	GHC	3/8/02
APPVD		- -

ISSUE CODE
P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE NONE

KATAHDIN PAPER COMPANY, LLC.
MILLINOCKET, MAINE

CAD FILE: DETAILS.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 13 CONSTRUCTION
CELL 11 CLOSURE
SECTIONS & DETAILS

JOB NO. 94768
FILE NO. 2-092-7082
LOC. NO.

YB-26083
SHEET 2 OF 3

STATE OF MAINE
PETER A. MAHER
NO. 5107
REGISTERED PROFESSIONAL ENGINEER

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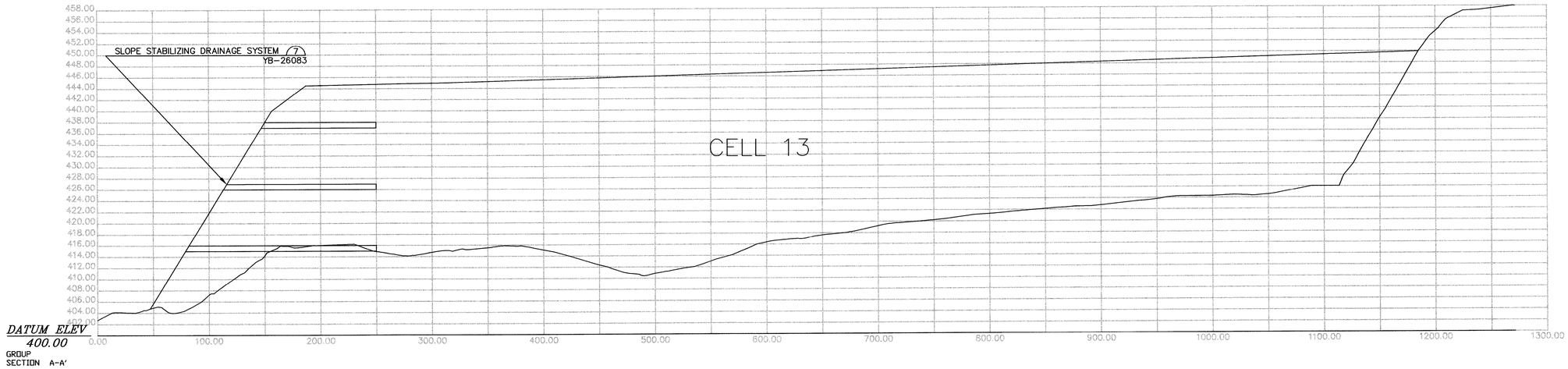

SECTION A – A' 8

YB-26081

SECTION B – B' 9

YB-26081

25 0 50 100

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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2	–			4/29/02	C	ISSUED FOR CONSTRUCTION	GHC			
1	–				P	SUBMITTED TO CLIENT	GHC			

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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4 Blanchard Road P.O. Box 85A
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JOB NO. 02021

DRN	KLC	3/6/02
CHKD	GHC	3/6/02
APPVD		

ISSUE CODE
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ASB - As Built
SCALE NONE

KATAHDIN PAPER COMPANY, LLC.
MILLINOCKET, MAINE

CAD FILE: CELL13-OPERGRADING.DWG

STATE OF MAINE
PETER M. MAHER
No. 7107
REGISTERED PROFESSIONAL ENGINEER

EAST OPERATION

DOLBY III LANDFILL
CELL 13 CONSTRUCTION
CELL 11 CLOSURE
SECTIONS & DETAILS

JOB NO. 94768
FILE NO. 2-092-7082
LOC. NO.

YB-26084
SHEET 3 OF 3

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KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE
DOLBY III LANDFILL
CELL 14 CONSTRUCTION
CELL 12 CLOSURE

SHT. NO.	TITLE	DWG. NO.
1	COVER SHEET	YB-26159
2	SYMBOLS & ABBREVIATIONS	YB-26160
3	EXISTING CONDITIONS PLAN	YB-26161
4	SITE DEVELOPMENT PLAN	YB-26162
5	CELL 14 – OPERATIONAL GRADING PLAN	YB-26163
6	SECTIONS & DETAILS (SHEET 1 OF 3)	YB-26164
7	SECTIONS & DETAILS (SHEET 2 OF 3)	YB-26165
8	SECTIONS & DETAILS (SHEET 3 OF 3)	YB-26166

SME

Sevee & Maher Engineers, Inc.

Waste Management and Hydrogeologic Consultants

Cumberland Center, Maine

STATE OF MAINE
JOHN E. SEVEE
REGISTERED PROFESSIONAL ENGINEER
7/12/04

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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4	-			- -								- -						
3	-											- -						
2	-			7/12/04	C	ISSUED FOR CONSTRUCTION	GHC					- -						
1	-			6/15/04	P	SUBMITTED TO CLIENT	GHC					- -						

JOB NO. 04011.04

DRN	DRD	6/4/04
CHKD	GHC	6/14/04
APPVD		- -

ISSUE CODE
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C - Construction
ASB - As Built
SCALE NONE

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: GNPCOV14.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 14 CONSTRUCTION
CELL 12 CLOSURE
COVER SHEET

JOB NO. 46226
FILE NO. 2-092-7082
LOC. NO.

YB-26159

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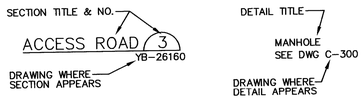
SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			DRAINAGE COURSE (WITH DIRECTION)	C	UG	UNDERGROUND GAS MAIN
DATE		NORTH ARROW (MAGNETIC)			EDGE OF WATER	T	UT	UNDERGROUND TELEPHONE LINE
TN		NORTH ARROW (PLAN NORTH)			WATER ELEVATION (GROUND OR SURFACE)	E	UE	UNDERGROUND ELECTRICAL LINE
25	25	CONTOUR LINES			FENCE LINE (WOOD)	OE	OE	OVERHEAD ELECTRICAL LINE
INV 25.56	INV 25.56	SPOT ELEVATION (INVERT ELEVATION)			FENCE LINE (WIRE)	OT	OT	OVERHEAD TELEPHONE LINE
		EXISTING GROUND			STONE WALL	12" SS	12" SS	SANITARY SEWER
		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION PT.			RETAINING WALL	8" FM	8" FM	FORCE MAIN
		PROPERTY LINE OR R.O.W.			GUARD RAIL	8" W	8" W	WATER MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			BUILDING AND STRUCTURES	12" SD	12" SD	STORM DRAIN
0+00 1+00		CONSTRUCTION BASELINE		2 1 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)	8" UD	8" UD	UNDERDRAIN
		BOUNDARY LINE (State, County, Municipality)	TOP OF SLOPE 2	TOP OF SLOPE 2	SLOPES (WITH SLOPE RATIO)	8" PD	6" PD	PERIMETER DRAIN
		SURVEY MONUMENT			EDGE OF ROAD	6" LT	6" LT	LEACHATE TRANSPORT
		SURVEY CONTROL			CUT OR FILL LINE	6" LC	6" LC	LEACHATE COLLECTION
		PROPERTY PIN, DRILL HOLE, PK, OR STAKE			BITUMINOUS PAVEMENT	LD	6" LD	LEAK DETECTION
		WOODS OR BRUSH LINE			CONCRETE	GC	6" G	GAS COLLECTION
		INDIVIDUAL TREE	B-12 MW-12 P-12	B-12 MW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER			REDUCER
		MAPPED WETLAND	TP-12	TP-12	TEST PIT AND NUMBER			MECHANICAL CAP OR PLUG
		GAS VENT	SW-12	SW-12	SURFACE WATER SAMPLE LOCATION			COUPLING
		GAS VENT (CAPPED)			GAS EXTRACTION WELL			BEND
		CLEAN OUT STRUCTURE			MANHOLE			TEE
		CULVERT			CATCH BASIN			PIPE TO BE ABANDONED
		RAILROAD			WATER OR GAS VALVE			RISER PIPE & INLET GRATE
		SLOPE INCLINOMETER			HYDRANT			STORM GRATE
		VIBRATING WIRE SETTLEMENT CELL			AIR RELEASE VALVE			DRAINAGE INLET STRUCTURE
		VERTICAL/HORIZONTAL DISPLACEMENT MONUMENT			SURGE RELEASE VALVE			UNDERDRAIN SUMP
		VERTICAL DISPLACEMENT MONUMENT			UTILITY POLE		SF	SILTATION FENCE
		LIQUID SETTLEMENT GAGE			LIGHT POLE		CLL	CLEARING OR CONSTRUCTION LIMIT LINE

ACCMP	ASPHALT COATED CMP	D	DEGREE OF CURVE	HDPE	HIGH DENSITY POLYETHYLENE	PERF	PERFORATED
ACP	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HORIZ	HORIZONTAL	PP	POWER POLE
AC	ACRE	DEG OR °	DEGREE	HP	HORSEPOWER	PSI	POUNDS PER SQUARE INCH
AGG	AGGREGATE	DEPT	DEPARTMENT	HYD	HYDRANT	PVC	POLYVINYL CHLORIDE
ALUM	ALUMINUM	DI	DUCTILE IRON			PVMT	PAVEMENT
APPD	APPROVED	DIA OR ø	DIAMETER	ID	INSIDE DIAMETER		
APPROX	APPROXIMATE	DIM	DIMENSION	IN OR "	INCHES	QTY	QUANTITY
ARMH	AIR RELEASE MANHOLE	DIST	DISTANCE	INV	INVERT		
ASB	ASBESTOS	DN	DOWN	INV EL	INVERT ELEVATION	RCP	REINFORCED CONCRETE PIPE
ASP	ASPHALT	DR	DRAIN			ROW	RIGHT OF WAY
AUTO	AUTOMATIC	DWG	DRAWING	LB	POUND	RAD	RADIUS
AUX	AUXILIARY			LC	LEACHATE COLLECTION	REQD	REQUIRED
AVE	AVENUE	EA	EACH	LD	LEAK DETECTION	RT	RIGHT
AZ	AZIMUTH	EG	EXISTING GROUND OR GRADE	LF	LINEAR FEET	RTE	ROUTE
		ELEC	ELECTRIC	LOC	LOCATION		
BCCMP	BITUMINOUS COATED CMP	EL	ELEVATION	LT	LEACHATE TRANSPORT	S	SLOPE
BM	BENCH MARK	ELB	ELBOW			SCH	SCHEDULE
BIT	BITUMINOUS	EOP	EDGE OF PAVEMENT	MH	MANHOLE	SF	SQUARE FEET
BLDG	BUILDING	EQUIP	EQUIPMENT	MJ	MECHANICAL JOINT	SHT	SHEET
BOT	BOTTOM	EST	ESTIMATED	MATL	MATERIAL	SMH	SANITARY MANHOLE
BRG	BEARING	EXC	EXCAVATE	MAX	MAXIMUM	ST	STREET
BV	BALL VALVE	EXIST	EXISTING	MFR	MANUFACTURE	STA	STATION
				MIN	MINIMUM	SY	SQUARE YARD
CB	CATCH BASIN	FG	FINISH GRADE	MISC	MISCELLANEOUS		
CEN	CENTER	FBRGL	FIBERGLASS	MON	MONUMENT	TAN	TANGENT
CEM LIN	CEMENT LINED	FDN	FOUNDATION			TDH	TOTAL DYNAMIC HEAD
CMP	CORRUGATED METAL PIPE	FLEX	FLEXIBLE	NITC	NOT IN THIS CONTRACT	TEMP	TEMPORARY
CO	CLEAN OUT	FLG	FLANGE	NTS	NOT TO SCALE	TYP	TYPICAL
CF	CUBIC FEET	FLR	FLOOR	N/F	NOW OR FORMERLY	UD	UNDERDRAIN
CFS	CUBIC FEET PER SECOND	FPS	FEET PER SECOND	NO OR #	NUMBER	V	VOLTS
CI	CAST IRON	FT OR '	FEET			VA TEE	VALVE ANCHORING TEE
CL	CLASS	FTG	FOOTING	OC	ON CENTER	VERT	VERTICAL
CONC	CONCRETE			OD	OUTSIDE DIAMETER		
CONST	CONSTRUCTION	GA	GAUGE			WG	WATER GATE
CONTR	CONTRACTOR	GAL	GALLON	PC	POINT OF CURVE	W/	WITH
CS	CURB STOP	GALV	GALVANIZED	PD	PERIMETER DRAIN	W/O	WITHOUT
CTR	CENTER	GPD	GALLONS PER DAY	PI	POINT OF INTERSECTION		
CU	COPPER	GPM	GALLONS PER MINUTE	PIV	POST INDICATOR VALVE	YD	YARD
CY	CUBIC YARD			PT	POINT OF TANGENT		

VIEW MARKERS & IDENTIFICATION



GENERAL NOTES:

THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.

CONTOURS SHOWN ON PLANS MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.

MATERIAL SPECIFICATIONS:

COMMON BORROW – MDOT SPECIFICATION 703.18

STONE BEDDING – THE STONE BEDDING MATERIAL SHALL BE 3/4 INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL

3/4" STONE – THE PIPE BEDDING MATERIAL SHALL BE 3/4–INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL

SAND BLANKET – MDOT SPECIFICATION 703.05

COMPACTION – DIKE EMBANKMENT SOIL SHALL BE COMPACTED TO A DENSITY OF 90 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR)

6" PVC PIPE – SDR 35

12" LEACHATE TRANSPORT PIPE – SOLID HANCOR TITELINE

SEED AND FERTILIZER:

AREAS DISTURBED BY CONSTRUCTION AND THE OUTBOARD SLOPES OF THE DIKE SHALL BE FERTILIZED AND SEEDED.

MATERIAL:

AGRICULTURAL GROUND LIMESTONE: 25 LBS PER UNIT (1,000 SF)

FERTILIZER: GRANULAR FERTILIZER 18.5, 18.5, 18.5 (N,P,K) 10 LBS PER UNIT

SEED:

TALL FESCUE	59%
RED FESCUE	25%
RED TOP	5%
LADINO CLOVER	3%
ANNUAL RYEGRASS	8%

THIS SEED MIXTURE SHALL BE APPLIED AT A RATE OF 3 LBS PER UNIT

MULCH – THE MULCH APPLICATION RATE SHALL BE 2 TONS PER ACRE

INSTALLATION – MDOT 618.05 AND MDOT 618.06

RECOMMENDED TIME OF SEEDING IS FROM APRIL 15 TO SEPTEMBER 15.

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
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5	–	
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CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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	7/12/04	C	ISSUED FOR CONSTRUCTION	GHC			– –
	6/15/04	P	SUBMITTED TO CLIENT	GHC			– –

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB

SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine
JOB NO. 04011.04

DRN	DRD	6/4/04
CHKD	GHC	6/14/04
APPVD		– –

ISSUE CODE
P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE NONE

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: SYMSHT.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 14 CONSTRUCTION
CELL 12 CLOSURE
SYMBOLS & ABBREVIATIONS

JOB NO. 46226
FILE NO. 2-092-7082
LOC. NO.

YB-26160

STATE OF MAINE JOHN H. SEVEE 4150 REGISTERED PROFESSIONAL ENGINEER

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CELL 13
(EXISTING)

CELL 14

CELL 12
(EXISTING)

Existing Leachate Collection Pipes (TYP)

CELL 11
(EXISTING)

CELL 10
(EXISTING)

CELL 9
(EXISTING)

CELL 1
THROUGH
CELL 8
(EXISTING)

EXISTING SPOIL STOCKPILE

Exist. Spoil Area

Sedimentation Pond

Leachate Pond

Sedimentation Pond

Access Road

GENERAL NOTES:

1. BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, INC. NORRIDGEWOCK, MAINE, PHOTOGRAPH DATED 5/1/99.

2. GROUND CONTROL PROVIDED BY PLISGA & DAY, BANGOR, MAINE.

3. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

4. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL REMAIN IN COMPLIANCE WITH MDEP BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENTATION CONTROL AND EXISTING PERMITTING REQUIREMENTS FOR THE SITE INCLUDING FEDERAL, STATE, AND LOCAL PERMITS.

5. GREAT NORTHERN PAPER IS ACTIVELY FILLING CELL 13. EXISTING GRADES MAY NOT REPRESENT CURRENT CONDITIONS.

50 0 100 200

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
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CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 04011.04

DRN	PAF	6/4/04
CHKD	GHC	6/14/04
APPVD		

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SCALE NONE

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: CELL14-EXCON.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 14 CONSTRUCTION
CELL 12 CLOSURE
EXISTING CONDITIONS PLAN

JOB NO. 46226
FILE NO. 2-092-7082
LOC. NO.

YB-26161

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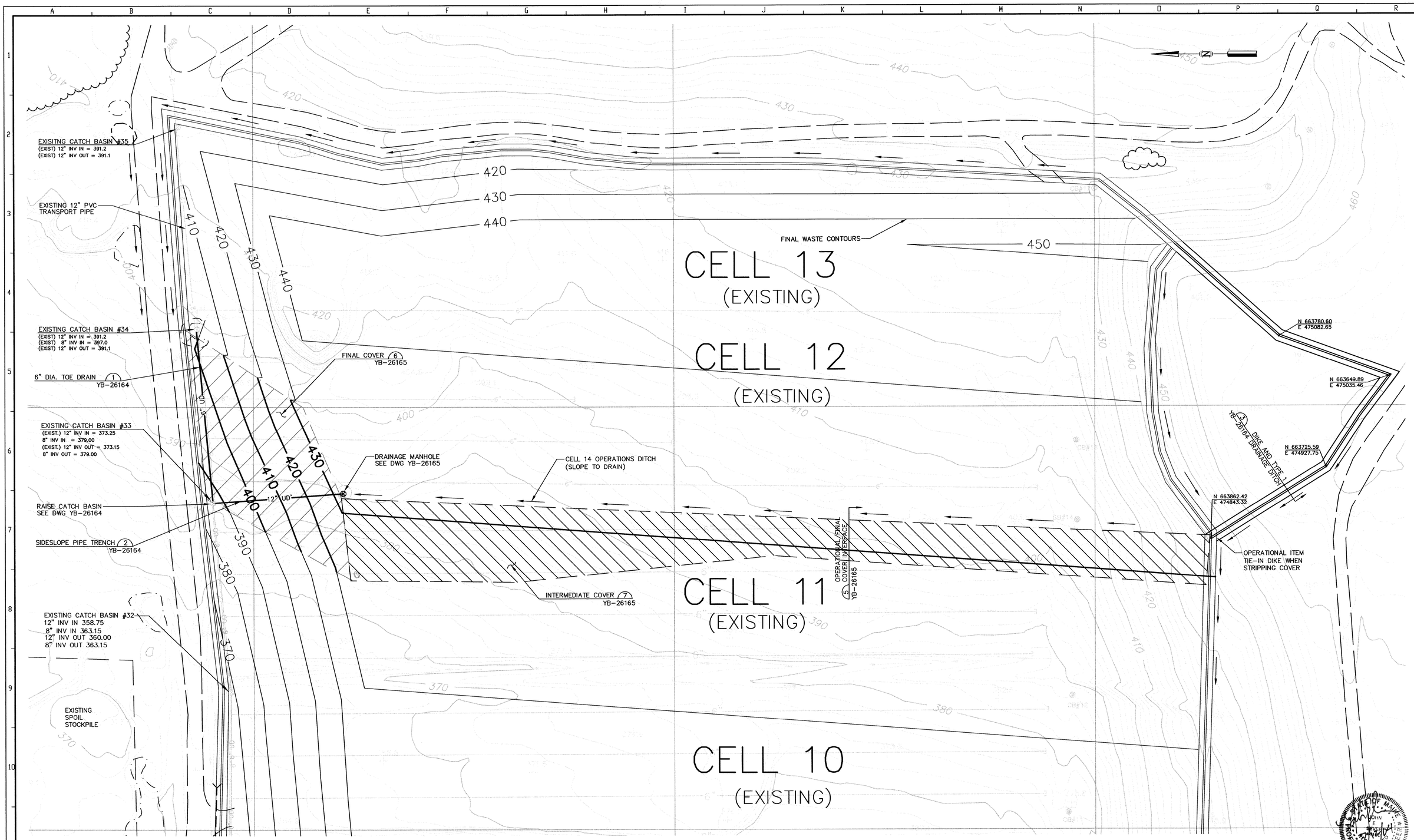

CELL 14 OPERATION NOTES (PRIOR TO FILLING)

STRIP EXISTING LANDFILL COVER AND CONSTRUCT CONTAINMENT BERM ON CELL 6.

25 0 50 100

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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5	-			- -								- -						
4	-			- -								- -						
3	-											- -						
2	-			7/12/04	C	ISSUED FOR CONSTRUCTION						- -						
1	-			6/15/04	P	SUBMITTED TO CLIENT	GHC					- -						

SME

Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 04011.04

DRN	PAF	6/4/04
CHKD	GHC	6/14/04
APPVD		
ISSUE CODE		
P - Preliminary		
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C - Construction		
ASB - As Built		
SCALE	NONE	

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: CELL14-OPERGRADING.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 14 CONSTRUCTION
CELL 12 CLOSURE
SITE DEVELOPMENT PLAN

JOB NO. 46226
FILE NO. 2-092-7082
LOC. NO.

YB-26162

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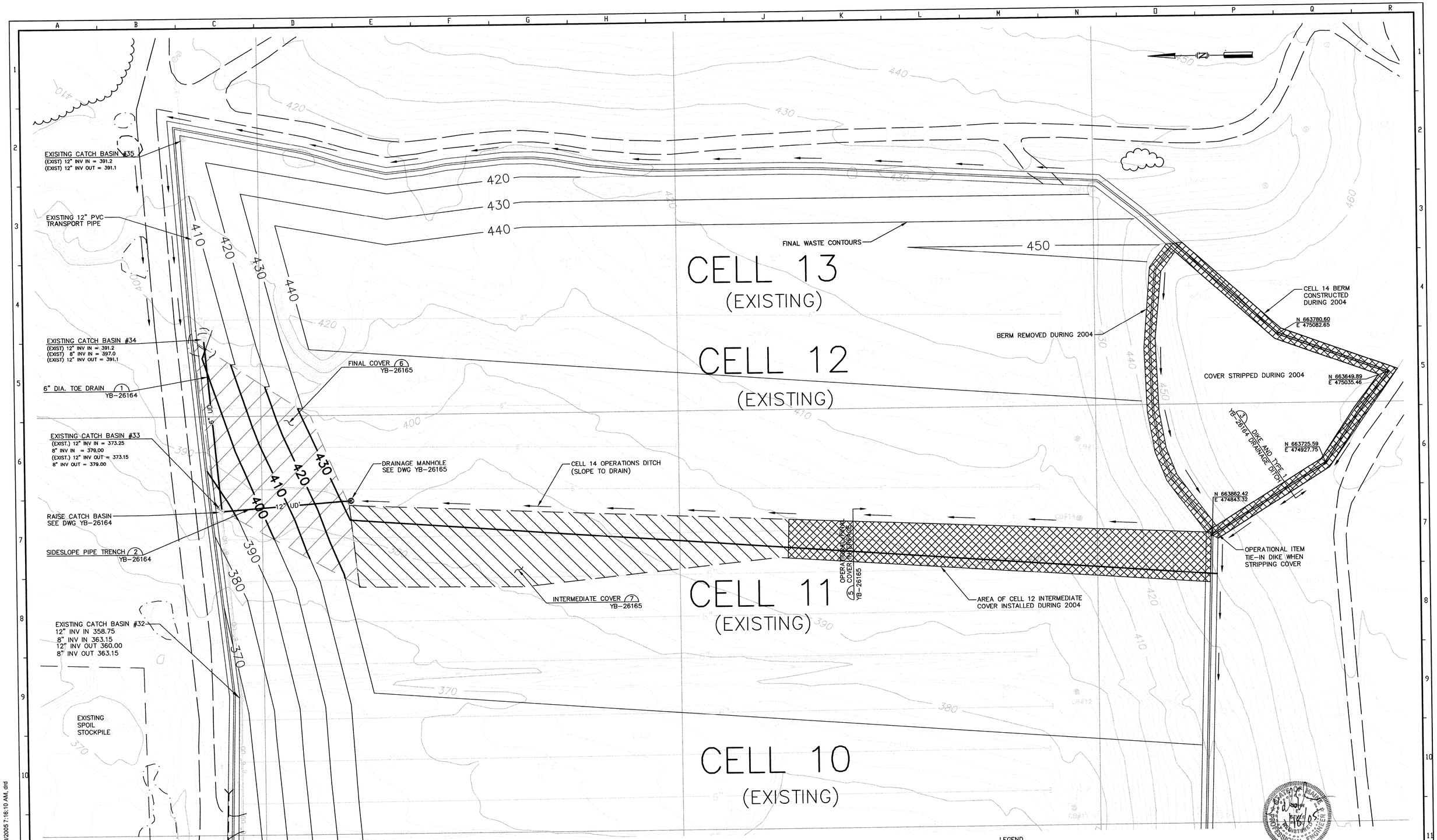

LEGEND

2004 CONSTRUCTION ACTIVITIES

CELL 14 OPERATION NOTES (PRIOR TO FILLING)

STRIP EXISTING LANDFILL COVER AND CONSTRUCT CONTAINMENT BERM ON CELL 6.

25 0 50 100

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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5	-			- -								- -						
4	-			- -								- -						
3	-			1/18/05	C	ADDED 2004 CONSTRUCTION ACTIVITIES	GHC					- -						
2	-			7/12/04	C	ISSUED FOR CONSTRUCTION	GHC					- -						
1	-			6/15/04	P	SUBMITTED TO CLIENT	GHC					- -						

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4 Blanchard Road P.O. Box 85A
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KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: CELL14-OPERGRADING.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 14 CONSTRUCTION
CELL 12 CLOSURE
2004 CONSTRUCTION ACTIVITIES

JOB NO. 46226
FILE NO. 2-092-7082
LOC. NO.

YB-26162A

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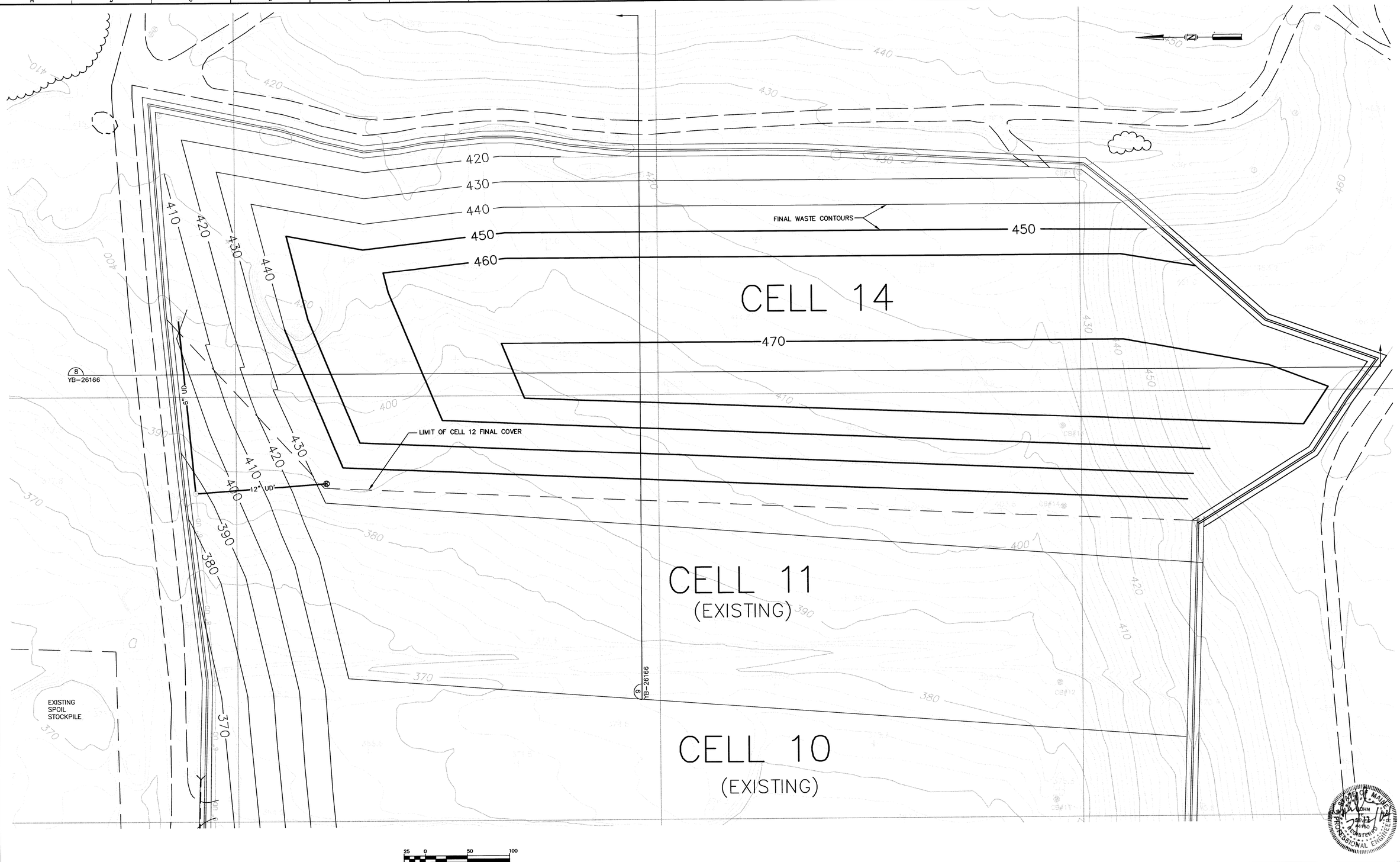

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5	-			- -								- -						
4	-			- -								- -						
3	-											- -						
2	-			7/12/04	C	ISSUED FOR CONSTRUCTION	GHC					- -						
1	-			6/15/04	P	SUBMITTED TO CLIENT	GHC					- -						

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 04011.04

DRN	PAF	6/4/04
CHKD	GHC	6/14/04
APPVD		
ISSUE CODE		
P - Preliminary		
B - Bids		
C - Construction		
ASB - As Built		
SCALE	NONE	

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: CELL14-OPERGRADING.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 14 CONSTRUCTION
CELL 12 CLOSURE
CELL 14-OPERATIONAL GRADING PLAN

JOB NO. 46226
FILE NO. 2-092-7082
LOC. NO.

YB-26163

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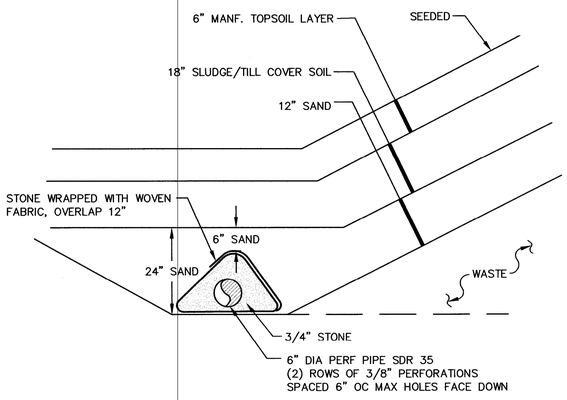
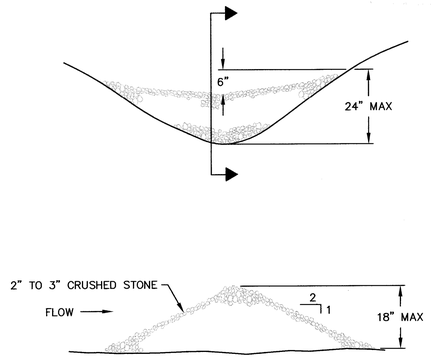
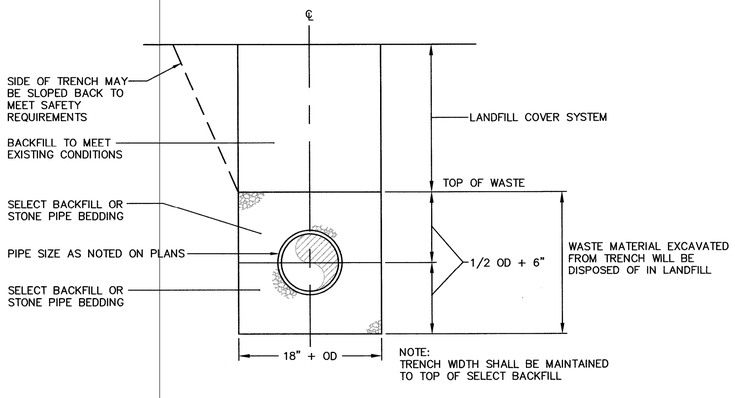


TOE DRAIN 1
NTS YB-26162

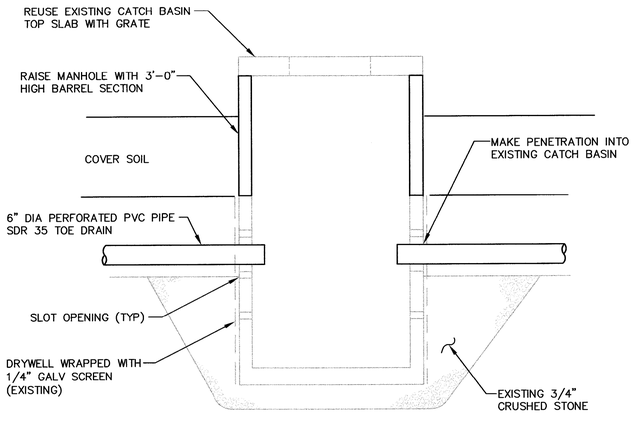


SECTION

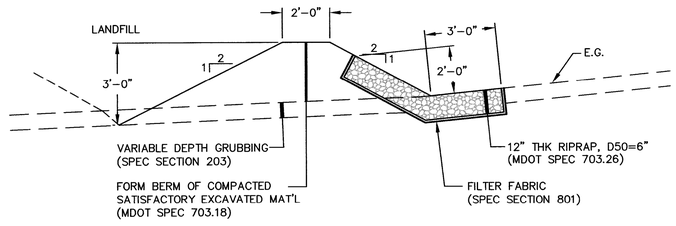
STONE CHECK DAM
NTS



SIDESLOPE PIPE TRENCH 2
NTS YB-26162



RAISE CATCH BASIN
NTS (EXISTING)



DIKE AND TYPE 1 DRAINAGE DITCH 3
NTS YB-26162

STATE OF MAINE
JOHN E. HIVE
REGISTERED PROFESSIONAL ENGINEER
7/14/04

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
6	–			– –								– –						
5	–			– –								– –						
4	–			– –								– –						
3	–			– –								– –						
2	–			7/12/04	C	ISSUED FOR CONSTRUCTION						– –						
1	–			6/15/04	P	SUBMITTED TO CLIENT	GHC					– –						

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021
JOB NO. 04011.04

DRN	DRD	6/4/04
CHKD	GHC	6/14/04
APPVD		– –
ISSUE CODE		
P – Preliminary		
B – Bids		
C – Construction		
ASB – As Built		
SCALE	NONE	

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: DETAILS.DWG

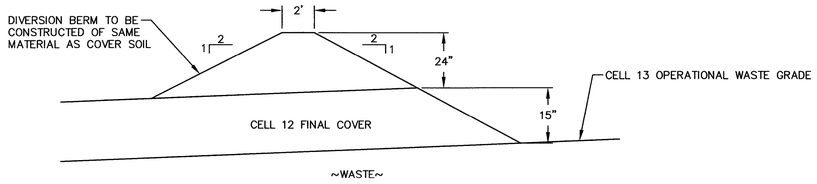
EAST OPERATION

DOLBY III LANDFILL
CELL 14 CONSTRUCTION
CELL 12 CLOSURE
SECTIONS & DETAILS

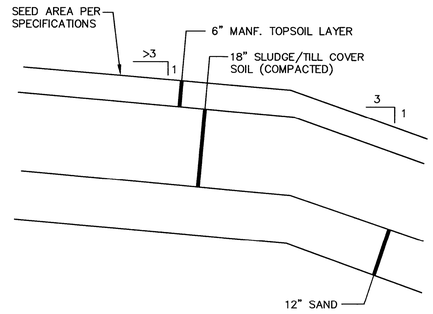
JOB NO. 46226
FILE NO. 2-092-7082
LOC. NO.

YB-26164
SHEET 1 OF 3

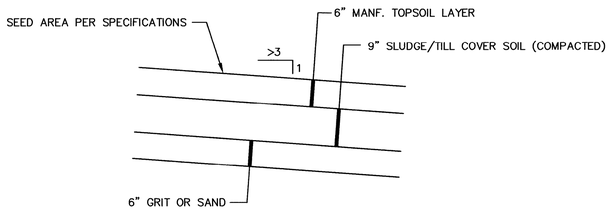
F:\Kpc\Dol\ACAD\CELL14\DETAILS.dwg, 7/12/2004 10:15:23 AM, drd



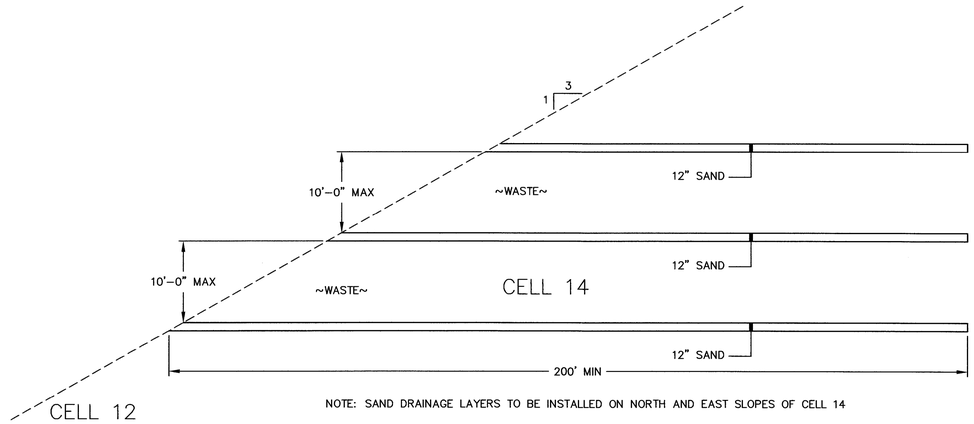
OPERATIONAL/FINAL COVER INTERFACE 5
NTS YB-26162



FINAL COVER 6
NTS YB-26162

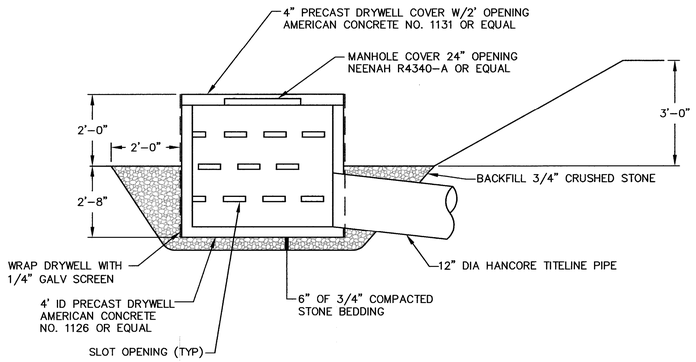


INTERMEDIATE COVER 7
NTS YB-26162



NOTE: SAND DRAINAGE LAYERS TO BE INSTALLED ON NORTH AND EAST SLOPES OF CELL 14

SLOPE STABILIZING DRAINAGE SYSTEM 10
NTS YB-26166



DRAINAGE MANHOLE
NTS

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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3	-			- -								- -						
2	-			7/12/04	C	ISSUED FOR CONSTRUCTION	[illegible]					- -						
1	-			6/15/04	P	SUBMITTED TO CLIENT	GHC					- -						

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021
JOB NO. 04011.04

DRN	DRD	6/4/04
CHKD	GHC	6/14/04
APPVD		- -
ISSUE CODE		
P - Preliminary		
B - Bids		
C - Construction		
ASB - As Built		
SCALE	NONE	

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: DETAILS.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 14 CONSTRUCTION
CELL 12 CLOSURE
SECTIONS & DETAILS

JOB NO. 46226
FILE NO. 2-092-7082
LOC. NO.

YB-26165
SHEET 2 OF 3

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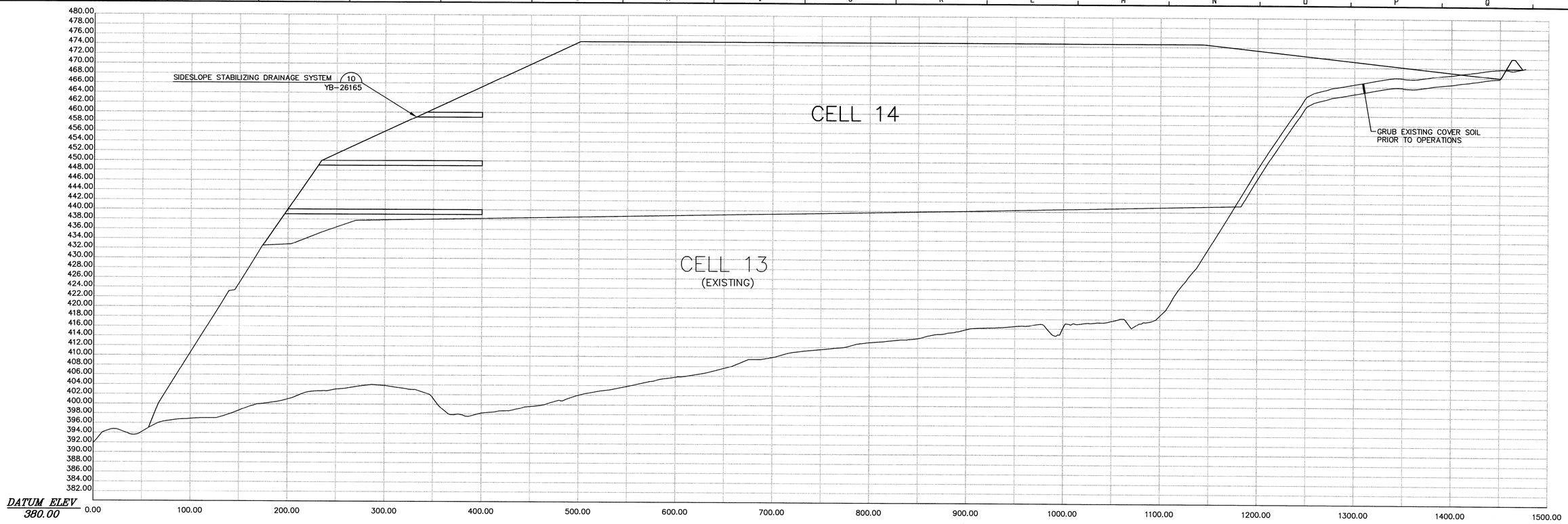
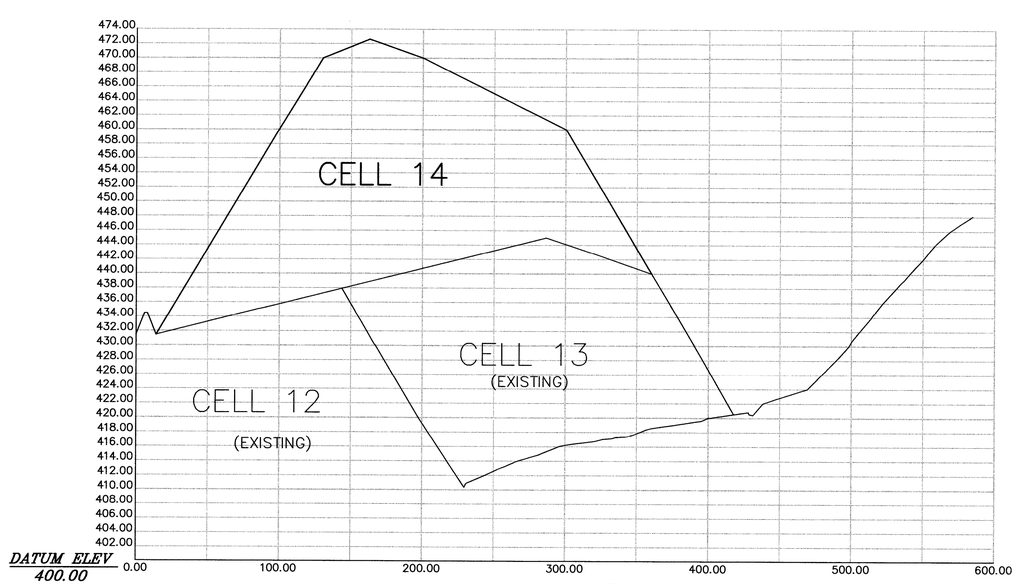


SECTION 8
YB-26163



SECTION 9
YB-26163

25 0 50 100

STATE OF MAINE
GREGORY H. CROCKETT
6/14/04
REGISTERED PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	-	
5	-	
4	-	
3	-	
2	-	
1	-	

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	- -						
	- -						
	- -						
	7/12/04	C	ISSUED FOR CONSTRUCTION	GHC			
	6/15/04	P	SUBMITTED TO CLIENT	GHC			

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	- -						
	- -						
	- -						
	- -						
	- -						
	- -						

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 04011.04

DRN	DRD	6/4/04
CHKD	GHC	6/14/04
APPVD		

ISSUE CODE
P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE NONE

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: CELL13-OPERGRADING.DWG

EAST OPERATION
DOLBY III LANDFILL
CELL 14 CONSTRUCTION
CELL 12 CLOSURE
SECTIONS & DETAILS

JOB NO. 46226
FILE NO. 2-092-7082
LOC. NO.

YB-26166
SHEET 3 OF 3

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RAISE EXISTING CATCH BASIN #35
12" INV IN 407.2 (EXISTING)
12" INV OUT 407.1 (EXISTING)
6" INV IN 415.0
6" INV OUT 415.0
SEE DWG YB-26199
SHT 1 OF 2

6" DIA TOE DRAIN
SEE DWG YB-26199
SHT 1 OF 2

6"UD

EXISTING CATCH BASIN #18
6" INV OUT 428.0

LANDFILL COVER
SEE DWG YB-26199
SHT 2 OF 2

2 YB-26199 SHT 2 OF 2

FINAL WASTE CONTOURS

RAISE EXISTING CATCH BASIN #34
12" INV IN 391.2 (EXISTING)
8" INV IN 397.0 (EXISTING)
12" INV OUT 391.1 (EXISTING)
8" INV OUT 397.0 (EXISTING)
6" INV IN
SEE DWG YB-26199
SHT 1 OF 2

1 YB-26199 SHT 2 OF 2

CELL 14

TIE INTO CELL 14 DIKE

DIKE AND TYPE 1 DRAINAGE DITCH
SEE DWG YB-26199
SHT 1 OF 2

CATCH BASIN #33

EXISTING DRAINAGE MANHOLE

N 663726.69
E 474777.65

N 663712.83
E 474774.23

CELL 15
(INTERIM OPERATIONS)

N 663757.38
E 474712.66

N 663745.63
E 474704.75

BREAK ON SLOPE
TO BE FIELD DETERMINED

CELL 15 OPERATIONAL DITCH
(SLOPE TO DRAIN)

REMOVE EXISTING COVER

DRAINAGE MANHOLE
SEE DWG YB-26199
SHT 2 OF 2

PIPE TRENCH
SEE DWG YB-26199
SHT 1 OF 2

18"DD

EXISTING DRAINAGE MANHOLE

25 0 50 100

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	-	
5	-	
4	-	
3	-	
2	-	
1	-	

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	- -						
	- -						
	- -						
	2/12/07		UPDATED PER MEDEP COMMENTS				
	10/6/06		SUBMITTED TO MEDEP	GHC			
	8/24/06	P	SUBMITTED TO CLIENT	RBC			

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	- -						
	- -						
	- -						
	- -						
	- -						
	- -						

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 06116

DRN	PAF	7/18/06
CHKD	GHC	8/8/06
APPVD		

ISSUE CODE
P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE AS SHOWN

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: YB-26197 BO

EAST OPERATION

DOLBY III LANDFILL
CELL 15 CONSTRUCTION
CELL 14 CLOSURE
SITE DEVELOPMENT PLAN

JOB NO.
FILE NO.
LOC. NO.

YB-26197

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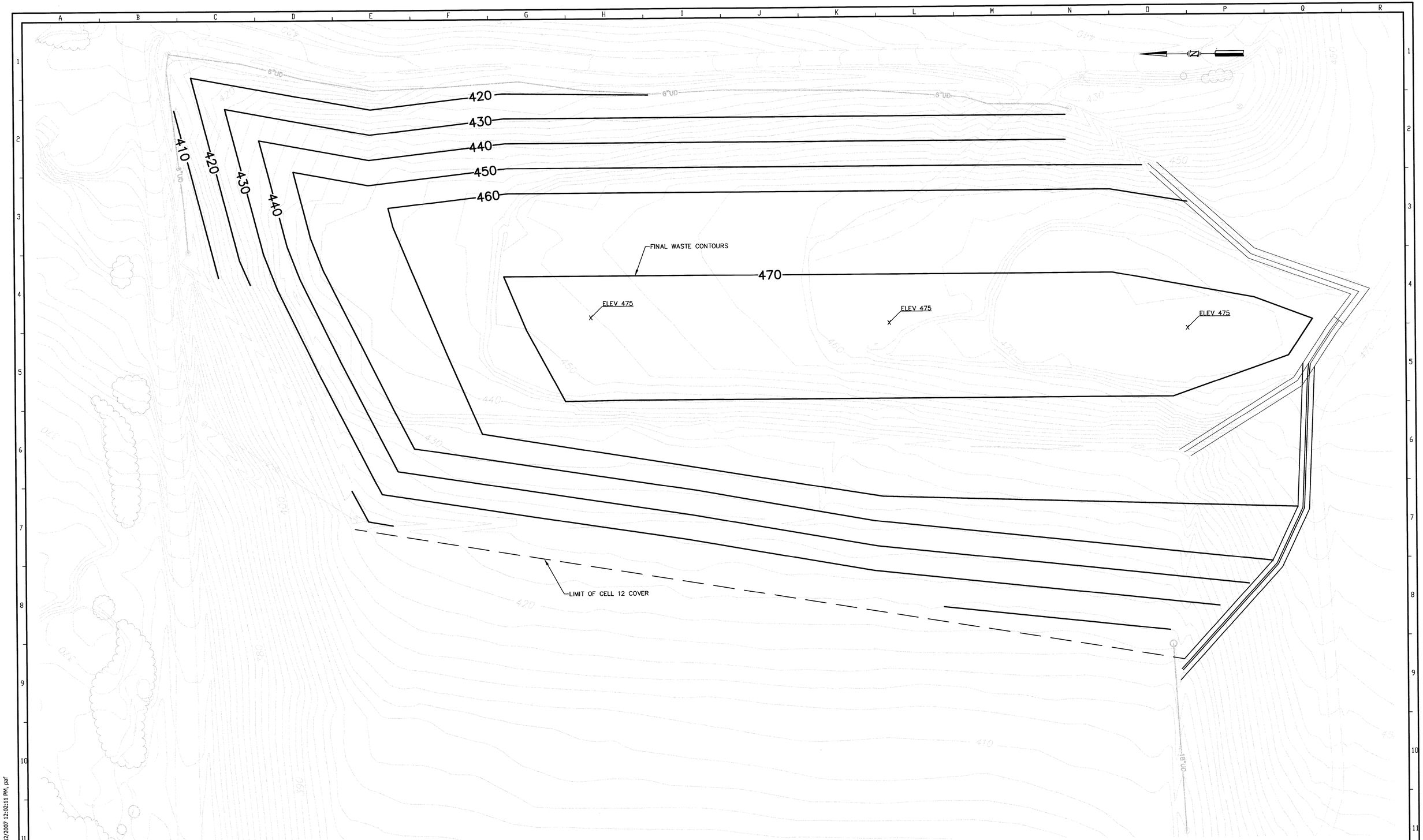

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
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2	-	
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CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	2/12/07		UPDATED PER MEDEP COMMENTS				
	10/6/06		SUBMITTED TO MEDEP	GHC			
	8/24/06	P	SUBMITTED TO CLIENT	RBC			

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 06116

DRN	PAF	7/18/06
CHKD	GHC	8/6/06
APPVD		

ISSUE CODE

P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE NONE

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: YB-26198 B0

EAST OPERATION

DOLBY III LANDFILL
CELL 15 CONSTRUCTION
CELL 14 CLOSURE
CELL 15 OPERATIONAL GRADING PLAN

JOB NO.
FILE NO.
LOC. NO.

YB-26198

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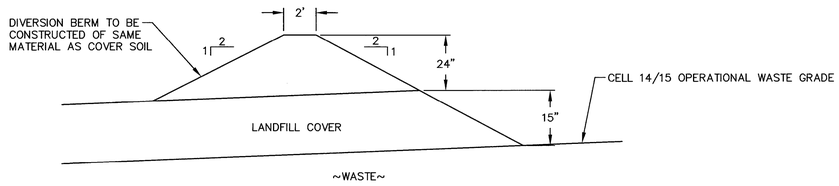
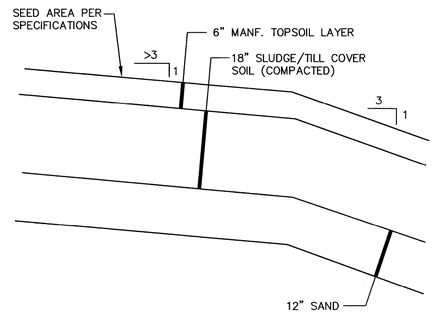


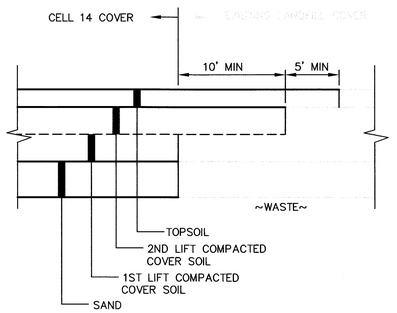
OPERATIONAL/LANDFILL COVER INTERFACE 1

NTS YB-26197



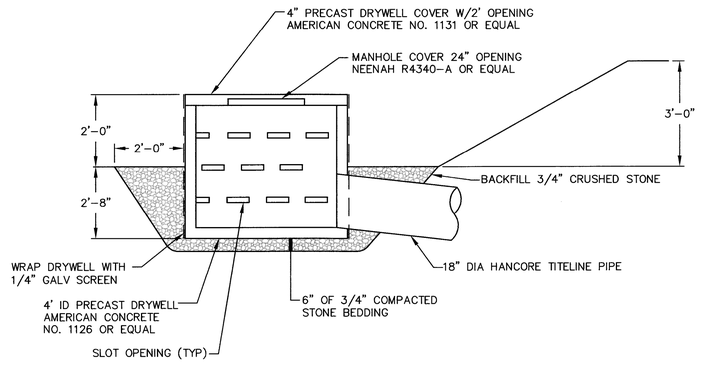
LANDFILL COVER

NTS



SECTION 2

NTS YB-26197



DRAINAGE MANHOLE

NTS

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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5	–			– –								– –						
4	–			– –								– –						
3	–			2/12/07		UPDATED PER MEDEP COMMENTS						– –						
2	–			10/6/06		SUBMITTED TO MEDEP	GHC					– –						
1	–			8/24/06	P	SUBMITTED TO CLIENT	RBC					– –						

SME

Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 04011.04

DRN	DRD	8/11/06
CHKD	GHC	8/11/06
APPVD		– –

ISSUE CODE
P – Preliminary
B – Bids
C – Construction
ASB – As Built
SCALE NONE

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: YB-26199 B1

EAST OPERATION

DOLBY III LANDFILL
CELL 15 CONSTRUCTION
CELL 14 CLOSURE
SECTIONS & DETAILS

JOB NO. _____
FILE NO. _____
LOC. NO. _____

YB-26199
SHEET 2 OF 2

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KATAHDIN PAPER COMPANY, LLC
EAST MILLINOCKET, MAINE
DOLBY III LANDFILL
CELL 16 CONSTRUCTION

SHT. NO.	TITLE	DWG. NO.
1	COVER SHEET	
2	SYMBOLS & ABBREVIATIONS	C-100
3	EXISTING CONDITIONS PLAN	C-101
4	SITE DEVELOPMENT PLAN	C-102
5	OPERATIONAL GRADING PLAN	C-103
6	SECTIONS & DETAILS (SHEET 1 OF 1)	C-300

SME

Sevee & Maher Engineers, Inc.

Waste Management and Hydrogeologic Consultants

Cumberland Center, Maine

STATE OF MAINE
PETER M. MAHER
NO. 7107
LICENSED
PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
6	-			- -								- -						
5	-			- -								- -						
4	-											- -						
3	-											- -						
2	-											- -						
1	-		P	7/23/08		SUBMITTED TO MEDEP						- -						

SME

Sevee & Maher Engineers, Inc.

4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 08035.05

DRN	MSB	7/08
CHKD	GHC	7/08
APPVD		

ISSUE CODE
P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE NONE

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: COVERSHT.DWG

EAST OPERATION

DOLBY III LANDFILL
CELL 16 CONSTRUCTION
COVER SHEET

JOB NO.
FILE NO.
LOC. NO.

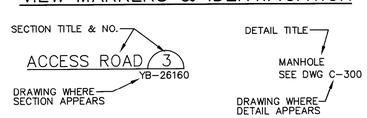
P:\Kpc\Dolby\ACAD\CELL 15-16\COVERSHT.dwg, 7/23/2008 2:18:06 PM, mbickup

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			DRAINAGE COURSE (WITH DIRECTION)		UG	UNDERGROUND GAS MAIN
DATE		NORTH ARROW (MAGNETIC)			EDGE OF WATER		UT	UNDERGROUND TELEPHONE LINE
N		NORTH ARROW (PLAN NORTH)			WATER ELEVATION (GROUND OR SURFACE)		UE	UNDERGROUND ELECTRICAL LINE
	25	CONTOUR LINES			FENCE LINE (WOOD)		OE	OVERHEAD ELECTRICAL LINE
	INV 25.56	SPOT ELEVATION (INVERT ELEVATION)			FENCE LINE (WIRE)		OT	OVERHEAD TELEPHONE LINE
		EXISTING GROUND			STONE WALL		12" SS	SANITARY SEWER
		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION PT.			RETAINING WALL		8" FM	FORCE MAIN
		PROPERTY LINE OR R.O.W.			GUARD RAIL		8" W	WATER MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			BUILDING AND STRUCTURES		12" SD	STORM DRAIN
	0+00 1+00	CONSTRUCTION BASELINE		1 2 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)		8" UD	UNDERDRAIN
		BOUNDARY LINE (State, County, Municipality)	TOP OF SLOPE 2	TOP OF SLOPE 2	SLOPES (WITH SLOPE RATIO)		6" PD	PERIMETER DRAIN
⊡	■	SURVEY MONUMENT			EDGE OF ROAD		6" LT	LEACHATE TRANSPORT
		SURVEY CONTROL		F	CUT OR FILL LINE		6" LC	LEACHATE COLLECTION
○	•	PROPERTY PIN, DRILL HOLE, PK, OR STAKE			BITUMINOUS PAVEMENT		6" LD	LEAK DETECTION
		WOODS OR BRUSH LINE			CONCRETE		6" G	GAS COLLECTION
		INDIVIDUAL TREE	B-12 MW-12 P-12	B-12 MW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER	▷	▶	REDUCER
		MAPPED WETLAND	TP-12	TP-12	TEST PIT AND NUMBER			MECHANICAL CAP OR PLUG
⊕	◑	GAS VENT	SW-12	SW-12	SURFACE WATER SAMPLE LOCATION			COUPLING
⊕		GAS VENT (CAPPED)			GAS EXTRACTION WELL			BEND
⊘	⊘	CLEAN OUT STRUCTURE	○	●	MANHOLE			TEE
		CULVERT	◎	○	CATCH BASIN			PIPE TO BE ABANDONED
		RAILROAD			WATER OR GAS VALVE			RISER PIPE & INLET GRATE
⊛	⊛	SLOPE INCLINOMETER			HYDRANT	▤	▤	STORM GRATE
⊠	⊠	VIBRATING WIRE SETTLEMENT CELL			AIR RELEASE VALVE	◯	◯	DRAINAGE INLET STRUCTURE
⊗	⊗	VERTICAL/HORIZONTAL DISPLACEMENT MONUMENT			SURGE RELEASE VALVE	□	■	UNDERDRAIN SUMP
▷	▶	VERTICAL DISPLACEMENT MONUMENT			UTILITY POLE		SF	SILTATION FENCE
⊗	☻	LIQUID SETTLEMENT GAGE	☼	✷	LIGHT POLE		CLL	CLEARING OR CONSTRUCTION LIMIT LINE

ACCMP	ASPHALT COATED CMP	D	DEGREE OF CURVE	HDPE	HIGH DENSITY POLYETHYLENE	PERF	PERFORATED
ACP	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HORIZ	HORIZONTAL	PP	POWER POLE
AC	ACRE	DEG OR °	DEGREE	HP	HORSEPOWER	PSI	POUNDS PER SQUARE INCH
AGG	AGGREGATE	DEPT	DEPARTMENT	HYD	HYDRANT	PVC	POLYVINYL CHLORIDE
ALUM	ALUMINUM	DI	DUCTILE IRON			PVMT	PAVEMENT
APPD	APPROVED	DIA OR ø	DIAMETER	ID	INSIDE DIAMETER		
APPROX	APPROXIMATE	DIM	DIMENSION	IN OR "	INCHES	QTY	QUANTITY
ARMH	AIR RELEASE MANHOLE	DIST	DISTANCE	INV	INVERT		
ASB	ASBESTOS	DN	DOWN	INV EL	INVERT ELEVATION	RCP	REINFORCED CONCRETE PIPE
ASP	ASPHALT	DR	DRAIN			ROW	RIGHT OF WAY
AUTO	AUTOMATIC	DWG	DRAWING	LB	POUND	RAD	RADIUS
AUX	AUXILIARY			LC	LEACHATE COLLECTION	REQD	REQUIRED
AVE	AVENUE	EA	EACH	LD	LEAK DETECTION	RT	RIGHT
AZ	AZIMUTH	EG	EXISTING GROUND OR GRADE	LF	LINEAR FEET	RTE	ROUTE
		ELEC	ELECTRIC	LOC	LOCATION		
BCCMP	BITUMINOUS COATED CMP	EL	ELEVATION	LT	LEACHATE TRANSPORT	S	SLOPE
BM	BENCH MARK	ELB	ELBOW			SCH	SCHEDULE
BIT	BITUMINOUS	EOP	EDGE OF PAVEMENT	MH	MANHOLE	SF	SQUARE FEET
BLDG	BUILDING	EQUIP	EQUIPMENT	MJ	MECHANICAL JOINT	SHT	SHEET
BOT	BOTTOM	EST	ESTIMATED	MATL	MATERIAL	SMH	SANITARY MANHOLE
BRG	BEARING	EXC	EXCAVATE	MAX	MAXIMUM	ST	STREET
BV	BALL VALVE	EXIST	EXISTING	MFR	MANUFACTURE	STA	STATION
				MIN	MINIMUM	SY	SQUARE YARD
CB	CATCH BASIN	FG	FINISH GRADE	MISC	MISCELLANEOUS	TAN	TANGENT
CEN	CENTER	FBRGL	FIBERGLASS	MON	MONUMENT	TDH	TOTAL DYNAMIC HEAD
CEM LIN	CEMENT LINED	FDN	FOUNDATION			TEMP	TEMPORARY
CMP	CORRUGATED METAL PIPE	FLEX	FLEXIBLE	NITC	NOT IN THIS CONTRACT	TYP	TYPICAL
CO	CLEAN OUT	FLG	FLANGE	NTS	NOT TO SCALE		
CF	CUBIC FEET	FLR	FLOOR	N/F	NOW OR FORMERLY	UD	UNDERDRAIN
CFS	CUBIC FEET PER SECOND	FPS	FEET PER SECOND	NO OR #	NUMBER		
CI	CAST IRON	FT OR '	FEET			V	VOLTS
CL	CLASS	FTG	FOOTING	OC	ON CENTER	VA TEE	VALVE ANCHORING TEE
CONC	CONCRETE			OD	OUTSIDE DIAMETER	VERT	VERTICAL
CONST	CONSTRUCTION	GA	GAUGE				
CONTR	CONTRACTOR	GAL	GALLON	PC	POINT OF CURVE	WG	WATER GATE
CS	CURB STOP	GALV	GALVANIZED	PD	PERIMETER DRAIN	W/	WITH
CTR	CENTER	GPD	GALLONS PER DAY	PI	POINT OF INTERSECTION	W/O	WITHOUT
CU	COPPER	GPM	GALLONS PER MINUTE	PIV	POST INDICATOR VALVE		
CY	CUBIC YARD			PT	POINT OF TANGENT	YD	YARD

VIEW MARKERS & IDENTIFICATION



GENERAL NOTES:

THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES WITH RESPECT TO THE EMPLOYEES OF THE CONTRACTOR AND HIS SUBCONTRACTOR UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.

CONTOURS SHOWN ON PLANS MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE.

MATERIAL SPECIFICATIONS:

COMMON BORROW – MDOT SPECIFICATION 703.18

SCREENED TILL – SHALL BE EARTH, SUITABLE FOR EMBANKMENT CONSTRUCTION. SCREENED TILL SHALL BE GLACIAL TILL FREE OF FROZEN MATERIALS, PERISHABLE RUBBISH, PEAT, ORGANIC MATER, LARGE ROCK FRAGMENTS, OR OTHER UNSUITABLE MATERIAL AND SHALL BE SCREENED TO LESS THAN 4" IN DIAMETER WITH GREATER THAN 20 PERCENT FINES. THE FINAL SURFACE OF THE SCREENED TILL SHALL BE FREE FROM PROTRUDING ROCKS GREATER THAN 3" IN DIAMETER.

SAND – THE DRAINAGE SAND SHALL BE AGGREGATE FREE OF ORGANIC MATTER, DEBRIS, AND ROCK FRAGMENTS LARGER THAN 1 INCH IN DIAMETER. SAND SHALL MEET A GRADATION AND HYDRAULIC CONDUCTIVITY REQUIREMENT AS FOLLOWS:

a. SIEVE DESIGNATION — PERCENT BY WEIGHT PASSING SQUARE MESH SIEVE

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVE
1/4"	60 – 100
#40	0 – 50
#200	0 – 7

b. REMOLDED HYDRAULIC CONDUCTIVITY (ASTM D 5084–90) MAXIMUM $\leq 1X10^{-3}$cm/sec

3/4" STONE – THE PIPE BEDDING MATERIAL SHALL BE 3/4–INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL.

COMPACTION – DIKE EMBANKMENT SOIL SHALL BE COMPACTED TO A DENSITY OF 90 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR)

6" PERFORATED HDPE UNDERDRAIN PIPE – SDR 21 – HDPE PIPE JOINTS SHALL BE BUTT–FUSION WELDED OR ELECTROFUSION COUPLED.

12" UNDERDRAIN/LEACHATE TRANSPORT PIPE – SOLID HANCOR TITELINE

SEED AND FERTILIZER:

AREAS DISTURBED BY CONSTRUCTION AND THE OUTBOARD SLOPES OF THE DIKE SHALL BE FERTILIZED AND SEEDED.

MATERIAL:

FERTILIZER: GRANULAR FERTILIZER 18.5, 18.5, 18.5 (N,P,K) 10 LBS PER UNIT

SEED:

TALL FESCUE	59%
RED FESCUE	25%
RED TOP	5%
LADINO CLOVER	3%
ANNUAL RYEGRASS	8%

THIS SEED MIXTURE SHALL BE APPLIED AT A RATE OF 3 LBS PER UNIT

MULCH – THE MULCH APPLICATION RATE SHALL BE 2 TONS PER ACRE

INSTALLATION – MDOT 618.05 AND MDOT 618.06

RECOMMENDED TIME OF SEEDING IS FROM APRIL 15 TO SEPTEMBER 15.



REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	–	
5	–	
4	–	
3	–	
2	–	
1	–	

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
P	7/23/08		SUBMITTED TO MEDEP				

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
–	–						
–	–						
–	–						
–	–						
–	–						
–	–						

SME

Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 08035.05

DRN	MSB	7/08
CHKD	GHC	7/08
APPVD		

ISSUE CODE
P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE NONE

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: SYMSHT

EAST OPERATION

DOLBY III LANDFILL
CELL 16 CONSTRUCTION
SYMBOLS AND ABBREVIATIONS

JOB NO.
FILE NO.
LOC. NO.

C-100

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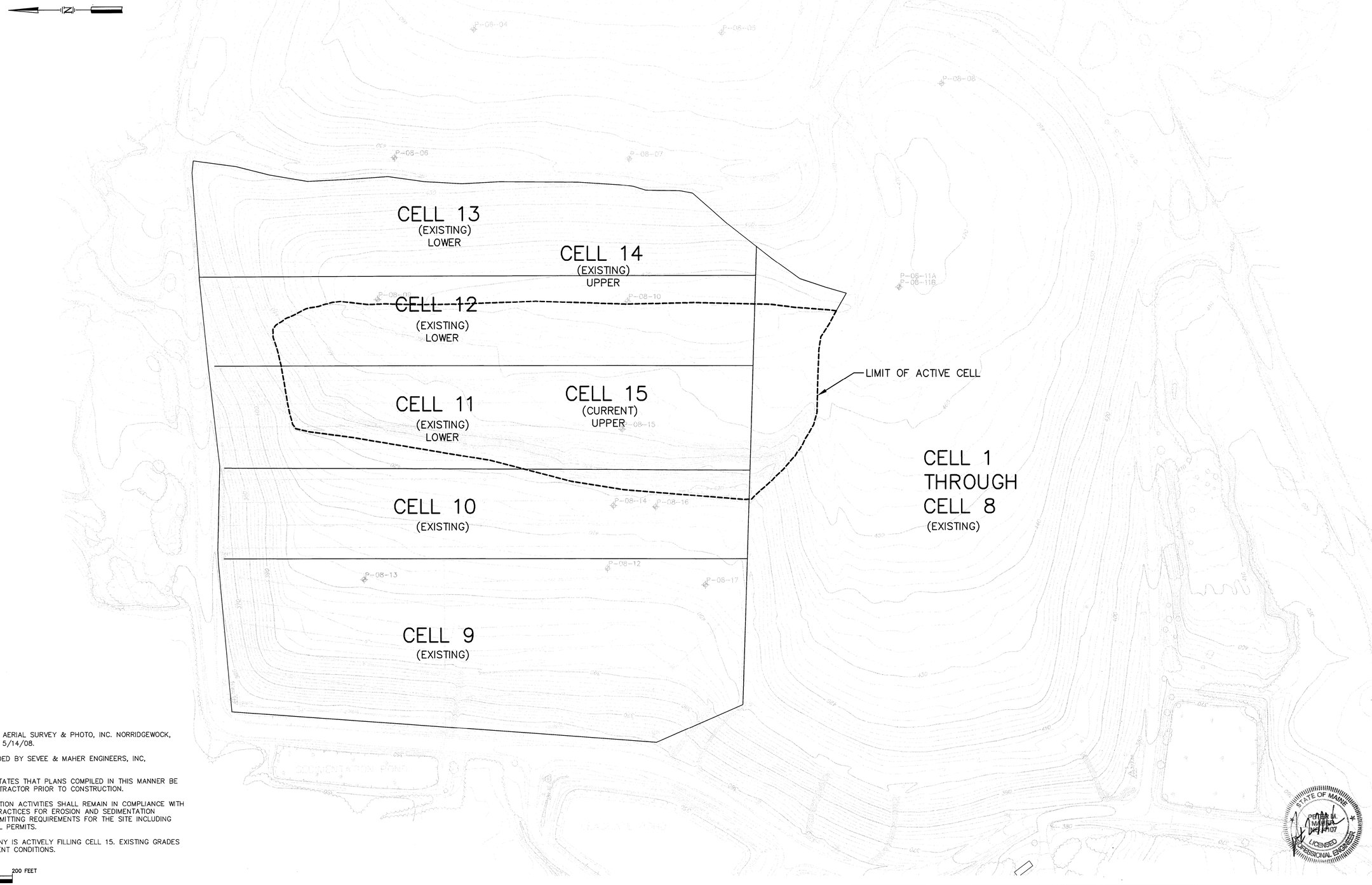

GENERAL NOTES:

1. BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, INC. NORRIDGEWOCK, MAINE, PHOTOGRAPH DATED 5/14/08.

2. GROUND CONTROL PROVIDED BY SEVEE & MAHER ENGINEERS, INC, CUMBERLAND, MAINE.

3. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

4. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL REMAIN IN COMPLIANCE WITH MDEP BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENTATION CONTROL AND EXISTING PERMITTING REQUIREMENTS FOR THE SITE INCLUDING FEDERAL, STATE, AND LOCAL PERMITS.

5. KATAHDIN PAPER COMPANY IS ACTIVELY FILLING CELL 15. EXISTING GRADES MAY NOT REPRESENT CURRENT CONDITIONS.

STATE OF MAINE
PETER M. MAHER
No. 7107
LICENSED
PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	-	
5	-	
4	-	
3	-	
2	-	
1	-	

REVISION	CODE	DATE	REV.
SUBMITTED TO MEDEP	P	7/23/08	

REVISION	BY	CKD	APPVD	JOB

REVISION	CODE	DATE	REV.

REVISION	BY	CKD	APPVD	JOB

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 08035.05

DRN	MSB	7/08
CHKD	GHC	7/08
APPVD		

ISSUE CODE
P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE AS SHOWN

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: CELL15-16Site

EAST OPERATION

DOLBY III LANDFILL
CELL 16 CONSTRUCTION
EXISTING CONDITIONS PLAN

JOB NO.
FILE NO.
LOC. NO.

C-101

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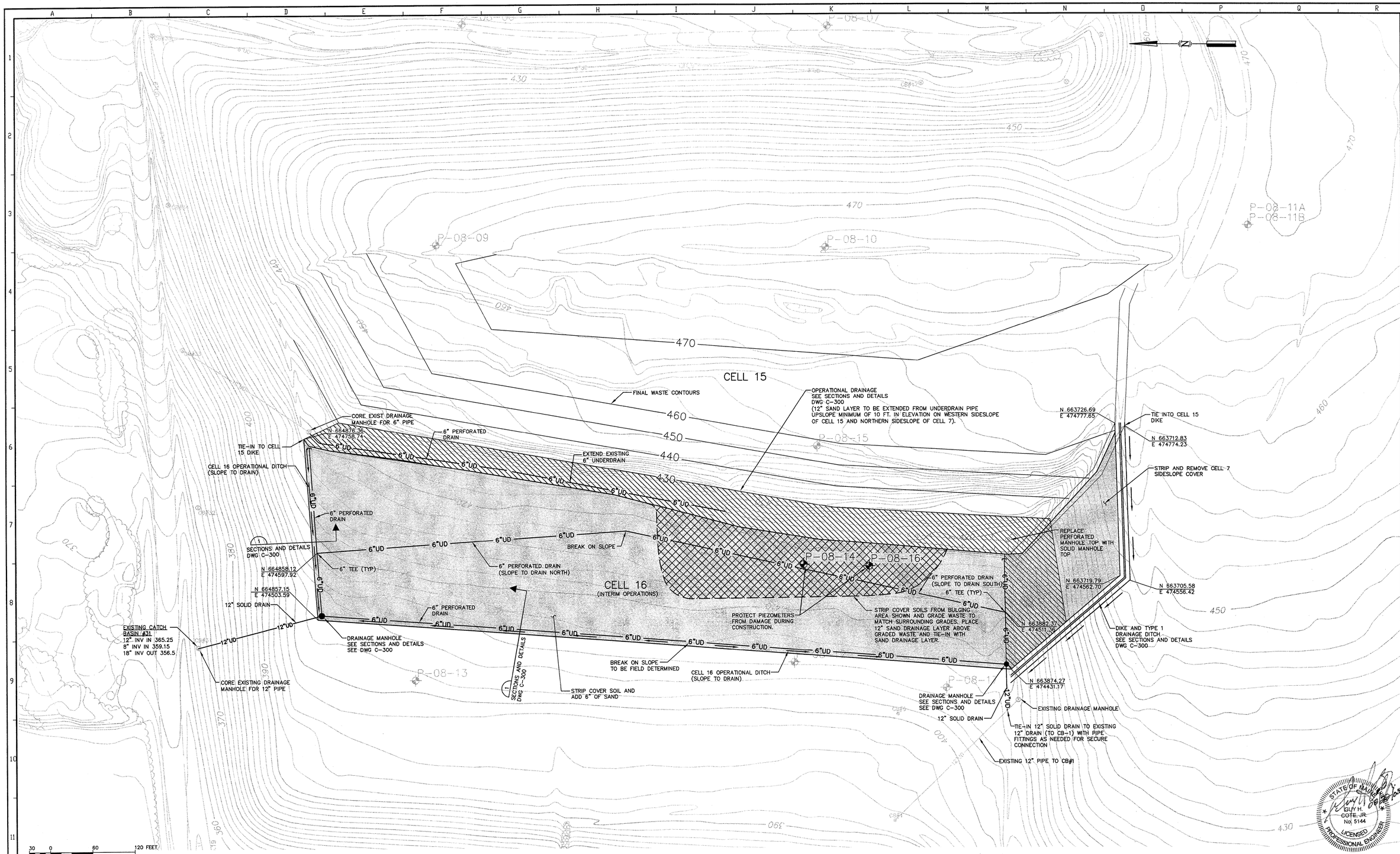

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4	-											- -						
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2	-		P	7/25/08		RESUBMITTED TO MEDEP	KCC	GHC				- -						
1	-		P	7/23/08		SUBMITTED TO MEDEP	KCC	GHC				- -						

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 08035.05

DRN	MSB	7/08
CHKD	GHC	7/08
APPVD		
ISSUE CODE		
P - Preliminary		
B - Bids		
C - Construction		
ASB - As Built		
SCALE	NONE	

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: CELL15-16Site

EAST OPERATION

DOLBY III LANDFILL
CELL 16 CONSTRUCTION
SITE DEVELOPMENT PLAN

JOB NO.
FILE NO.
LOC. NO.

C-102

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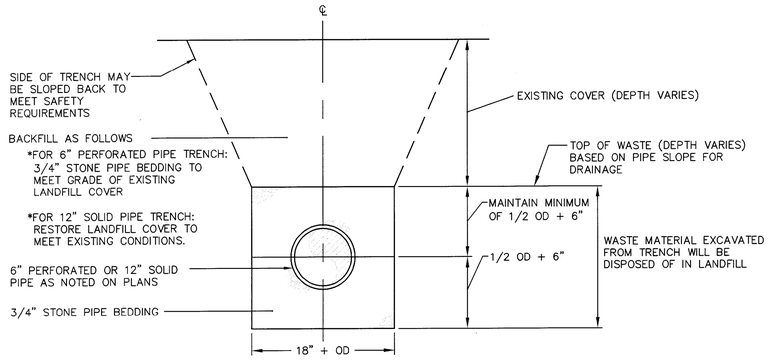
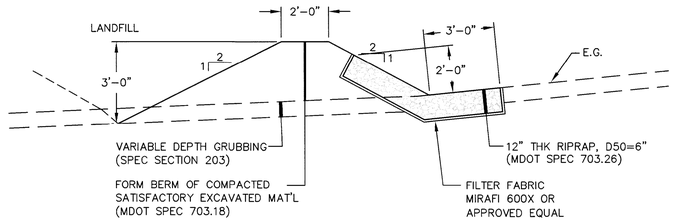
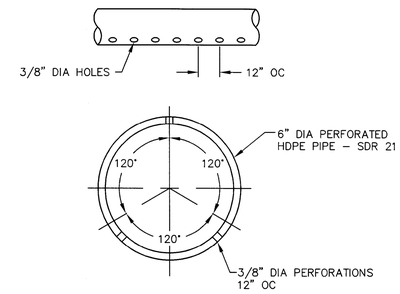


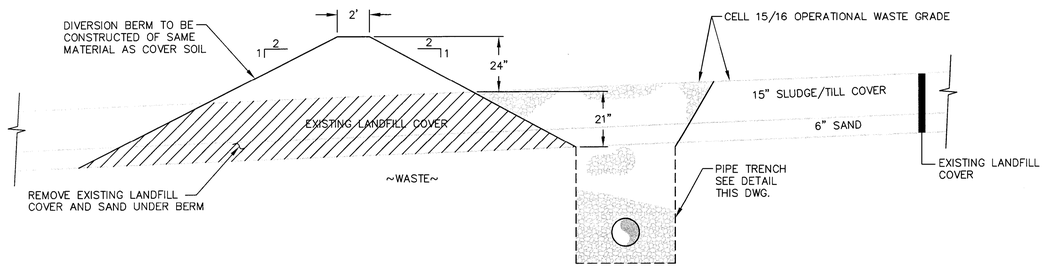
PIPE TRENCH
NTS



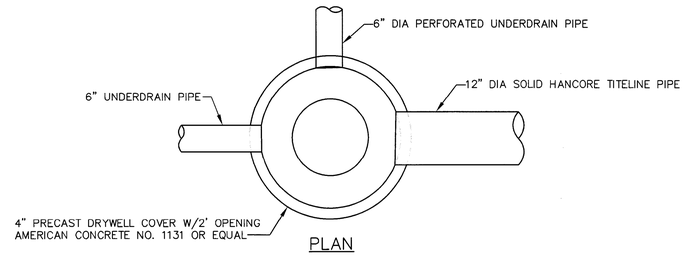
DIKE AND TYPE 1 DRAINAGE DITCH
NTS



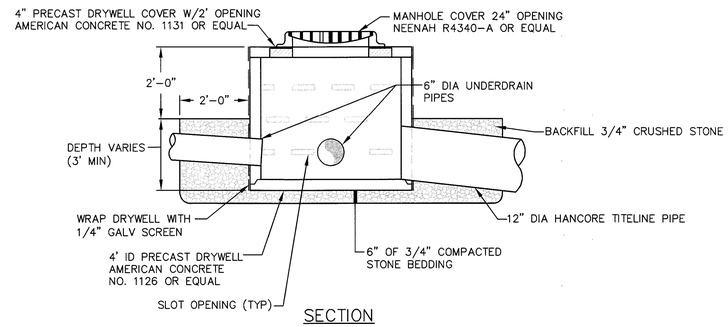
PERFORATED PIPE
NTS



OPERATIONAL/EXISTING LANDFILL COVER INTERFACE (1)
NTS YB-___

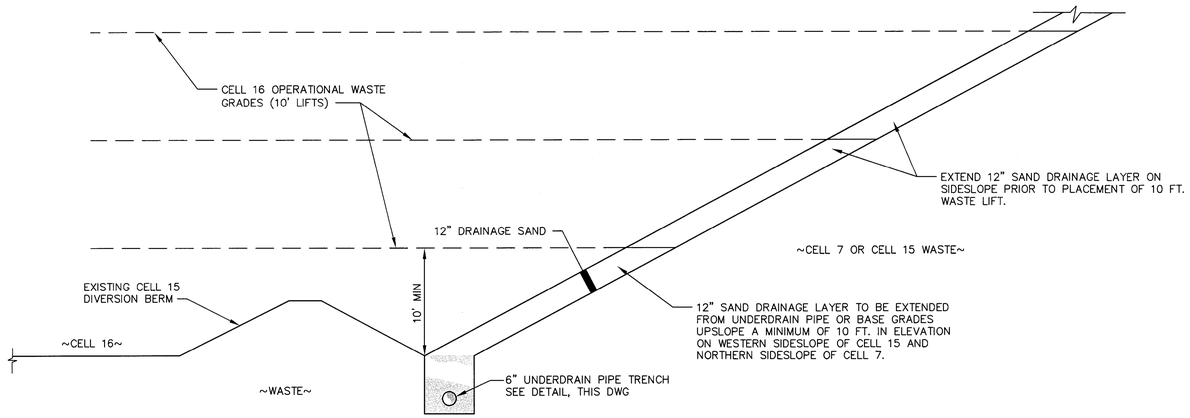


PLAN



SECTION

DRAINAGE MANHOLE
NTS



OPERATIONAL DRAINAGE
NTS

STATE OF MAINE — GARY M. MAHER — NO. 4107 — LICENSED PROFESSIONAL ENGINEER

REF NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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5	–			– –						
4	–			– –						
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2	–			– –						
1	–		P	7/23/08		SUBMITTED TO MEDEP	CE	MMC		

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	– –						

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021
JOB NO. 08035.05

DRN	MSB	7/08
CHKD	GHC	7/08
APPVD		– –

ISSUE CODE
P – Preliminary
B – Bids
C – Construction
ASB – As Built
SCALE NONE

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE:

EAST OPERATION
DOLBY III LANDFILL
CELL 16 CONSTRUCTION
SECTIONS & DETAILS

JOB NO.
FILE NO.
LOC. NO.

C-300
SHEET 1 OF 1

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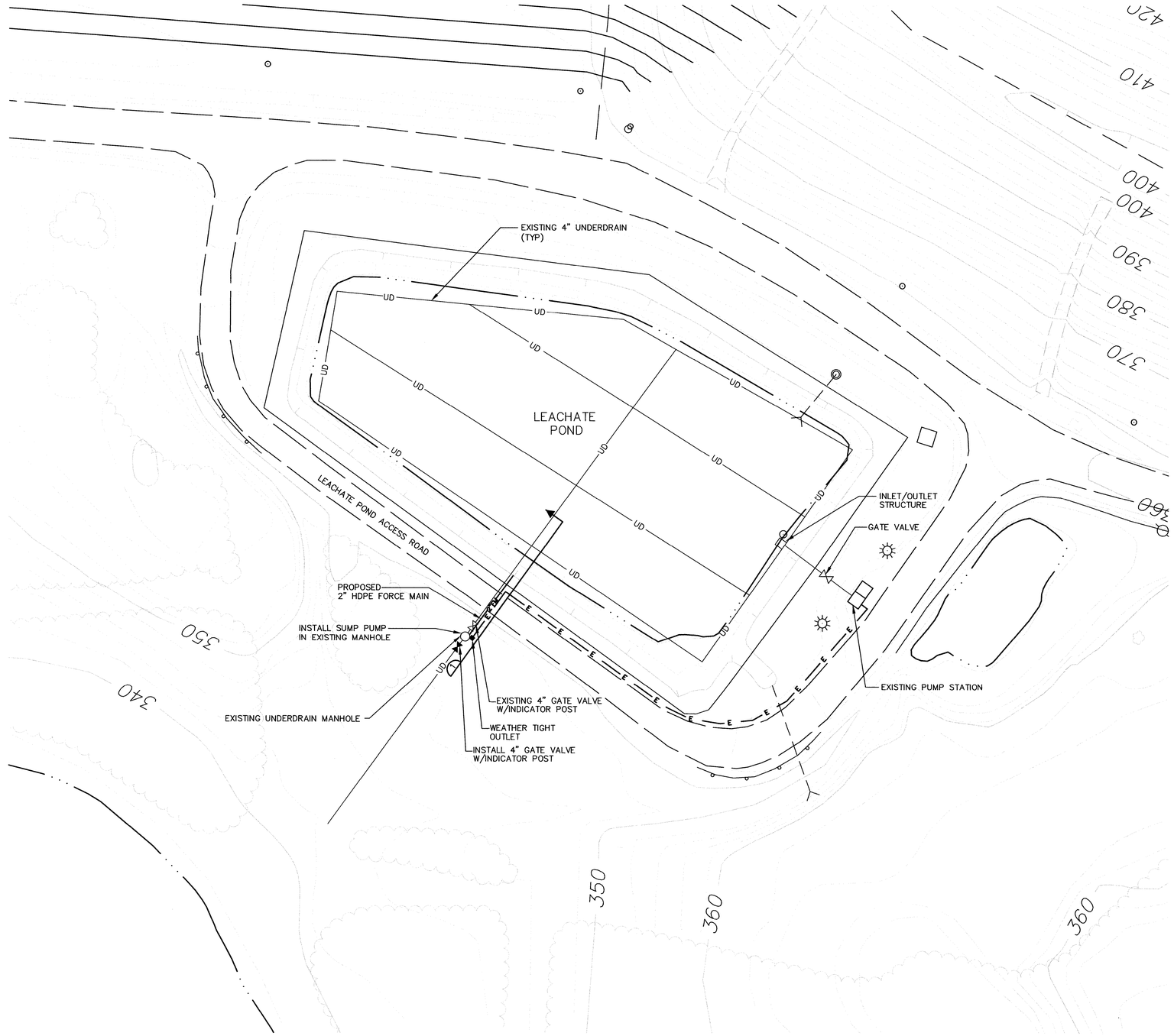

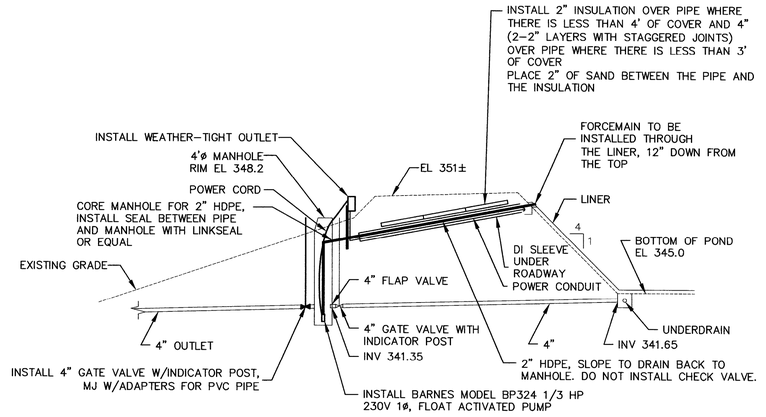

SECTION 1
NTS

STATE OF MAINE
JOHN H. GOSLINE
REGISTERED PROFESSIONAL ENGINEER
8/30/02

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REVISION	BY	CKD	APPVD	JOB
6	–			– –					
5	–			– –					
4	–	BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, INC.		– –					
3	–	NORRIDGEWOCK, MAINE – PHOTO DATE 10/23/95. GROUND CONTROL BY PLISGA & DAY,		– –					
2	–	BANGOR, MAINE. STANDARD PRACTICE DICTATES THAT PLANS		– –					
1	–	COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY CONTRACTOR BEFORE CONSTRUCTION.		8/13/02	SUBMITTED TO MDEP				

SME
Sevee & Maher Engineers, Inc.
4 Blanchard Road P.O. Box 85A
Cumberland Center, ME 04021

JOB NO. 02005

DRN	DRD	7/27/02
CHKD	GHC	7/27/02
APPVD		

ISSUE CODE
P – Preliminary
B – Bids
C – Construction
ASB – As Built
SCALE NONE

Great Northern PAPER, INC.

CAD FILE: AS9548.DWG

EAST OPERATION

DOLBY III LANDFILL
LEACHATE POND
REPIPING OF UNDERDRAIN DISCHARGE

JOB NO.
FILE NO.
LOC. NO.

YB–26109

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KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE
DOLBY III LANDFILL
LEACHATE POND REDEVELOPMENT

SHT NO	TITLE	DWG NO
1	COVER SHEET	YB-26187
2	SYMBOLS & ABBREVIATIONS	YB-26188
3	SITE LOCATION PLAN	YB-26189
4	EXISTING CONDITIONS PLAN	YB-26190
5	BASE GRADING AND UNDERDRAIN PLAN	YB-26191
6	LEAK DETECTION PLAN	YB-26192
7	SECTIONS & DETAILS (SHEET 1 OF 3)	YB-26193
8	SECTIONS & DETAILS (SHEET 2 OF 3)	YB-26193
9	SECTIONS & DETAILS (SHEET 3 OF 3)	YB-26193

SME

Sevee & Maher Engineers, Inc.

Waste Management and Hydrogeologic Consultants

Cumberland Center, Maine

STATE OF MAINE
JOHN E. SEVEE
NO. 2150
LICENSED
PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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3	-			10/31/06	B	ISSUED FOR BID		GHC				- -						
2	-			5/17/06	P	REVISED PER MEDEP COMMENTS		GHC				- -						
1	-			12/9/05	P	SUBMITTED TO MEDEP		GHC				- -						

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DRN	DRD	11/05
CHKD	GHC	11/05
APPVD		- -

ISSUE CODE
P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE NONE

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: LPOND-COVER.DWG

EAST OPERATION

DOLBY III LANDFILL
LEACHATE POND REDEVELOPMENT
COVER SHEET

JOB NO. 00000
FILE NO. 0-000-0000
LOC. NO.

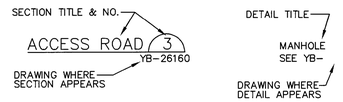
YB-26187

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			DRAINAGE COURSE (WITH DIRECTION)		UG	UNDERGROUND GAS MAIN
DATE		NORTH ARROW (MAGNETIC)			EDGE OF WATER		UT	UNDERGROUND TELEPHONE LINE
N		NORTH ARROW (PLAN NORTH)			WATER ELEVATION (GROUND OR SURFACE)		UE	UNDERGROUND ELECTRICAL LINE
	25	CONTOUR LINES			FENCE LINE (WOOD)		OE	OVERHEAD ELECTRICAL LINE
	INV 25.56	SPOT ELEVATION (INVERT ELEVATION)			FENCE LINE (WIRE)		OT	OVERHEAD TELEPHONE LINE
		EXISTING GROUND			STONE WALL		12" SS	SANITARY SEWER
		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION PT.			RETAINING WALL		8" FM	FORCE MAIN
		PROPERTY LINE OR R.O.W.			GUARD RAIL		8" W	WATER MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			BUILDING AND STRUCTURES		12" SD	STORM DRAIN
	0+00 1+00	CONSTRUCTION BASELINE		2 1' OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)		8" UD	UNDERDRAIN
		BOUNDARY LINE (State, County, Municipality)	TOP OF SLOPE 2'	TOP OF SLOPE 2'	SLOPES (WITH SLOPE RATIO)		6" PD	PERIMETER DRAIN
		SURVEY MONUMENT			EDGE OF ROAD		6" LT	LEACHATE TRANSPORT
		SURVEY CONTROL		P	CUT OR FILL LINE		6" LC	LEACHATE COLLECTION
		PROPERTY PIN, DRILL HOLE, PK, OR STAKE			BITUMINOUS PAVEMENT		6" LD	LEAK DETECTION
		WOODS OR BRUSH LINE			CONCRETE		6" G	GAS COLLECTION
		INDIVIDUAL TREE	B-12 MW-12 P-12	B-12 MW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER			REDUCER
		MAPPED WETLAND	TP-12	TP-12	TEST PIT AND NUMBER			MECHANICAL CAP OR PLUG
		GAS VENT	SW-12	SW-12	SURFACE WATER SAMPLE LOCATION			COUPLING
		GAS VENT (CAPPED)			GAS EXTRACTION WELL			BEND
		CLEAN OUT STRUCTURE			MANHOLE			TEE
		CULVERT			CATCH BASIN			PIPE TO BE ABANDONED
		RAILROAD			WATER OR GAS VALVE			RISER PIPE & INLET GRATE
		SLOPE INCLINOMETER			HYDRANT			STORM GRATE
		VIBRATING WIRE SETTLEMENT CELL			AIR RELEASE VALVE			DRAINAGE INLET STRUCTURE
		VERTICAL/HORIZONTAL DISPLACEMENT MONUMENT			SURGE RELEASE VALVE			UNDERDRAIN SUMP
		VERTICAL DISPLACEMENT MONUMENT			UTILITY POLE		SF	SILTATION FENCE
		LIQUID SETTLEMENT GAGE			LIGHT POLE		CL	CLEARING OR CONSTRUCTION LIMIT LINE

ACCMP	ASPHALT COATED CMP	D	DEGREE OF CURVE	HDPE	HIGH DENSITY POLYETHYLENE	PERF	PERFORATED
ACP	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HORIZ	HORIZONTAL	PP	POWER POLE
AC	ACRE	DEG OR °	DEGREE	HP	HORSEPOWER	PSI	POUNDS PER SQUARE INCH
AGG	AGGREGATE	DEPT	DEPARTMENT	HYD	HYDRANT	PVC	POLYVINYL CHLORIDE
ALUM	ALUMINUM	DI	DUCTILE IRON			PVMT	PAVEMENT
APPD	APPROVED	DIA OR ø	DIAMETER	ID	INSIDE DIAMETER		
APPROX	APPROXIMATE	DIM	DIMENSION	IN OR "	INCHES	QTY	QUANTITY
ARMH	AIR RELEASE MANHOLE	DIST	DISTANCE	INV	INVERT		
ASB	ASBESTOS	DN	DOWN	INV EL	INVERT ELEVATION	RCP	REINFORCED CONCRETE PIPE
ASP	ASPHALT	DR	DRAIN			ROW	RIGHT OF WAY
AUTO	AUTOMATIC	DWG	DRAWING	LB	POUND	RAD	RADIUS
AUX	AUXILIARY			LC	LEACHATE COLLECTION	REQD	REQUIRED
AVE	AVENUE	EA	EACH	LD	LEAK DETECTION	RT	RIGHT
AZ	AZIMUTH	EG	EXISTING GROUND OR GRADE	LF	LINEAR FEET	RTE	ROUTE
		ELEC	ELECTRIC	LOC	LOCATION		
BCCMP	BITUMINOUS COATED CMP	EL	ELEVATION	LT	LEACHATE TRANSPORT	S	SLOPE
BM	BENCH MARK	ELB	ELBOW			SCH	SCHEDULE
BIT	BITUMINOUS	EOP	EDGE OF PAVEMENT	MH	MANHOLE	SF	SQUARE FEET
BLDG	BUILDING	EQUIP	EQUIPMENT	MJ	MECHANICAL JOINT	SHT	SHEET
BOT	BOTTOM	EST	ESTIMATED	MATL	MATERIAL	SMH	SANITARY MANHOLE
BRG	BEARING	EXC	EXCAVATE	MAX	MAXIMUM	ST	STREET
BV	BALL VALVE	EXIST	EXISTING	MFR	MANUFACTURE	STA	STATION
				MIN	MINIMUM	SY	SQUARE YARD
CB	CATCH BASIN	FG	FINISH GRADE	MISC	MISCELLANEOUS		
CEN	CENTER	FBRGL	FIBERGLASS	MON	MONUMENT	TAN	TANGENT
CEM LIN	CEMENT LINED	FDN	FOUNDATION			TDH	TOTAL DYNAMIC HEAD
CMP	CORRUGATED METAL PIPE	FLEX	FLEXIBLE	NITC	NOT IN THIS CONTRACT	TEMP	TEMPORARY
CO	CLEAN OUT	FLG	FLANGE	NTS	NOT TO SCALE	TYP	TYPICAL
CF	CUBIC FEET	FLR	FLOOR	N/F	NOW OR FORMERLY		
CFS	CUBIC FEET PER SECOND	FPS	FEET PER SECOND	NO OR #	NUMBER	UD	UNDERDRAIN
CI	CAST IRON	FT OR '	FEET				
CL	CLASS	FTG	FOOTING	OC	ON CENTER	V	VOLTS
CONC	CONCRETE			OD	OUTSIDE DIAMETER	VA TEE	VALVE ANCHORING TEE
CONST	CONSTRUCTION	GA	GAUGE			VERT	VERTICAL
CONTR	CONTRACTOR	GAL	GALLON	PC	POINT OF CURVE		
CS	CURB STOP	GALV	GALVANIZED	PD	PERIMETER DRAIN	WG	WATER GATE
CTR	CENTER	GPD	GALLONS PER DAY	PI	POINT OF INTERSECTION	W/	WITH
CU	COPPER	GPM	GALLONS PER MINUTE	PIV	POST INDICATOR VALVE	W/O	WITHOUT
CY	CUBIC YARD			PT	POINT OF TANGENT	YD	YARD

VIEW MARKERS & IDENTIFICATION



GENERAL NOTES:

THE DOLBY LANDFILL IS AN ACTIVE FACILITY THAT RECEIVES WASTE ON A DAILY BASIS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE OWNER WITH REGARDS TO USE OF PREMISES, INCLUDING HAUL ROUTES AND VEHICULAR ACCESS. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES SO AS NOT TO INTERFERE WITH ACTIVE LANDFILLING OPERATIONS. THE CONTRACTOR SHALL OBEY ALL TRAFFIC, NOISE, AND DUST CONTROL POLICIES OF THE DOLBY LANDFILL.

THE CONTRACTOR SHALL COMPLY FULLY WITH CONDITIONS OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, (MEDEP), NRPA PERMIT BY RULE CONDITIONS, MEDEP CONSTRUCTION GENERAL PERMIT, AND MEDEP "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES", AS APPLICABLE, AND SHALL TAKE EVERY PRECAUTION TO INSURE THAT NO SILTATION OF STORMWATER DRAINAGE COURSES OCCURS AS A RESULT OF SOIL DISTURBANCE ASSOCIATED WITH THE CONTRACT SCOPE OF WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING COMPLETE PROTECTION OF THE PROJECT DURING CONSTRUCTION FROM ANY ACTS OF NATURE OR MAN, SUCH AS, BUT NOT LIMITED TO, FLOODS, WIND DAMAGE, EARTHEN SLIDES, AND SLOPE FAILURES. DAMAGE TO THE PROJECT CAUSED BY SUCH ACTS WILL NOT BE SUFFICIENT CAUSE TO INCREASE CONTRACTOR COSTS TO THE OWNER.

THE CONTRACTOR SHALL PROTECT EXISTING ON-SITE STRUCTURES FROM DAMAGE DURING CONSTRUCTION, INCLUDING: MONITORING WELLS, POWER LINES, SURVEY POINTS, AND EXISTING LEACHATE COLLECTION AND TRANSPORT FACILITIES AND SYSTEMS, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS REQUIRED TO CORRECT DAMAGE MADE TO EXISTING ON-SITE STRUCTURES DESCRIBED ABOVE RESULTING FROM ANY CONSTRUCTION ACTIVITY.

THE CONTRACTOR AND ITS SUBCONTRACTORS MUST COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES AND REQUIREMENTS UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ISSUED THEREUNDER AND STATE LABOR (SAFETY) DEPARTMENT AND MILL RULES, PROCEDURES, AND REGULATIONS REGARDING SAFETY.

CONTOURS SHOWN ON PLANS MAY NOT REPRESENT EXISTING CONDITIONS OF THE SITE. CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO CONSTRUCTION.

MATERIAL SPECIFICATIONS: (SEE TECHNICAL SPECIFICATIONS FOR MORE INFORMATION)

SCREENED TILL: SHALL BE EARTH, SUITABLE FOR EMBANKMENT CONSTRUCTION. SCREENED TILL SHALL BE GLACIAL TILL FREE OF FROZEN MATERIALS, PERISHABLE RUBBISH, PEAT, ORGANIC MATTER, LARGE ROCK FRAGMENTS, OR OTHER UNSUITABLE MATERIAL AND SHALL BE SCREENED TO LESS THAN 1" IN DIAMETER WITH GREATER THAN 20 PERCENT FINES. THE FINAL SURFACE OF THE SCREENED TILL SHALL BE FREE FROM PROTRUDING ROCKS GREATER THAN 1-INCH IN DIAMETER.

COMMON BORROW – MDOT SPECIFICATION 703.18

CLAY – THE CLAY FOR POND LINER BASE SHALL BE SILTY CLAY SOIL FREE OF ORGANIC MATTER, DEBRIS, AND ROCK FRAGMENTS LARGER THAN 1 INCH IN DIAMETER. CLAY SHALL MEET A GRADATION AND HYDRAULIC CONDUCTIVITY REQUIREMENT AS FOLLOWS:

a. SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVE
1"	100
#40	90-100
#200	75-100

b. REMOLDED HYDRAULIC CONDUCTIVITY (ASTM D 5084-90) MAXIMUM ≤ 1X10-7 cm/sec

c. LIQUID LIMIT: > 20
PLASTICITY INDEX: 8 ≤ P.E. <30

STONE BEDDING – THE STONE BEDDING MATERIAL SHALL BE 3/4 INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL.

3/4" STONE – THE PIPE BEDDING MATERIAL SHALL BE 3/4 INCH SCREENED OR CRUSHED STONE, FREE OF ORGANIC MATTER, SILT OR CLAY LUMPS, OR DELETERIOUS MATERIAL.

COMPACTION – DIKE EMBANKMENT SOIL SHALL BE COMPACTED TO A DENSITY OF 90 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR)

2" SOLID SDR 11 PVC LEAK DETECTION FORCE MAIN
4" PERFORATED SDR 15.5 HDPE PIPE
6" SOLID AND PERFORATED SDR 17 HDPE PIPE
12" SOLID SDR 17 HDPE PIPE
24" SOLID SDR 17 HDPE PIPE

SEED AND FERTILIZER:
AREAS DISTURBED BY CONSTRUCTION AND THE OUTBOARD SLOPES OF THE DIKE SHALL BE FERTILIZED AND SEEDED.

MATERIAL:

AGRICULTURAL GROUND LIMESTONE: 25 LBS PER UNIT (1,000 SF)

FERTILIZER: GRANULAR FERTILIZER 18.5, 18.5, 18.5 (N,P,K) 10 LBS PER UNIT

SEED:		
	TALL FESCUE	59%
	RED FESCUE	25%
	RED TOP	5%
	LADINO CLOVER	3%
	ANNUAL RYEGRASS	8%

THIS SEED MIXTURE SHALL BE APPLIED AT A RATE OF 3 LBS PER UNIT

MULCH – THE MULCH APPLICATION RATE SHALL BE 2 TONS PER ACRE

INSTALLATION – MDOT 618.05 AND MDOT 618.06

RECOMMENDED TIME OF SEEDING IS FROM APRIL 15 TO SEPTEMBER 15.



REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
6	-			- -						- -
5	-			- -						- -
4	-			11/26/07	ASB	RECORD DRAWING		GHC		- -
3	-			10/31/06	B	ISSUED FOR BID		GHC		- -
2	-			5/17/06	P	REVISED PER MEDEP COMMENTS		GHC		- -
1	-			12/9/05	P	SUBMITTED TO MEDEP		GHC		- -

SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine

JOB NO. 05043.01

DRN	DRD	11/05
CHKD	GHC	11/05
APPVD		- -

ISSUE CODE
P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE NONE

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: SYMSHT.DWG

EAST OPERATION

DOLBY III LANDFILL
LEACHATE POND REDEVELOPMENT
SYMBOLS & ABBREVIATIONS

JOB NO. 00000
FILE NO. 0-000-0000
LOC. NO.

YB-26188

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NOTE:

1. PLAN COMPILED FROM AERIAL PHOTOGRAPH DATED AUGUST 18, 2005.

2. AERIAL PHOTOGRAPHY AND BASE MAP PERFORMED BY AERIAL SURVEY & PHOTO, INC. OF NORRIDGEWOCK, MAINE. GROUND CONTROL PROVIDED BY PLISGA & DAY OF BANGOR, MAINE. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

3. EXISTING TOPOGRAPHY SHOWN AT 2-FOOT INTERVALS AND REPRESENT GRADES AT THE TIME OF THE SURVEY.

4. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL REMAIN IN COMPLIANCE WITH MAINE DEP AND BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENTATION CONTROL AND EXISTING PERMITTING REQUIREMENTS FOR THE SITE INCLUDING FEDERAL, STATE AND LOCAL PERMITS.

STATE OF MAINE JOHN E. SEVEE NO. 4450 LICENSED PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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4	-			11/26/07	ASB	RECORD DRAWING		GHC				- -						
3	-			10/31/06	B	ISSUED FOR BID		GHC				- -						
2	-			5/17/06	P	REVISED PER MEDEP COMMENTS		GHC				- -						
1	-			12/9/05	P	SUBMITTED TO MEDEP		GHC				- -						

SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine

JOB NO. 05043.01

DRN	DRD	11/05
CHKD	GHC	11/05
APPVD		- -

ISSUE CODE
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ASB - As Built
SCALE AS NOTED

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

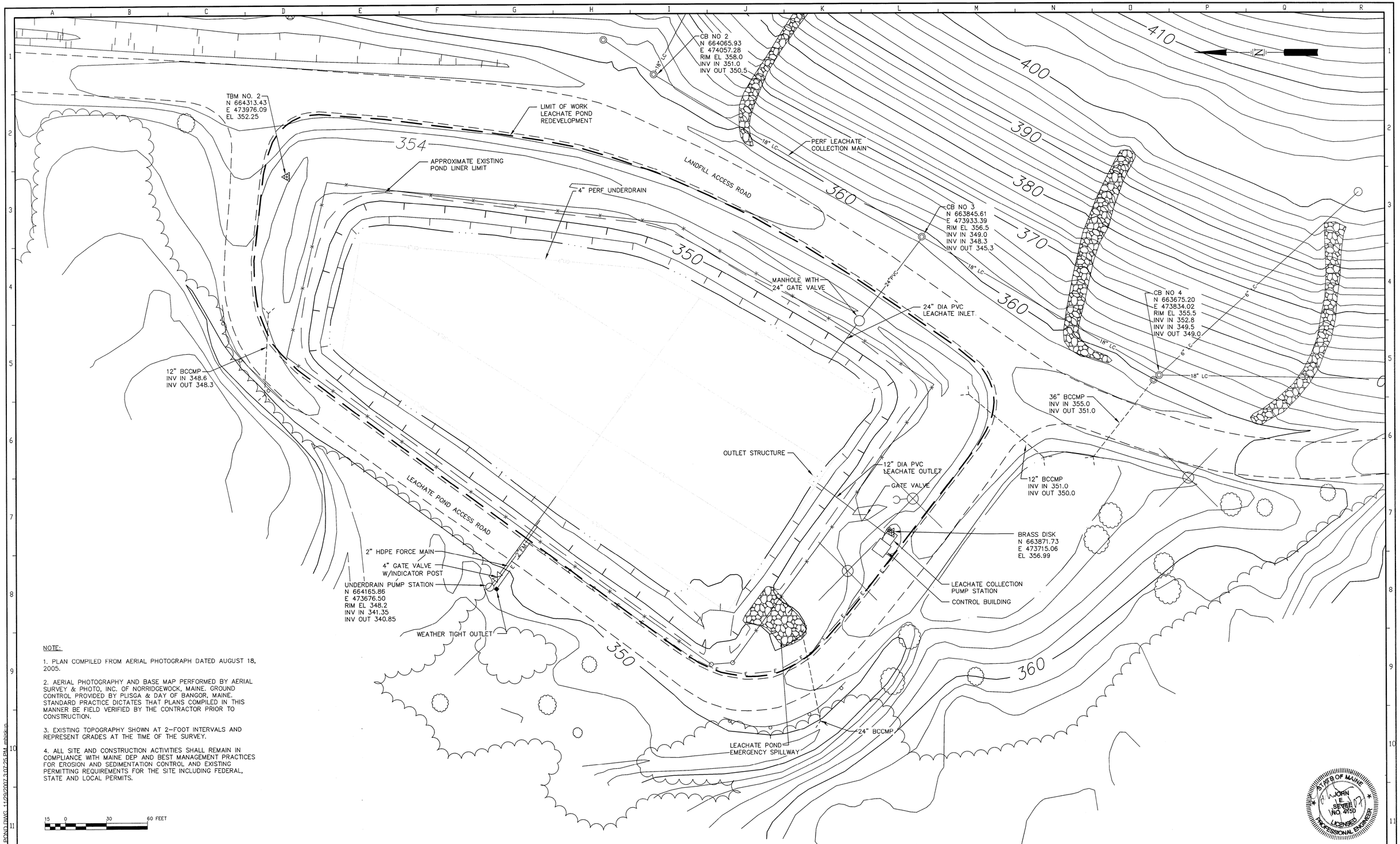
CAD FILE: LPOND.DWG

EAST OPERATION

DOLBY III LANDFILL
LEACHATE POND REDEVELOPMENT
SITE LOCATION PLAN

JOB NO. 00000
FILE NO. 0-000-0000
LOC. NO.

YB-26189



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STATE OF MAINE
JOHN E. SEVEE
NO. 4950
LICENSED
PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	-	
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SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine

JOB NO. 05043.01

DRN	MBISK	11/05
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ISSUE CODE
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SCALE AS NOTED

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: LPOND.DWG

EAST OPERATION

DOLBY III LANDFILL
LEACHATE POND REDEVELOPMENT
EXISTING CONDITIONS PLAN

JOB NO. 000000
FILE NO. 0-000-0000
LOC. NO.

YB-26190

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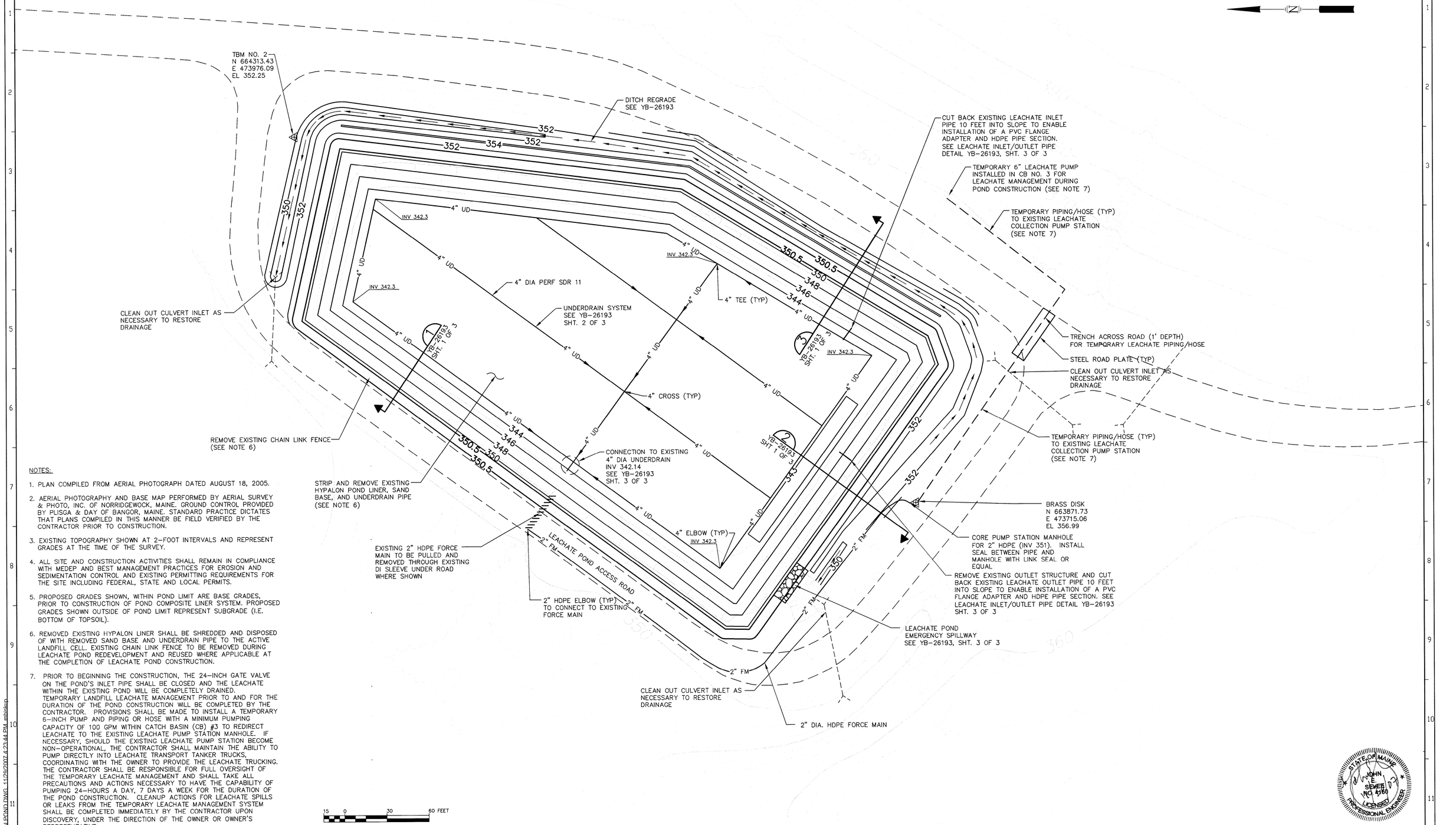
TBM NO. 2
N 664313.43
E 473976.09
EL 352.25
DITCH REGRADE
SEE YB-26193
CUT BACK EXISTING LEACHATE INLET PIPE 10 FEET INTO SLOPE TO ENABLE INSTALLATION OF A PVC FLANGE ADAPTER AND HDPE PIPE SECTION. SEE LEACHATE INLET/OUTLET PIPE DETAIL YB-26193, SHT. 3 OF 3
TEMPORARY 6" LEACHATE PUMP INSTALLED IN CB NO. 3 FOR LEACHATE MANAGEMENT DURING POND CONSTRUCTION (SEE NOTE 7)
TEMPORARY PIPING/HOSE (TYP) TO EXISTING LEACHATE COLLECTION PUMP STATION (SEE NOTE 7)
CLEAN OUT CULVERT INLET AS NECESSARY TO RESTORE DRAINAGE
4" DIA PERF SDR 11
UNDERDRAIN SYSTEM SEE YB-26193 SHT. 2 OF 3
4" TEE (TYP)
4" CROSS (TYP)
4" UD
INV 342.3
REMOVE EXISTING CHAIN LINK FENCE (SEE NOTE 6)
CONNECTION TO EXISTING 4" DIA UNDERDRAIN INV 342.14 SEE YB-26193 SHT. 3 OF 3
STRIP AND REMOVE EXISTING HYPALON POND LINER, SAND BASE, AND UNDERDRAIN PIPE (SEE NOTE 6)
4" ELBOW (TYP)
EXISTING 2" HDPE FORCE MAIN TO BE PULLED AND REMOVED THROUGH EXISTING DI SLEEVE UNDER ROAD WHERE SHOWN
LEACHATE POND ACCESS ROAD
2" FM
2" HDPE ELBOW (TYP) TO CONNECT TO EXISTING FORCE MAIN
TRENCH ACROSS ROAD (1' DEPTH) FOR TEMPORARY LEACHATE PIPING/HOSE
STEEL ROAD PLATE (TYP)
CLEAN OUT CULVERT INLET AS NECESSARY TO RESTORE DRAINAGE
TEMPORARY PIPING/HOSE (TYP) TO EXISTING LEACHATE COLLECTION PUMP STATION (SEE NOTE 7)
BRASS DISK
N 663871.73
E 473715.06
EL 356.99
CORE PUMP STATION MANHOLE FOR 2" HDPE (INV 351). INSTALL SEAL BETWEEN PIPE AND MANHOLE WITH LINK SEAL OR EQUAL
REMOVE EXISTING OUTLET STRUCTURE AND CUT BACK EXISTING LEACHATE OUTLET PIPE 10 FEET INTO SLOPE TO ENABLE INSTALLATION OF A PVC FLANGE ADAPTER AND HDPE PIPE SECTION. SEE LEACHATE INLET/OUTLET PIPE DETAIL YB-26193 SHT. 3 OF 3
LEACHATE POND EMERGENCY SPILLWAY SEE YB-26193, SHT. 3 OF 3
CLEAN OUT CULVERT INLET AS NECESSARY TO RESTORE DRAINAGE
2" DIA. HDPE FORCE MAIN
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TBM NO. 2
N 664313.43
E 473976.09
EL 352.25

ANCHOR TRENCH/
LINER LIMIT

LANDFILL ACCESS ROAD

CHAIN LINK FENCE (TYP)
SEE YB-26193, SHT. 2 OF 3
(SEE NOTE 6)

EXISTING 24" LEACHATE POND INLET
CONNECTION TO 24" HDPE SDR 17,
LEACHATE INLET PIPE SECTION, AS
SHOWN ON LEACHATE INLET/OUTLET
PIPE DETAIL. SEE YB-26193,
SHT. 3 OF 3

1 YB-26193 SHT. 1 OF 3

3 YB-26193 SHT. 1 OF 3

LEAK DETECTION SUMP
SEE YB-26193, SHT. 1 OF 3

6" DIA HDPE SDR 17
LEACHATE POND
DRY HYDRANT
SEE DWG YB-26193,
SHEET 1 OF 3

2 YB-26193 SHT. 1 OF 3

LEACHATE POND ACCESS ROAD

6" TEE (TYP)

6" DIA SOLID SDR 17

6" RISER FLANGED END CAP
SEE YB-26193, SHT. 3 OF 3

6" DIA PERF SDR 17

6" END CAP (TYP)

EXISTING 12" LEACHATE POND
OUTLET CONNECTION TO 12" HDPE
SDR 17 LEACHATE OUTLET PIPE
SECTION, AS SHOWN ON LEACHATE
INLET/OUTLET PIPE DETAIL.
SEE YB-26193. SHEET 3 OF 3

BRASS DISK
N 663871.73
E 473715.06
EL 356.99

LEAK DETECTION OUTLET TO EXISTING
PUMP STATION. INV 352.0

LEAK DETECTION PUMP CONTROLS TO
BE INSTALLED WITHIN CONTROL HOUSE

2" DIA HDPE LEAK
DETECTION FORCE MAIN

UNDERGROUND ELECTRIC UTILITY
SEE YB-26193, SHT. 2 OF 3

LEAK DETECTION
METER PIT MANHOLE
N 663912.83
E 473710.41
RIM EL 353.0
INV IN 349.0
SEE YB-26193, SHT. 2 OF 3

NOTES:

1. PLAN COMPILED FROM AERIAL PHOTOGRAPH DATED AUGUST 18, 2005.
2. AERIAL PHOTOGRAPHY AND BASE MAP PERFORMED BY AERIAL SURVEY & PHOTO, INC. OF NORRIDGEWOCK, MAINE. GROUND CONTROL PROVIDED BY PLISGA & DAY OF BANGOR, MAINE. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. EXISTING TOPOGRAPHY SHOWN AT 2-FOOT INTERVALS AND REPRESENT GRADES AT THE TIME OF THE SURVEY.
4. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL REMAIN IN COMPLIANCE WITH MEDEP AND BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENTATION CONTROL AND EXISTING PERMITTING REQUIREMENTS FOR THE SITE INCLUDING FEDERAL, STATE AND LOCAL PERMITS.
5. PROPOSED GRADES SHOWN, WITHIN POND LIMIT ARE BASE GRADES, PRIOR TO CONSTRUCTION OF POND COMPOSITE LINER SYSTEM. PROPOSED GRADES SHOWN OUTSIDE OF POND LIMIT REPRESENT SUBGRADE (I.E. BOTTOM OF TOPSOIL).
6. REMOVED EXISTING HYPALON LINER SHALL BE SHREDDED AND DISPOSED OF WITH REMOVED SAND BASE AND UNDERDRAIN PIPE TO THE ACTIVE LANDFILL CELL. EXISTING CHAIN LINK FENCE TO BE REMOVED DURING LEACHATE POND REDEVELOPMENT AND REUSED WHERE APPLICABLE AT THE COMPLETION OF LEACHATE POND CONSTRUCTION.
7. PRIOR TO BEGINNING THE CONSTRUCTION, THE 24-INCH GATE VALVE ON THE POND'S INLET PIPE SHALL BE CLOSED AND THE LEACHATE WITHIN THE EXISTING POND WILL BE COMPLETELY DRAINED. TEMPORARY LANDFILL LEACHATE MANAGEMENT PRIOR TO AND FOR THE DURATION OF THE POND CONSTRUCTION WILL BE COMPLETED BY THE CONTRACTOR. PROVISIONS SHALL BE MADE TO INSTALL A TEMPORARY 6-INCH PUMP AND PIPING OR HOSE WITH A MINIMUM PUMPING CAPACITY OF 100 GPM WITHIN CATCH BASIN (CB) #3 TO REDIRECT LEACHATE TO THE EXISTING LEACHATE PUMP STATION MANHOLE. IF NECESSARY, SHOULD THE EXISTING LEACHATE PUMP STATION BECOME NON-OPERATIONAL, THE CONTRACTOR SHALL MAINTAIN THE ABILITY TO PUMP DIRECTLY INTO LEACHATE TRANSPORT TANKER TRUCKS, COORDINATING WITH THE OWNER TO PROVIDE THE LEACHATE TRUCKING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULL OVERSIGHT OF THE TEMPORARY LEACHATE MANAGEMENT AND SHALL TAKE ALL PRECAUTIONS AND ACTIONS NECESSARY TO HAVE THE CAPABILITY OF PUMPING 24-HOURS A DAY, 7 DAYS A WEEK FOR THE DURATION OF THE POND CONSTRUCTION. CLEANUP ACTIONS FOR LEACHATE SPILLS OR LEAKS FROM THE TEMPORARY LEACHATE MANAGEMENT SYSTEM SHALL BE COMPLETED IMMEDIATELY BY THE CONTRACTOR UPON DISCOVERY, UNDER THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE.

15 0 30 60 FEET

STATE OF MAINE
JOHN E. SEVEE
No. 5150
LICENSED PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE	CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
6	-			- -						
5	-			- -						
4	-			11/26/07	ASB	RECORD DRAWING		GHC		
3	-			10/31/06	B	ISSUED FOR BID		GHC		
2	-			5/17/06	P	REVISED PER MEDEP COMMENTS		GHC		
1	-			12/9/05	P	SUBMITTED TO MEDEP		GHC		

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
	- -						
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	- -						
	- -						
	- -						
	- -						

SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine
JOB NO. 05043.01

DRN MBISK	11/05
CHKD GHC	11/05
APPVD	- -
ISSUE CODE	
P - Preliminary	
B - Bids	
C - Construction	
ASB - As Built	
SCALE AS NOTED	

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: LPOND.DWG

EAST OPERATION

DOLBY III LANDFILL
LEACHATE POND REDEVELOPMENT
LEAK DETECTION PLAN

JOB NO. 00000
FILE NO. 0-000-0000
LOC. NO.

YB-26192

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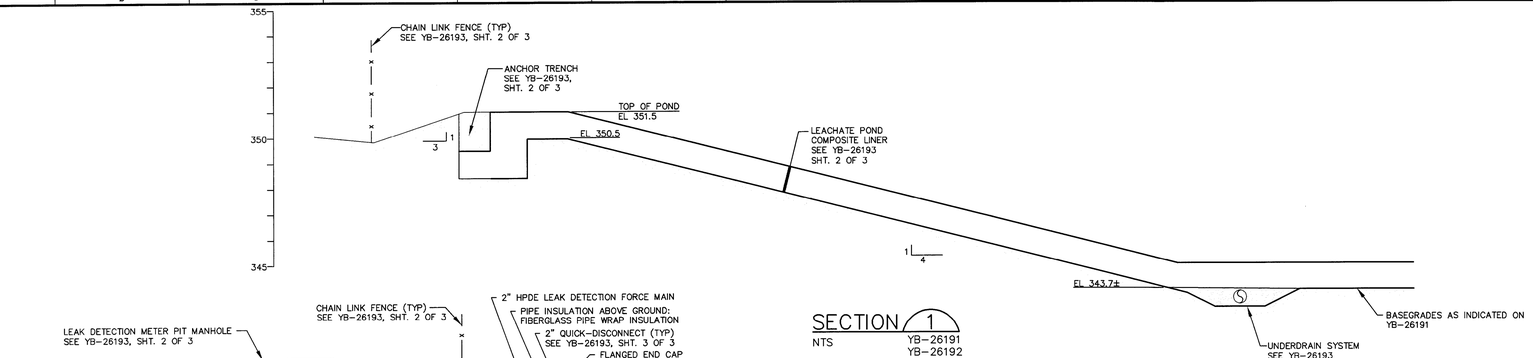
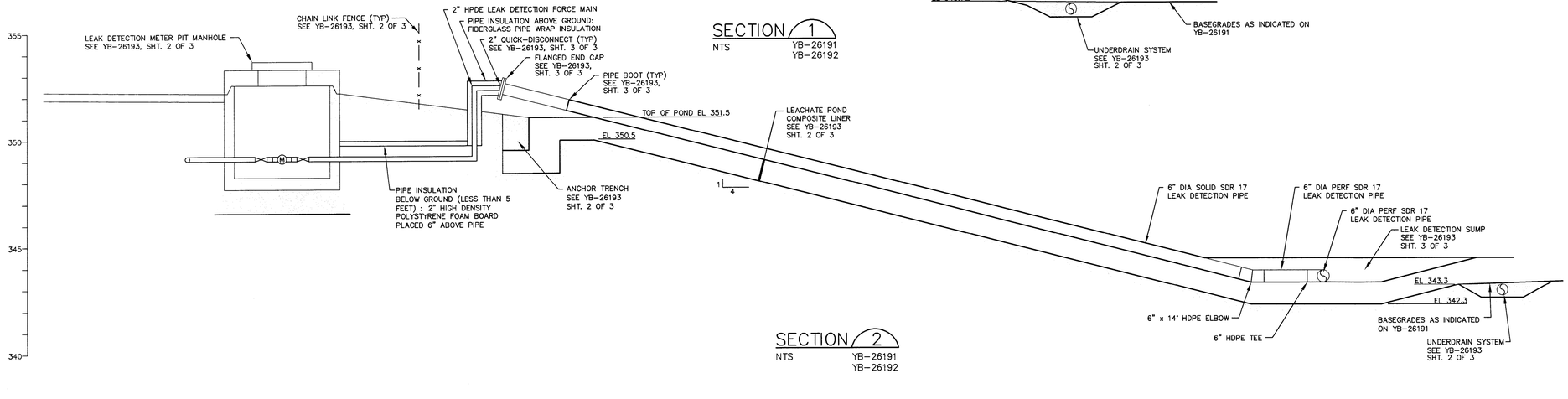


SECTION 1
NTS YB-26191 YB-26192



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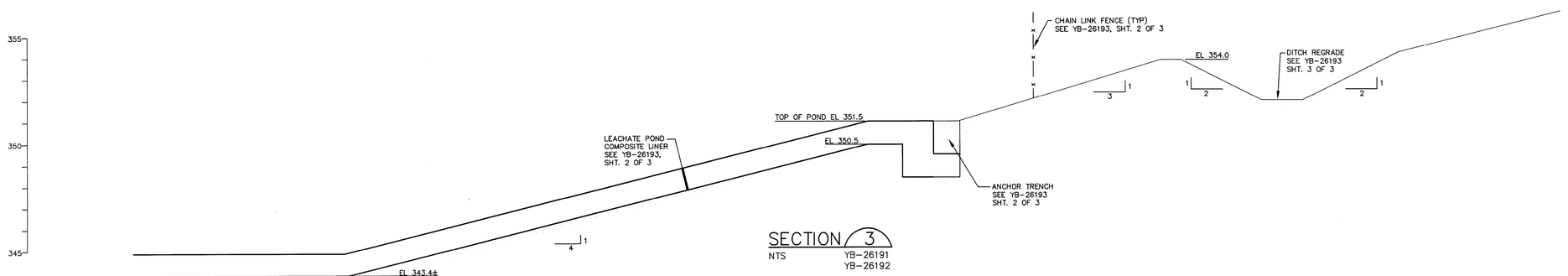
NTS YB-26191 YB-26192



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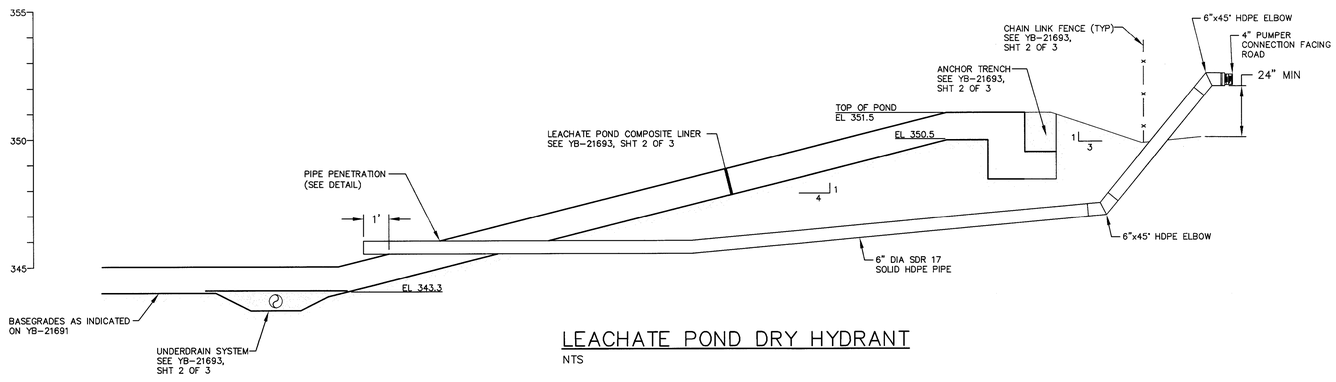

LEACHATE POND DRY HYDRANT
NTS

STATE OF MAINE
JOHN E. SEVEE
NO. 4160
LICENSED
PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	-	
5	-	
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3	-	
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1	-	

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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- -							
- -	11/26/07	ASB	RECORD DRAWING		GHC		
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- -	5/17/06	P	REVISED PER MEDEP COMMENTS		GHC		
- -	12/9/05	P	SUBMITTED TO MEDEP		GHC		

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine
JOB NO. 05043.01

DRN	DRD	11/05
CHKD	GHC	11/05
APPVD	- -	

ISSUE CODE
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B - Bids
C - Construction
ASB - As Built
SCALE AS NOTED

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: YB-26193 B0

EAST OPERATION
DOLBY III LANDFILL
LEACHATE POND REDEVELOPMENT
SECTIONS AND DETAILS
(SHEET 1 OF 3)

JOB NO. 00000
FILE NO. 0-000-0000
LOC. NO.

YB-26193

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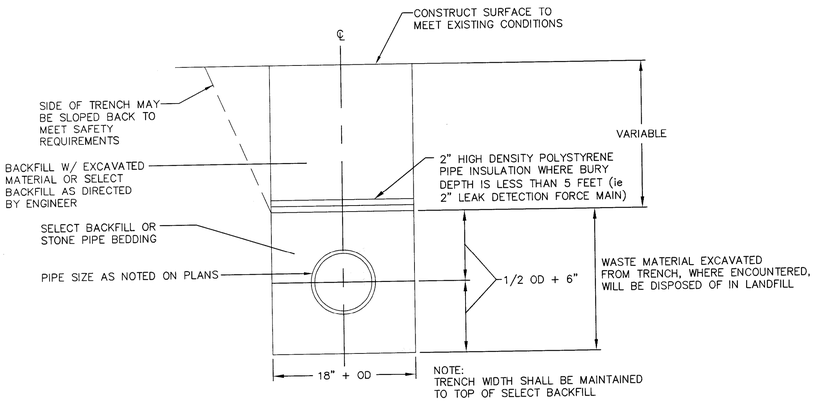
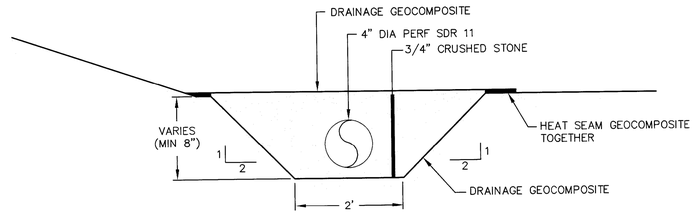
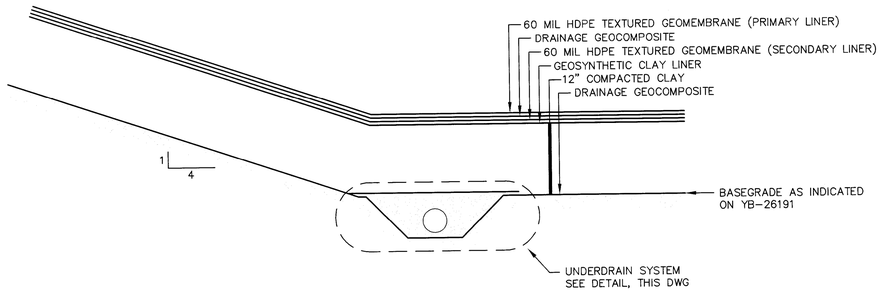


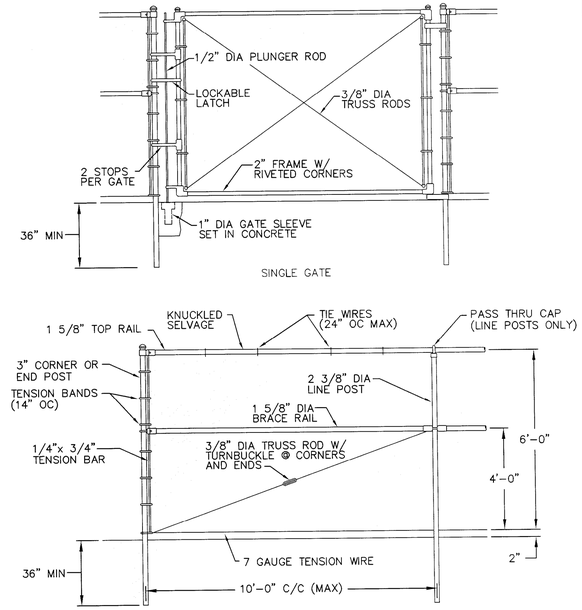
PIPE TRENCH
NTS



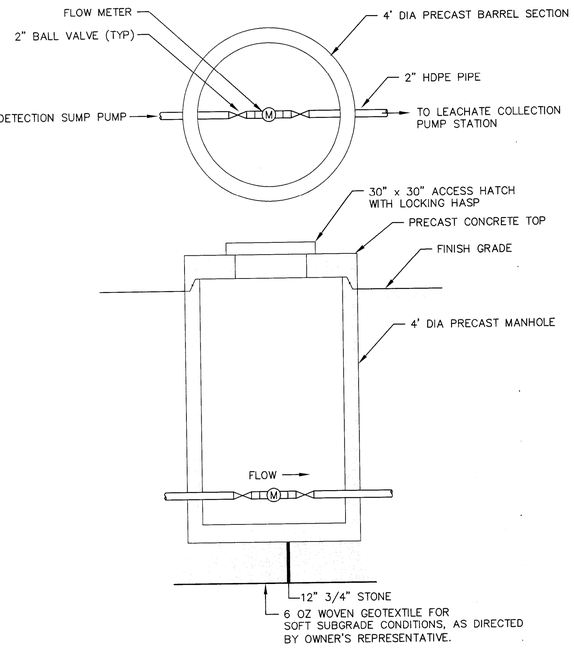
UNDERDRAIN SYSTEM
NTS



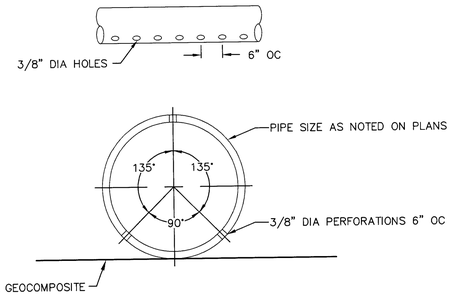
LEACHATE POND COMPOSITE LINER (BASE & SIDESLOPE)
NTS



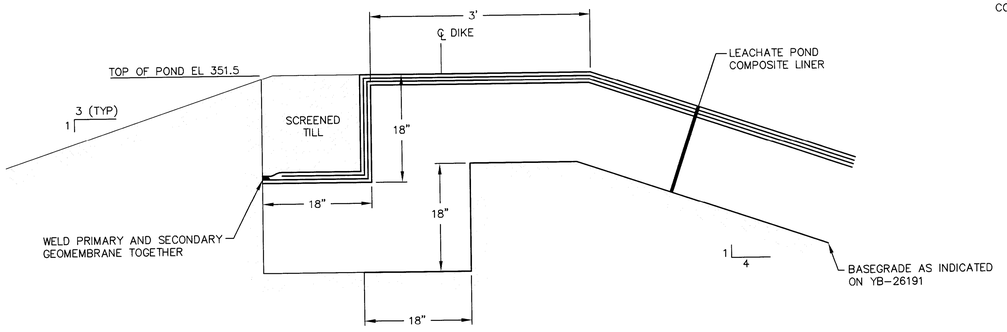
TYPICAL CHAIN LINK FENCE
NTS



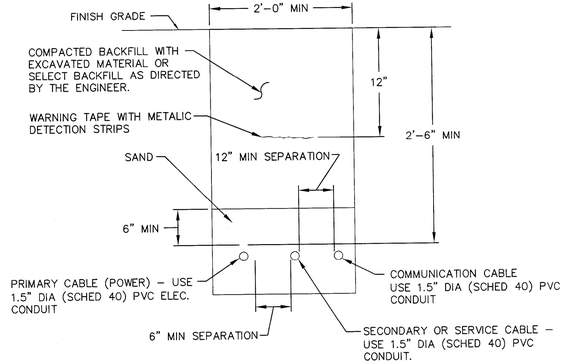
METER PIT
NTS



PERFORATED PIPE
NTS



ANCHOR TRENCH
NTS



UNDERGROUND ELECTRIC UTILITY
NTS

STATE OF MAINE — JOHN E. SEVEE — NO. 4190 — LICENSED PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	–	
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4	–	
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1	–	

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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- -							
ASB	11/26/07		RECORD DRAWING				
B	10/31/06		ISSUED FOR BID		GHC		
P	5/17/06		REVISED PER MEDEP COMMENTS		GHC		
P	12/9/05		SUBMITTED TO MEDEP		GHC		

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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- -							
- -							
- -							
- -							

SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine
JOB NO. 05043.01

DRN	DRD	11/05
CHKD	GHC	11/05
APPVD		- -

ISSUE CODE
P - Preliminary
B - Bids
C - Construction
ASB - As Built
SCALE AS NOTED

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: YB-26193 B1

EAST OPERATION
DOLBY III LANDFILL
LEACHATE POND REDEVELOPMENT
SECTIONS AND DETAILS
(SHEET 2 OF 3)

JOB NO. 00000
FILE NO. 0-000-0000
LOC. NO.

YB-26193

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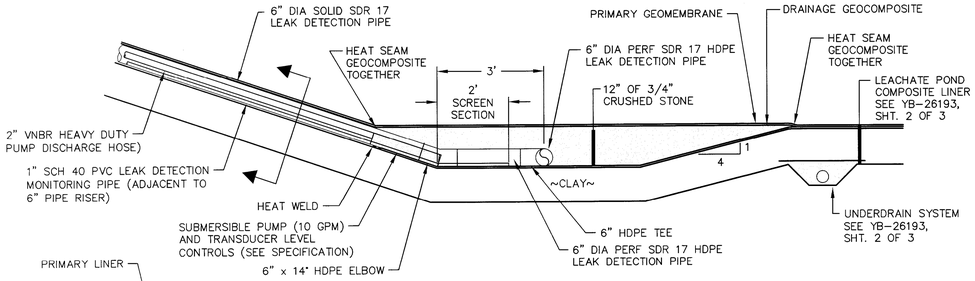
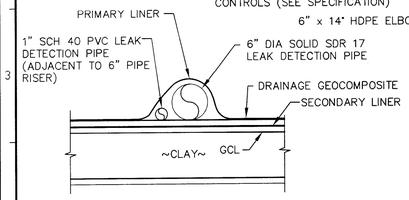
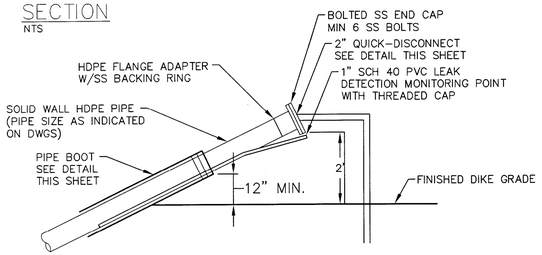


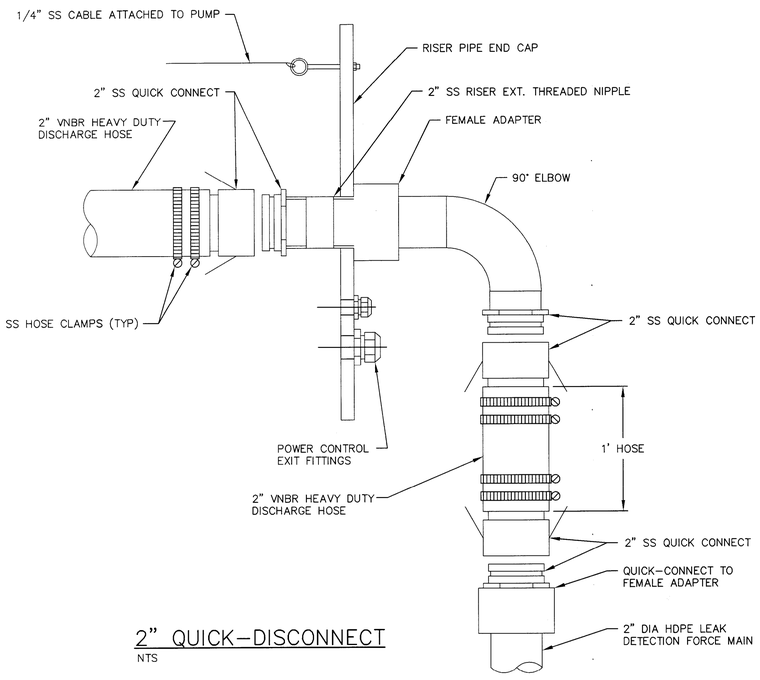
LEAK DETECTION SUMP
NTS



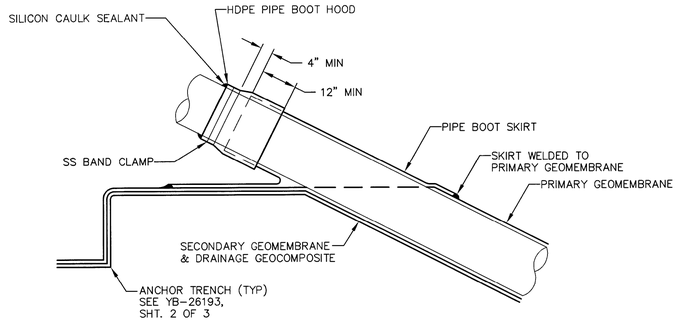
SECTION
NTS



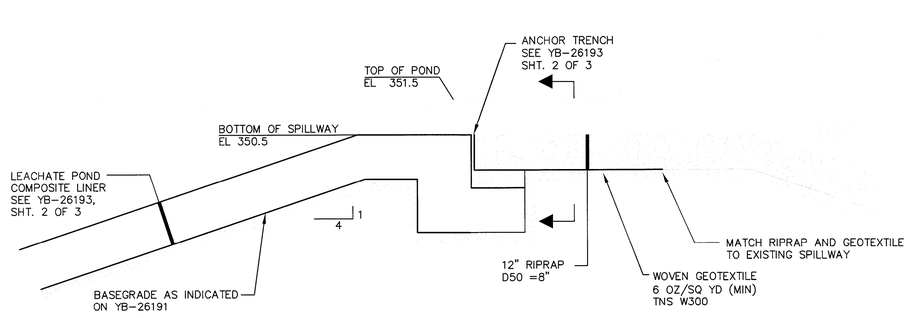
FLANGED END CAP
NTS

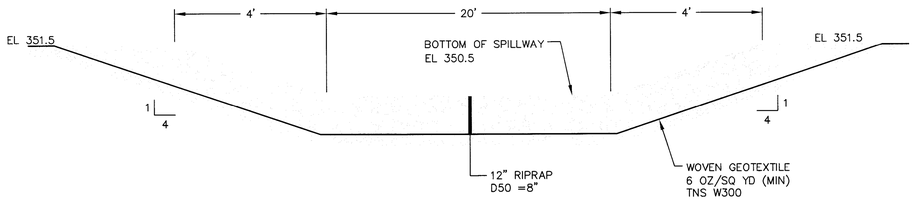


2" QUICK-DISCONNECT
NTS

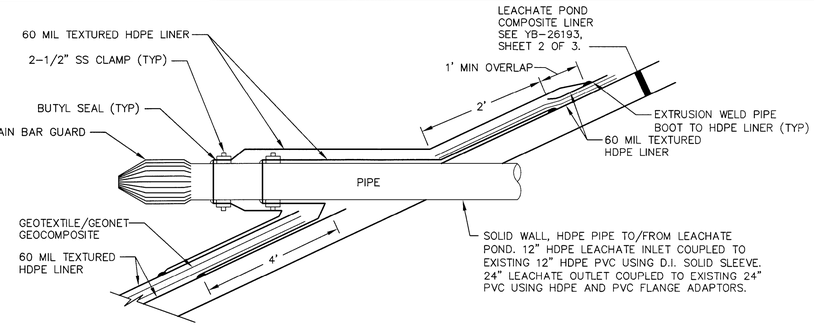


LEAK DETECTION PUMP CONDUIT PIPE BOOT
NTS

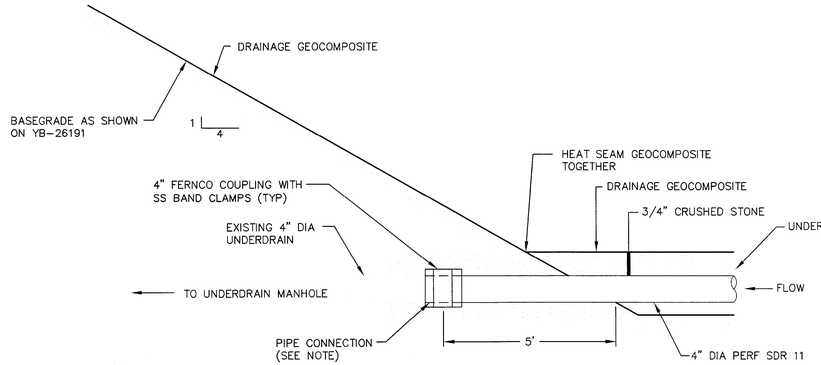




SECTION
LEACHATE POND EMERGENCY SPILLWAY
NTS



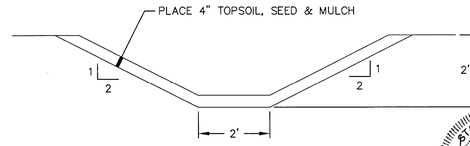
LEACHATE INLET/OUTLET PIPE
NTS



NOTE:

CUT BACK EXISTING UNDERDRAIN 5 FT INTO SLOPE TO CONNECT. MATCH EXISTING INVERT AND DRAINAGE MEDIA FROM PIPE CONNECTIONS TO BASEGRADE.

CONNECTION TO EXISTING 4" UNDERDRAIN
NTS



DITCH REGRADE
NTS

STATE OF MAINE — JOHN E. SEVEE — NO. 4210 — LICENSED PROFESSIONAL ENGINEER

REF. NO.	DRAWING NO.	REFERENCE DRAWING TITLE
6	-	
5	-	
4	-	
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CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
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							- -
ASB	11/26/07		RECORD DRAWING				- -
B	10/31/06		ISSUED FOR BID	GHC			- -
P	5/17/06		REVISED PER MEDEP COMMENTS	GHC			- -
	12/9/05		SUBMITTED TO MEDEP	GHC			- -

CODE	DATE	REV.	REVISION	BY	CKD	APPVD	JOB
-	-						- -
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							- -
							- -

SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine

JOB NO. 05043.01

DRN	DRD	11/05
CHKD	GHC	11/05
APPVD		- -

ISSUE CODE
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C - Construction
ASB - As Built
SCALE AS NOTED

KATAHDIN PAPER COMPANY LLC.
EAST MILLINOCKET, MAINE

CAD FILE: YB-26193 B2

EAST OPERATION
DOLBY III LANDFILL
LEACHATE POND REDEVELOPMENT
SECTIONS AND DETAILS
(SHEET 3 OF 3)

JOB NO. 00000
FILE NO. 0-000-0000
LOC. NO.

YB-26193

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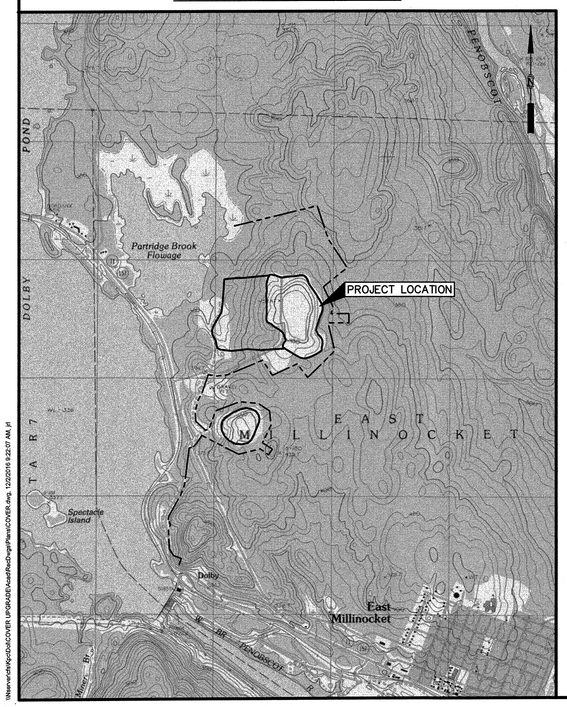
MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE - PHASE 1
EAST MILLINOCKET, MAINE

TITLE	DWG NO
COVER SHEET	C-000
SYMBOLS & ABBREVIATIONS	C-100
PHASED CLOSURE PLAN	C-101
EXISTING CONDITIONS PLAN	C-102
SITE BASE GRADING PLAN (NOT INCLUDED)	C-103
SITE PLAN	C-104
GAS COLLECTION PIPING PLAN	C-105
UNDERDRAIN PIPING PLAN	C-106
SECTIONS AND DETAILS	C-300
SECTIONS AND DETAILS	C-301
SECTIONS AND DETAILS	C-302
SECTIONS AND DETAILS	C-303
LAYOUT POINT TABLES (NOT INCLUDED)	C-304
SEDIMENT POND #3 RESTORATION PLAN AND DETAILS	C-305
SECTIONS AND DETAILS	C-306

LOCATION MAP



SME
Sevee & Maher Engineers, Inc.

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

STATE OF MAINE
No. 5144
LICENSED
PROFESSIONAL ENGINEER
12/6/16

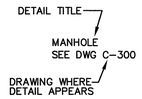
RECORD DRAWINGS

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			DRAINAGE COURSE (WITH DIRECTION)	G	UG	UNDERGROUND GAS MAIN
DATE		NORTH ARROW (MAGNETIC)			EDGE OF WATER	T	UT	UNDERGROUND TELEPHONE LINE
N		NORTH ARROW (PLAN NORTH)			WATER ELEVATION (GROUND OR SURFACE)	E	UE	UNDERGROUND ELECTRICAL LINE
25	25	CONTOUR LINES			FENCE LINE (WOOD)	OE	OE	OVERHEAD ELECTRICAL LINE
	INV 25.56	SPOT ELEVATION (INVERT ELEVATION)			FENCE LINE (WIRE)	OT	OT	OVERHEAD TELEPHONE LINE
		EXISTING GROUND			STONE WALL	12" SS	12" SS	SANITARY SEWER
		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION PT.			RETAINING WALL	8" FM	8" FM	FORCE MAIN
		PROPERTY LINE OR R.O.W.			GUARD RAIL	8" W	8" W	WATER MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			BUILDING AND STRUCTURES	12" SD	12" SD	STORM DRAIN
	0+00 1+00	CONSTRUCTION BASELINE		2 1' OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)	8" UD	8" UD	UNDERDRAIN
		BOUNDARY LINE (State, County, Municipality)	TOP OF SLOPE 2H 1V	TOP OF SLOPE 2H 1V	SLOPES (WITH SLOPE RATIO)	6" PD	6" PD	PERIMETER DRAIN
		SURVEY MONUMENT			EDGE OF ROAD	6" LT	6" LT	LEACHATE TRANSPORT
		SURVEY CONTROL		P	CUT OR FILL LINE	6" LC	6" LC	LEACHATE COLLECTION
		PROPERTY PIN, DRILL HOLE, PK, OR STAKE			BITUMINOUS PAVEMENT	LD	LD	LEAK DETECTION
		WOODS OR BRUSH LINE			CONCRETE	GC	G	GAS COLLECTION
		INDIVIDUAL TREE	B-13 SW-12 P-12	B-13 SW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER			REDUCER
		MAPPED WETLAND	TP-12	TP-12	TEST PIT AND NUMBER			MECHANICAL CAP OR PLUG
		GAS VENT	SW-12	SW-12	SURFACE WATER SAMPLE LOCATION			COUPLING
		GAS VENT (CAPPED)			GAS EXTRACTION WELL			BEND
		CLEAN OUT STRUCTURE			MANHOLE			TEE
		CULVERT			CATCH BASIN			PIPE TO BE ABANDONED
		RAILROAD			WATER OR GAS VALVE			RISER PIPE & INLET GRATE
		SLOPE INCLINOMETER			HYDRANT			STORM GRATE
		VIBRATING WIRE SETTLEMENT CELL			AIR RELEASE VALVE			DRAINAGE INLET STRUCTURE
		VERTICAL/HORIZONTAL DISPLACEMENT MONUMENT			SURGE RELEASE VALVE			UNDERDRAIN SUMP
		VERTICAL DISPLACEMENT MONUMENT			UTILITY POLE		SF	SILTATION FENCE
		LIQUID SETTLEMENT GAGE			LIGHT POLE		CL	CLEARING OR CONSTRUCTION LIMIT LINE

ACCMP	ASPHALT COATED CMP	D	DEGREE OF CURVE	HDPE	HIGH DENSITY POLYETHYLENE	PERF	PERFORATED
ACP	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HORIZ	HORIZONTAL	PP	POWER POLE
AC	ACRE	DEG OR °	DEGREE	HP	HORSEPOWER	PSI	POUNDS PER SQUARE INCH
AGG	AGGREGATE	DEPT	DEPARTMENT	HYD	HYDRANT	PVC	POLYVINYL CHLORIDE
ALUM	ALUMINUM	DI	DUCTILE IRON			PVMT	PAVEMENT
APPD	APPROVED	DIA OR ø	DIAMETER	ID	INSIDE DIAMETER		
APPROX	APPROXIMATE	DIM	DIMENSION	IN OR "	INCHES	QTY	QUANTITY
ARMH	AIR RELEASE MANHOLE	DIST	DISTANCE	INV	INVERT		
ASB	ASBESTOS	DN	DOWN	INV EL	INVERT ELEVATION	RCP	REINFORCED CONCRETE PIPE
ASP	ASPHALT	DR	DRAIN			ROW	RIGHT OF WAY
AUTO	AUTOMATIC	DWG	DRAWING	LB	POUND	RAD	RADIUS
AUX	AUXILIARY			LC	LEACHATE COLLECTION	REQD	REQUIRED
AVE	AVENUE	EA	EACH	LD	LEAK DETECTION	RT	RIGHT
AZ	AZIMUTH	EG	EXISTING GROUND OR GRADE	LF	LINEAR FEET	RTE	ROUTE
		ELEC	ELECTRIC	LOC	LOCATION		
BCCMP	BITUMINOUS COATED CMP	EL	ELEVATION	LT	LEACHATE TRANSPORT	S	SLOPE
BM	BENCH MARK	ELB	ELBOW			SCH	SCHEDULE
BIT	BITUMINOUS	EOP	EDGE OF PAVEMENT	MH	MANHOLE	SF	SQUARE FEET
BLDG	BUILDING	EQUIP	EQUIPMENT	MJ	MECHANICAL JOINT	SHT	SHEET
BOT	BOTTOM	EST	ESTIMATED	MATL	MATERIAL	SMH	SANITARY MANHOLE
BRG	BEARING	EXC	EXCAVATE	MAX	MAXIMUM	ST	STREET
BV	BALL VALVE	EXIST	EXISTING	MFR	MANUFACTURE	STA	STATION
				MIN	MINIMUM	SY	SQUARE YARD
CB	CATCH BASIN	FG	FINISH GRADE	MISC	MISCELLANEOUS		
CEN	CENTER	FBRGL	FIBERGLASS	MON	MONUMENT	TAN	TANGENT
CEM LIN	CEMENT LINED	FDN	FOUNDATION			TDH	TOTAL DYNAMIC HEAD
CMP	CORRUGATED METAL PIPE	FLEX	FLEXIBLE	NITC	NOT IN THIS CONTRACT	TEMP	TEMPORARY
CO	CLEAN OUT	FLG	FLANGE	NTS	NOT TO SCALE	TYP	TYPICAL
CF	CUBIC FEET	FLR	FLOOR	N/F	NOW OR FORMERLY	UD	UNDERDRAIN
CFS	CUBIC FEET PER SECOND	FPS	FEET PER SECOND	NO OR #	NUMBER		
CI	CAST IRON	FT OR '	FEET			V	VOLTS
CL	CLASS	FTG	FOOTING	OC	ON CENTER	VA TEE	VALVE ANCHORING TEE
CONC	CONCRETE			OD	OUTSIDE DIAMETER	VERT	VERTICAL
CONST	CONSTRUCTION	GA	GAUGE				
CONTR	CONTRACTOR	GAL	GALLON	PC	POINT OF CURVE	WG	WATER GATE
CS	CURB STOP	GALV	GALVANIZED	PD	PERIMETER DRAIN	W/	WITH
CTR	CENTER	GPD	GALLONS PER DAY	PI	POINT OF INTERSECTION	W/O	WITHOUT
CU	COPPER	GPM	GALLONS PER MINUTE	PIV	POST INDICATOR VALVE		
CY	CUBIC YARD			PT	POINT OF TANGENT	YD	YARD

VIEW MARKERS & IDENTIFICATION



GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY FULLY WITH CONDITIONS OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION (MEDEP) OPERATING PERMIT, BOARD ORDER, MEDEP NRPA PERMIT BY RULE CONDITIONS, MEDEP CONSTRUCTION GENERAL PERMIT, MEDEP "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES", AND MAINE DEPARTMENT OF TRANSPORTATION (MDOT) ENTRANCE PERMIT REQUIREMENTS, AS APPLICABLE.
2. THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL ABIDE BY ALL SAFETY REQUIREMENTS ASSOCIATED WITH WORKING AT AN ACTIVE SOLID WASTE LANDFILL FACILITY (i.e., RISK OF WORKER EXPOSURE TO LANDFILL GASES, LEACHATE, SOLID WASTE) INCLUDING THE FOLLOWING:
   - COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS;
   - COMPLY WITH ALL VERSO SAFETY REQUIREMENTS, INCLUDING USE OF HARD HATS, SAFETY GLASSES, AND FLUORESCENT SAFETY VESTS AT ALL TIMES;
   - FOLLOW CONFINED SPACE ENTRY RULES ESTABLISHED BY VERSO OPERATIONS AND OSHA FOR THE SITE, INCLUDING, BUT NOT LIMITED TO, MANHOLES, CATCH BASINS, PUMP STATIONS, TEST PITS, TRENCHES, ETC., AND
   - ALL EQUIPMENT USED ON SITE SHALL BE EQUIPPED WITH BACK-UP ALARMS AND WARNING LIGHTS.
3. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO ENSURE THAT NO SILTATION OF STORMWATER DRAINAGE COURSES OCCURS AS A RESULT OF SOIL DISTURBANCE ASSOCIATED WITH THE CONTRACT SCOPE OF WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING COMPLETE PROTECTION OF THE PROJECT DURING CONSTRUCTION FROM ANY ACTS OF NATURE OR MAN, SUCH AS, BUT NOT LIMITED TO, FLOODS, WIND DAMAGE, EARTH SLIDES, AND SLOPE FAILURES. DAMAGE TO THE PROJECT CAUSED BY SUCH ACTS WILL NOT BE SUFFICIENT CAUSE TO INCREASE CONTRACT COSTS TO THE OWNER.
5. THE CONTRACTOR SHALL PROTECT EXISTING ON-SITE STRUCTURES FROM DAMAGE DURING CONSTRUCTION, INCLUDING: MONITORING WELLS, POWER LINES, MAINTENANCE FACILITIES, EXISTING LEACHATE COLLECTION, LINER AND TRANSPORT SYSTEMS, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS REQUIRED TO CORRECT DAMAGE MADE TO EXISTING ON-SITE STRUCTURES DESCRIBED ABOVE RESULTING FROM ANY CONSTRUCTION ACTIVITY.
6. THE DESIGN INTENT, AS DETERMINED BY THE ENGINEER, WILL GOVERN IN THE CASE OF DISCREPANCY IN OR BETWEEN THE DRAWINGS AND SPECIFICATIONS. THE SPECIFICATIONS ARE INTENDED TO SUPPLEMENT AND CLARIFY THE DRAWINGS, AS SOMETIMES WORK IS CALLED FOR IN THE SPECIFICATIONS THAT IS NOT SHOWN ON THE DRAWINGS AND SOMETIMES THE DRAWINGS INDICATE WORK THAT IS NOT MENTIONED IN THE SPECIFICATIONS. BOTH DRAWINGS AND SPECIFICATIONS MUST BE COMPILED WITH IN ORDER TO FULFILL THE CONTRACT REQUIREMENTS, AND ANY WORK CALLED FOR BY EITHER IS AS BINDING AS THOUGH IT WERE CALLED FOR BY BOTH. THE CONTRACTOR SHALL TAKE NO ADVANTAGE OF ANY ERROR OR OMISSION IN THE DRAWINGS OR OF ANY DISCREPANCY BETWEEN THE DRAWINGS AND SPECIFICATIONS. IN ALL CASES OF DOUBT AS TO THE TRUE MEANING OF THE DRAWINGS AND SPECIFICATIONS, THE DECISION OF THE ENGINEER WILL BE FINAL AND CONCLUSIVE.

REV.	BY	DATE	STATUS
	NMT	11/2016	RECORD DRAWING
	PCM	6/2016	ISSUED FOR CONSTRUCTION
	PCM	4/2016	ISSUED FOR BID

STATE OF MAINE · GUY H. COTE, JR. · No. 5107 · LICENSED PROFESSIONAL ENGINEER

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

SYMBOLS AND ABBREVIATIONS

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

DESIGN BY: PCM
DRAWN BY: SJM
DATE: 4/2016
CHECKED BY: GHC
LMN: NONE
CTB: SME-STD

JOB NO. 15250.00 DWG FILE SYMSHT

C-100

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NOTES

1. BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, NORRIDGEWOCK, MAINE. PHOTO DATE 10/15/2015. HORIZONTAL DATUM MAINE STATE COORDINATE SYSTEM EAST ZONE, NAD 83. GROUND CONTROL BY PLISGA & DAY, BANGOR, MAINE. VERTICAL DATUM: NAVD 1929. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. ADDITIONAL DITCH TOPOGRAPHY ALONG TOE OF LANDFILL BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 10/7/2015
3. PHASED CLOSURE AREAS ARE APPROXIMATE AND ARE SUBJECT TO CHANGE.
4. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL BE IN COMPLIANCE WITH MEDEP BEST MANAGEMENT PRACTICES AND EXISTING FEDERAL, STATE, AND LOCAL PERMITS AND PERMITTING REQUIREMENTS FOR THE SITE.

REV.	BY	DATE	STATUS
	NMT	11/2016	RECORD DRAWING
	PCM	6/2016	ISSUED FOR CONSTRUCTION
	PCM	4/2016	ISSUED FOR BID

STATE OF MAINE GUY R. COTE No. 5784 LICENSED PROFESSIONAL ENGINEER

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

PHASED CLOSURE PLAN

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LMN:	PHASED
CTB:	SME–STD

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C–101

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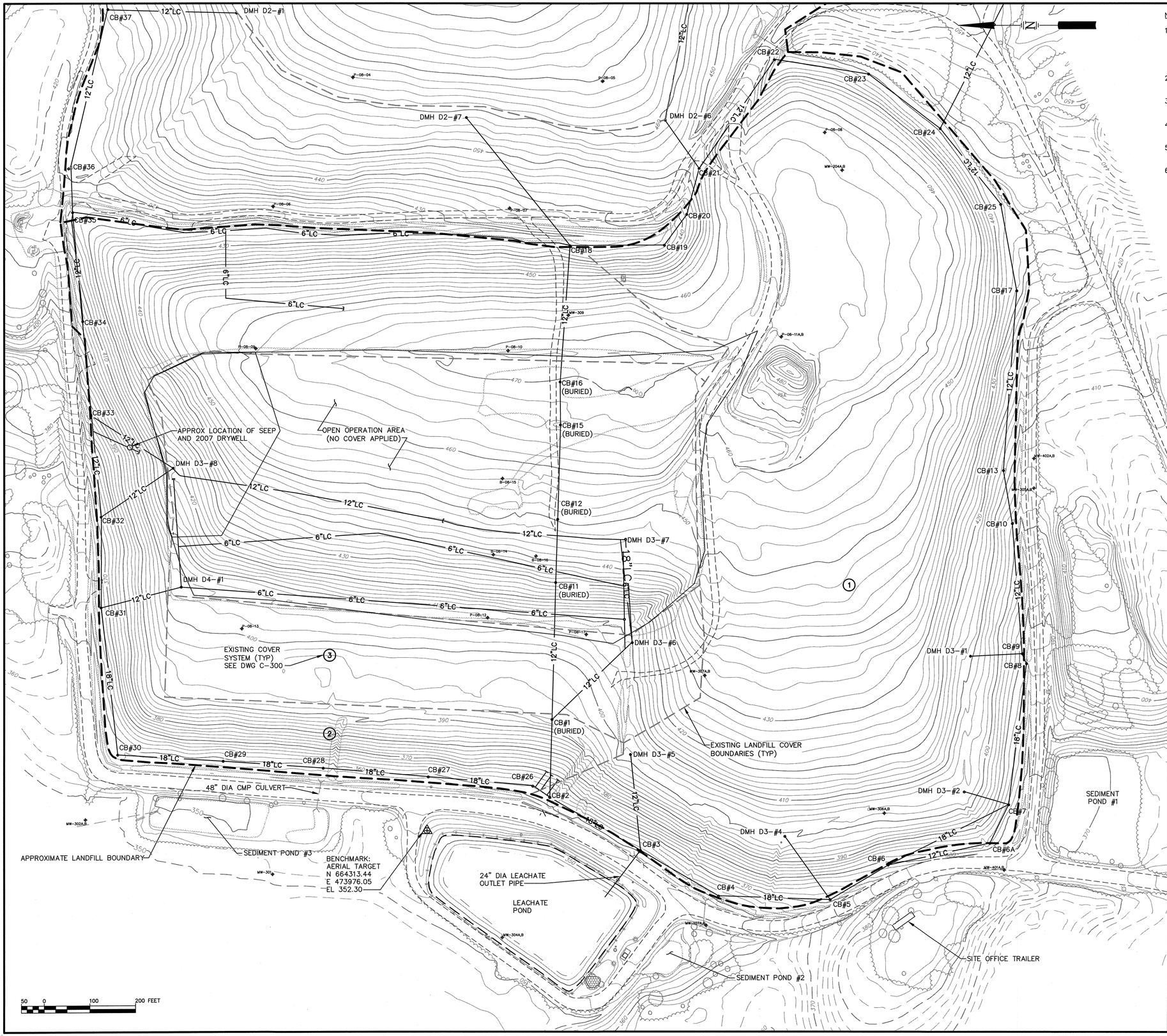

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2. VERTICAL DATUM: BRASS PLUG BENCHMARK (EL. 356.99) AT PUMP STATION. HORIZONTAL DATUM: MAINE STATE COORDINATES EAST ZONE NAD 83.
3. ADDITIONAL DITCH TOPOGRAPHY ALONG TOE OF LANDFILL BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 10/7/2015.
4. BORINGS AND TEST PITS PERFORMED BY MAINE TEST BORING. FIELD LOCATION AND LOGS BY SEVEE & MAHER ENGINEERS.
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PHASE I CATCH BASIN SCHEDULE

CB ID	RIM EL	INV IN	INV OUT
CB#2	362.00	350.9 (18") 350.48 (18")	350.48 (18")
CB#26	357.80	351.1 (18")	351.1 (12")
CB#27	358.20	351.6 (18")	351.6 (18")
CB#28	359.70	352.0 (18") 353.7 (8")	352.0 (18")
CB#29	359.20	352.6 (18")	352.6 (18")
CB#30	359.70	353.0 (18")	353.0 (18")
CB#31	364.00	355.3 (12") 359.2 (8")	356.5 (18")

REV.	BY	DATE	STATUS
	NMT	11/2016	RECORD DRAWING
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	PCM	4/2016	ISSUED FOR BID

STATE OF MAINE
NOTE
LICENSED PROFESSIONAL ENGINEER
12/6/16

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

EXISTING CONDITIONS PLAN

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DATE: 4/2016
CHECKED BY: [signature]
LMN: EXCON
CTB: SME-STD

JOB NO. 15250.00 DWG FILE BASE

C-102

TYPE IV FINAL COVER TERMINATION (TYP) SEE DWG C-300

TYPE III FINAL COVER TERMINATION (TYP) SEE DWG C-300

TYPE IV FINAL COVER TERMINATION (TYP) SEE DWG C-300

RIPRAP DOWNSPOUT TRANSITION AT SURFACE SWALE (TYP) SEE DWG C-301

GRASS LINED DITCH (TYP) SEE DWG C-301

RIPRAP TRANSITION AT SURFACE SWALE (TYP) SEE DWG C-301

SURFACE SWALE (TYP) SEE DWG C-300

RIPRAP/GRASS LINED DITCH TRANSITION (TYP) SEE DWG C-301

TOE BERM (TYP) SEE DWG C-300

FINAL COVER GRADES (TYP)

GRASS LINED DITCH (TYP) SEE DWG C-301

RIPRAP TRANSITION AT SURFACE SWALE (TYP) SEE DWG C-301

RIPRAP DOWNSPOUT (TYP) SEE DWG C-301

CULVERT PIPE BOOT SEE DWG C-303

RIPRAP DITCH RD-1 SEE DWG C-303

RIPRAP DITCH RD-2 SEE DWG C-303

SEDIMENT POND #3

TYPE I FINAL COVER TERMINATION (TYP) SEE DWG C-300

LIMIT OF FINAL COVER GEOEMEMBRANE LAYOUT POINT (TYP) SEE DWG C-304

LEACHATE POND

RIPRAP DITCH RD-3 (TYP) SEE DWG C-303

18' WIDE GRAVEL ACCESS ROAD SEE SECTION 4, DWG C-302

RIPRAP/GRASS LINED DITCH TRANSITION SEE DWG C-301

GRASS LINED DITCH (TYP) SEE DWG C-301

LIMIT OF FINAL COVER GEOMEMBRANE (TYP)

TYPE II FINAL COVER TERMINATION (TYP) SEE DWG C-300

LIMIT OF WORK (TYP)

PILE

MW-302A,B

MW-301

P-08-11A,B

30 0 60 120 FEET

FINAL COVER TERMINATION LEGEND

1 — TYPE I FINAL COVER TERMINATION
2 — TYPE II FINAL COVER TERMINATION
3 — TYPE III FINAL COVER TERMINATION
4 — TYPE IV FINAL COVER TERMINATION

NOTE: FOR DETAILS SEE DWG C-300

NOTES

1. BASE MAP OUTSIDE OF THE LIMIT OF WORK PREPARED BY AERIAL SURVEY & PHOTO, NORRIDGEWOCK, MAINE. PHOTO DATE 10/15/2015. GROUND CONTROL BY PLISGA & DAY, BANGOR, MAINE. BASE MAP INSIDE THE LIMIT OF WORK FROM AS BUILT SURVEY OF DOLBY LANDFILL PHASE 1 BY SARGENT CORPORATION, DATED OCTOBER, 2016. HORIZONTAL DATUM MAINE STATE COORDINATE SYSTEM EAST ZONE, NAD 83. VERTICAL DATUM: NAVD 1929.
2. ADDITIONAL DITCH TOPOGRAPHY ALONG TOE OF LANDFILL BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 10/7/2015.
3. BORINGS AND TEST PITS PERFORMED BY MAINE TEST BORING. FIELD LOCATION AND LOGS BY SEVEE & MAHER ENGINEERS.
4. CATCH BASIN DATA AS SHOWN ON HISTORICAL DRAWINGS FOR SITE DEVELOPMENT PLAN CELL 2, CELL 9 AND CELL 14 CONSTRUCTION AND CELL 12 CLOSURE.
5. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL BE IN COMPLIANCE WITH MEDEP BEST MANAGEMENT PRACTICES AND EXISTING FEDERAL, STATE, AND LOCAL PERMITS AND PERMITTING REQUIREMENTS FOR THE SITE.
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7. EXISTING COVER SOILS WITHIN THE LIMIT OF THE FINAL COVER GEOMEMBRANE SHALL BE STRIPPED TO THE TOP OF EXISTING GAS COLLECTION LAYER. THE CONTRACTOR SHALL VERIFY THE THICKNESS OF EXISTING GAS COLLECTION SAND OR GRIT AND SHALL ADD ADDITIONAL SAND AS NECESSARY TO ACHIEVE A MINIMUM SAND THICKNESS OF 6 INCHES.
8. CONTRACTOR SHALL PRESERVE THE EXISTING TOE DRAIN. EXISTING TOE DRAIN SHALL REMAIN TO COLLECT LEACHATE AND GAS BELOW THE COVER SYSTEM.

REV.	BY	DATE	STATUS
	NMT	11/2016	RECORD DRAWING
	PCM	6/2016	ISSUED FOR CONSTRUCTION
	PCM	4/2016	ISSUED FOR BID

STATE OF MAINE — SCOTT M. HUSTUS — No. 5 — LICENSED PROFESSIONAL ENGINEER — 10/6/16

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

SITE PLAN

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DRAWN BY:	SJM
DATE:	4/2016
CHECKED BY:	
LMN:	SITE PLAN
CTB:	SME-STD
JOB NO. 15250.00	DWG FILE BASE
	C-104

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PHASE III
ACRES = 22

LOW
4"GC
6"TD
12"LC
8"LC
18"LC
CB#34
CB#33
CB#32
CB#2
CB#3
CB#4
DMH D3-#8
DMH D3-#5
P-08-10
P-08-11A,B
PILE
MW-302A,B
MW-301
MW-307A,B

END CAP (TYP)

LIMIT OF FINAL COVER GEOMEMBRANE (TYP)

LOCATION OF GAS BUBBLE WHERE ADDITIONAL GAS VENT WAS INSTALLED SEE DWG C-303

FINAL COVER GRADES (TYP)

4" DIA SLOTTED CORR HDPE PIPE (TYP)

GAS VENTING SYSTEM (TYP) SEE DWG C-303

LIMIT OF WORK (TYP)

48" DIA CMP CULVERT

SEDIMENT POND #3

EXISTING 6" DIA PERFORATED HDPE TOE DRAIN TO REMAIN SEE NOTE 8

GAS VENT AT CB (TYP) SEE EXISTING CATCH BASIN ABANDONMENT DWG C-303

30" DIA BCCMP CULVERT

LEACHATE POND

24" DIA LEACHATE OUTLET PIPE

30 0 60 120 FEET

NOTES

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REV.	BY	DATE	STATUS
		11/2016	RECORD DRAWING
	PCM	6/2016	ISSUED FOR CONSTRUCTION
	PCM	4/2016	ISSUED FOR BID

STATE OF MAINE
SCOTT J. BUSH
No. 5
LICENSED PROFESSIONAL ENGINEER

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

GAS COLLECTION PIPING PLAN

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DATE:	4/2016
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LMN:	GC-PIPING
CTB:	SME-STD

JOB NO. 15250.00 DWG FILE BASE

C-105

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NOTES

1. BASE MAP OUTSIDE OF THE LIMIT OF WORK PREPARED BY AERIAL SURVEY & PHOTO, NORRIDGEWOCK, MAINE. PHOTO DATE 10/15/2015. GROUND CONTROL BY PLISGA & DAY, BANGOR, MAINE. BASE MAP INSIDE THE LIMIT OF WORK FROM AS BUILT SURVEY OF DOLBY LANDFILL PHASE 1 BY SARGENT CORPORATION, DATED OCTOBER, 2016. HORIZONTAL DATUM MAINE STATE COORDINATE SYSTEM EAST ZONE, NAD 83. VERTICAL DATUM: NAVD 1929.
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REV.	BY	DATE	STATUS
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STATE OF MAINE — PAUL C. MACDONALD — No. 10116 — LICENSED PROFESSIONAL ENGINEER

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

UNDERDRAIN PIPING PLAN

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DRAWN BY:	SJM
DATE:	4/2016
CHECKED BY:	PCM
LMN:	UD-PIPING
CTB:	SME-STD

JOB NO. 15250.00 DWG FILE BASE

C-106

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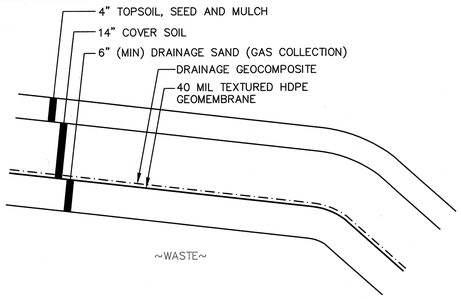
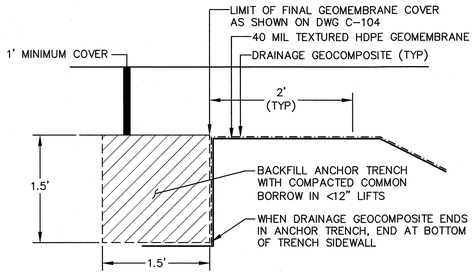
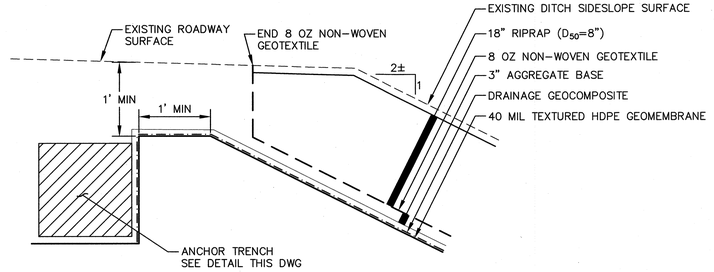


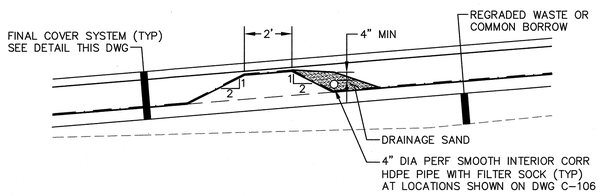
FINAL COVER SYSTEM
NTS



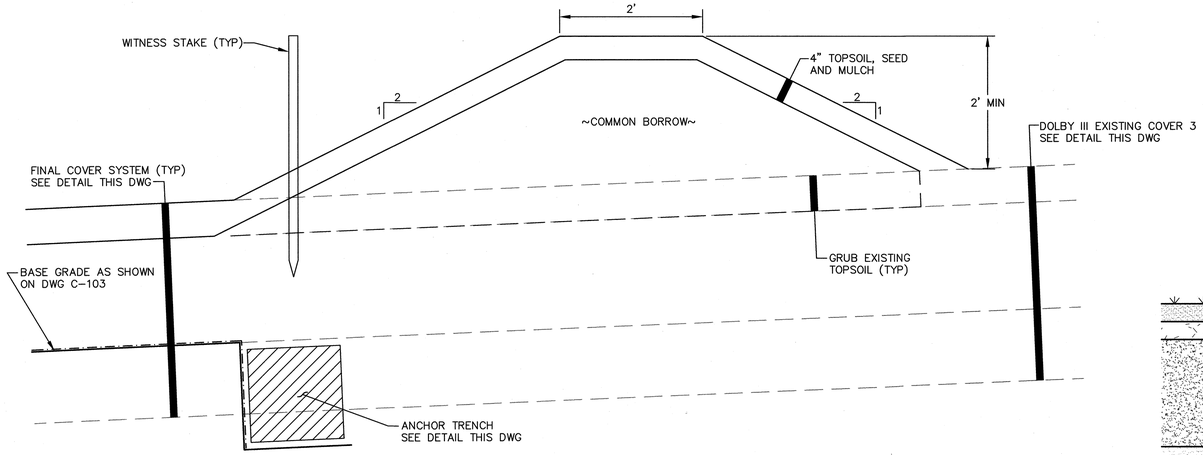
ANCHOR TRENCH
NTS



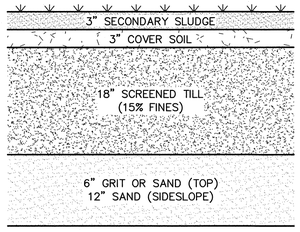
TYPE I FINAL COVER TERMINATION
NTS



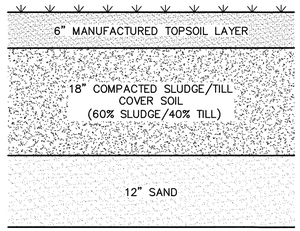
INTERMEDIATE UNDERDRAIN
NTS



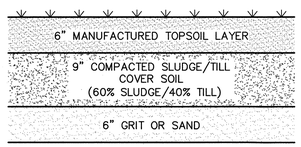
TYPE II FINAL COVER TERMINATION
NTS



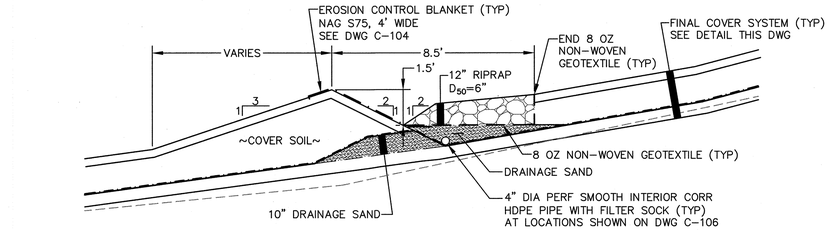
DOLBY III – EXISTING COVER 1
NTS



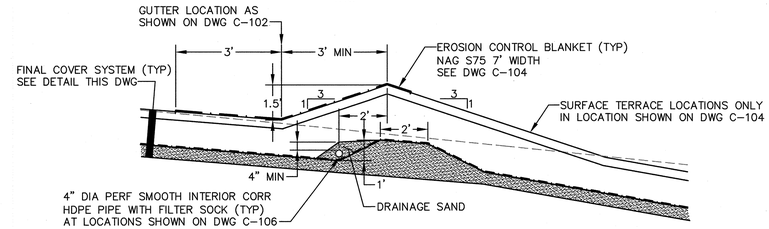
DOLBY III – EXISTING COVER 2
NTS



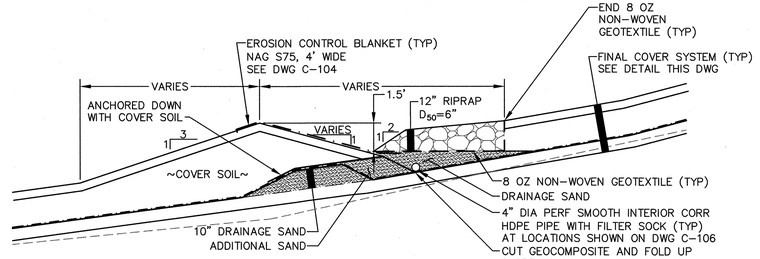
DOLBY III – EXISTING COVER 3
NTS



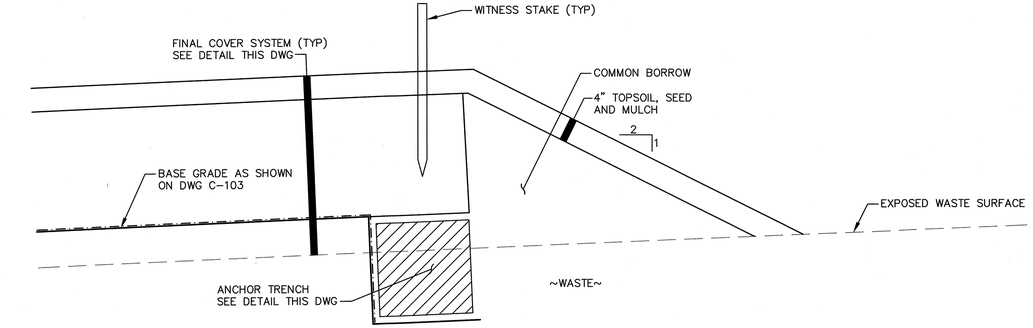
TOE BERM AND UNDERDRAIN
NTS



SURFACE SWALE AND UNDERDRAIN
NTS



RAIN FLAP
NTS



TYPE III FINAL COVER TERMINATION
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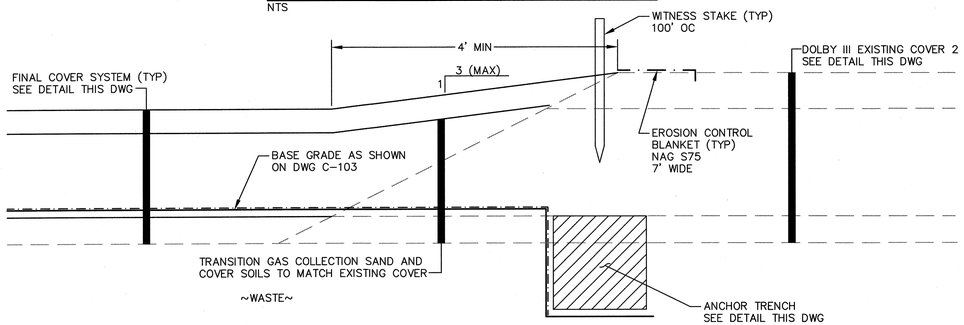


TYPE IV FINAL COVER TERMINATION
NTS

REV.	BY	DATE	STATUS
	NMT	11/2016	RECORD DRAWING
	PCM	6/2016	ISSUED FOR CONSTRUCTION
	PCM	4/2016	ISSUED FOR BID

STATE OF MAINE — PAUL C. MACH, JR. — No. 5 — LICENSED PROFESSIONAL ENGINEER

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

SECTIONS AND DETAILS

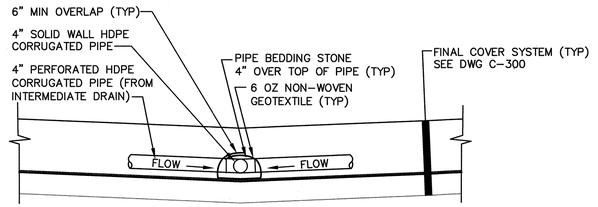
SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

DESIGN BY: PCM
DRAWN BY: SJM
DATE: 4/2016
CHECKED BY:
LMN: NONE
CTB: SME-STD

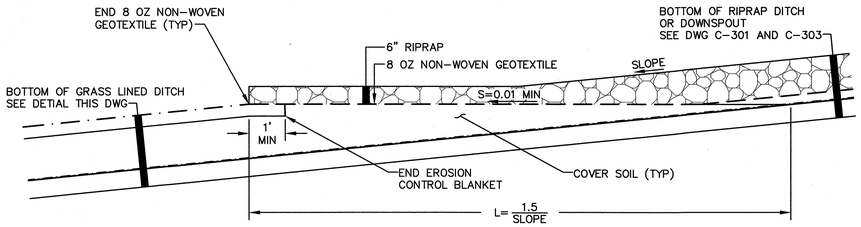
JOB NO. 15250.00 DWG FILE DETAILS

C-300

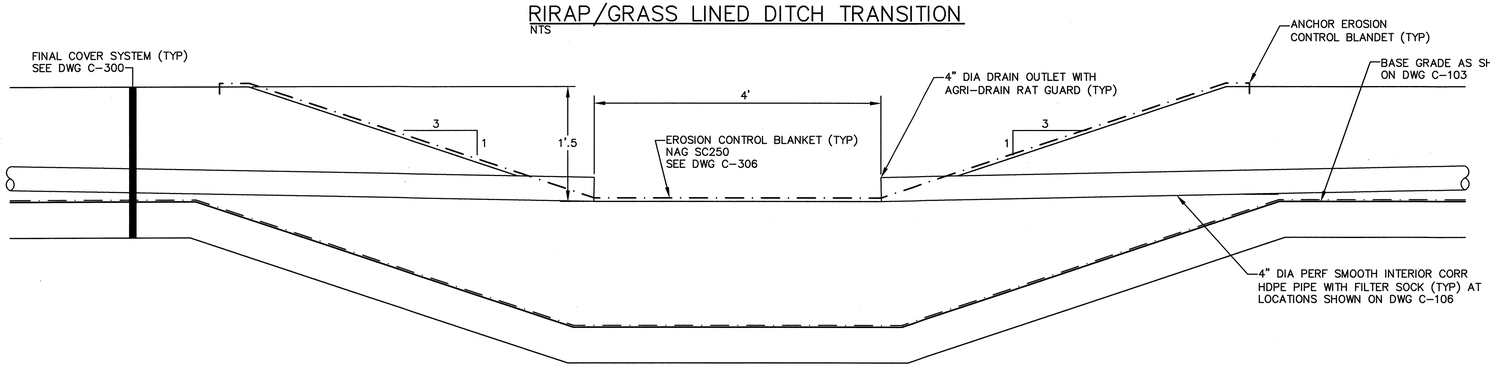
\\Mainenfs\Projects\COVER UPGRADE\AutoRevDwgs\PlansDETAILS.dwg 11/9/2016 3:29:47 PM jfl



UNDERDRAIN HEADER PIPE
NTS



RIRAP/GRASS LINED DITCH TRANSITION
NTS



GRASS LINED DITCH
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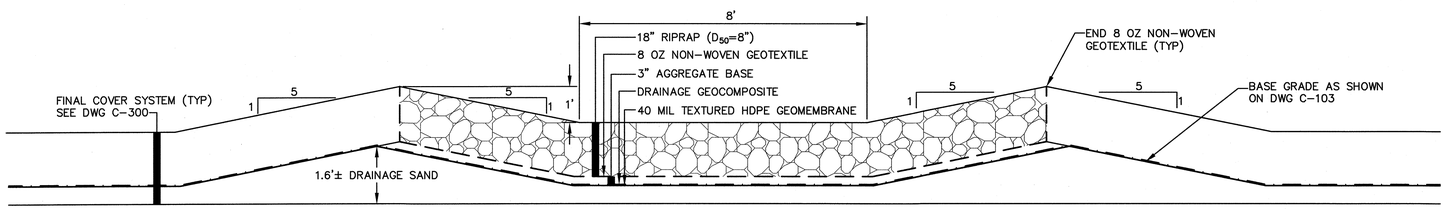
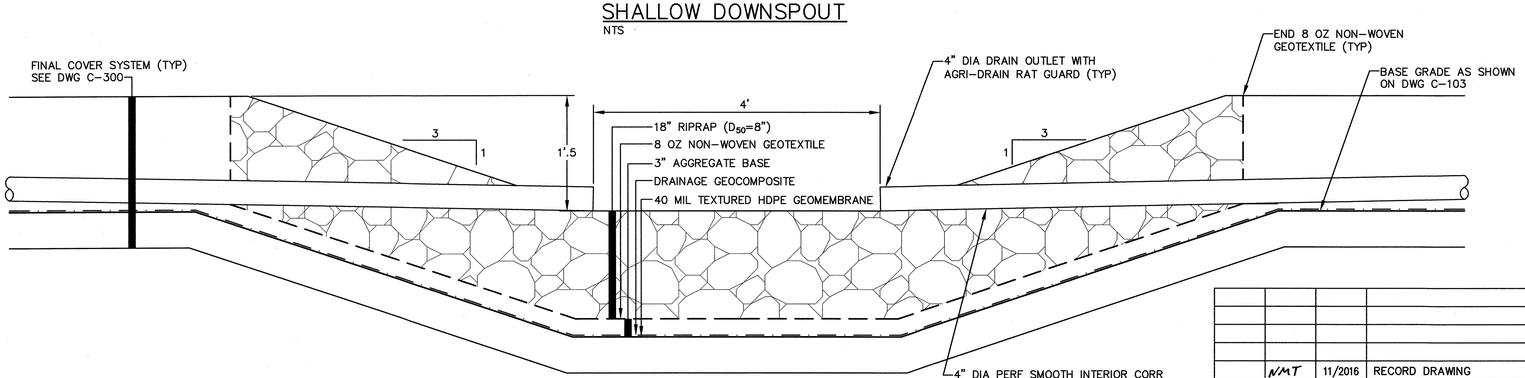


SHALLOW DOWNSPOUT
NTS



RIPRAP DOWNSPOUT
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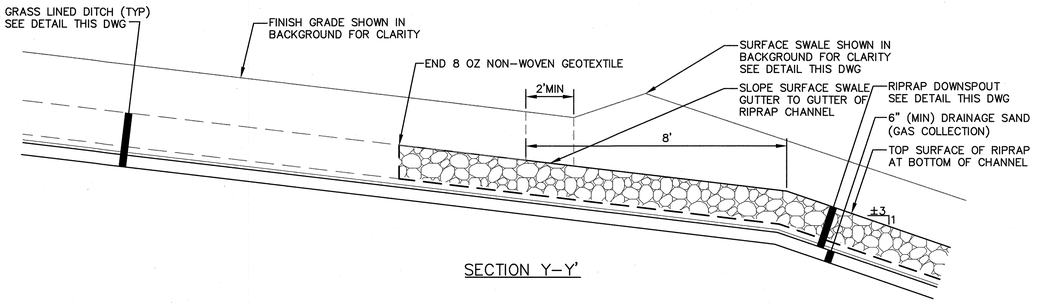

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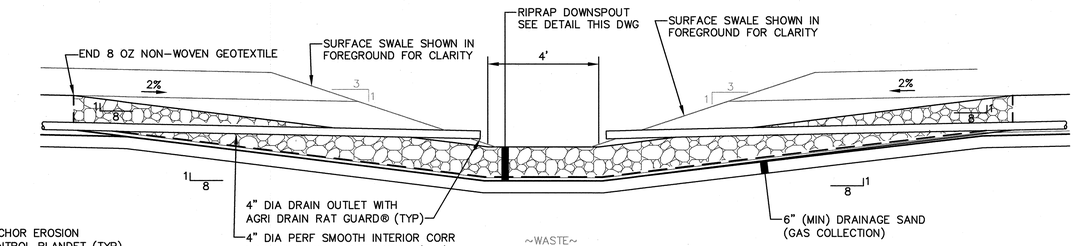

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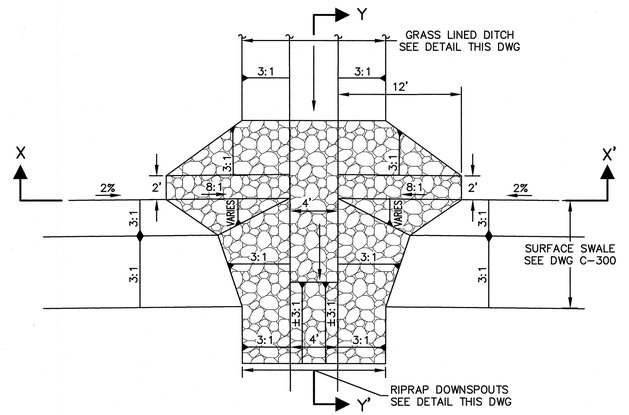

RIPRAP TRANSITION AT SURFACE SWALE
NTS

REV.	BY	DATE	STATUS
	NMT	11/2016	RECORD DRAWING
	PCM	6/2016	ISSUED FOR CONSTRUCTION
	PCM	4/2016	ISSUED FOR BID

STATE OF MAINE — MICHAEL L. CATELLI — No. 5144 — LICENSED PROFESSIONAL ENGINEER

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

SECTIONS AND DETAILS

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

DESIGN BY:	PCM
DRAWN BY:	SJM
DATE:	4/2016
CHECKED BY:	MLC
LMN:	NONE
CTB:	SME–STD

JOB NO. 15250.00 DWG FILE DETAILS

C–301

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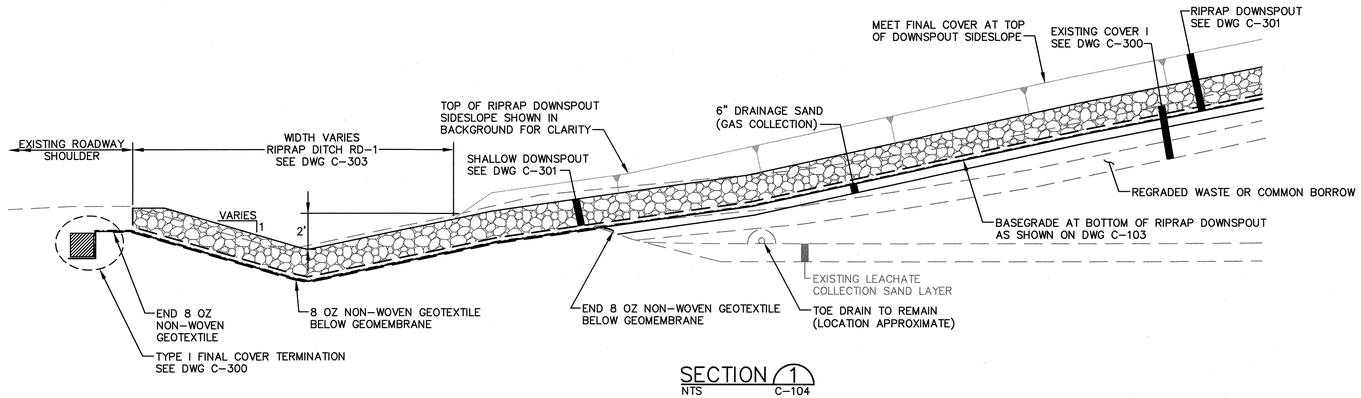
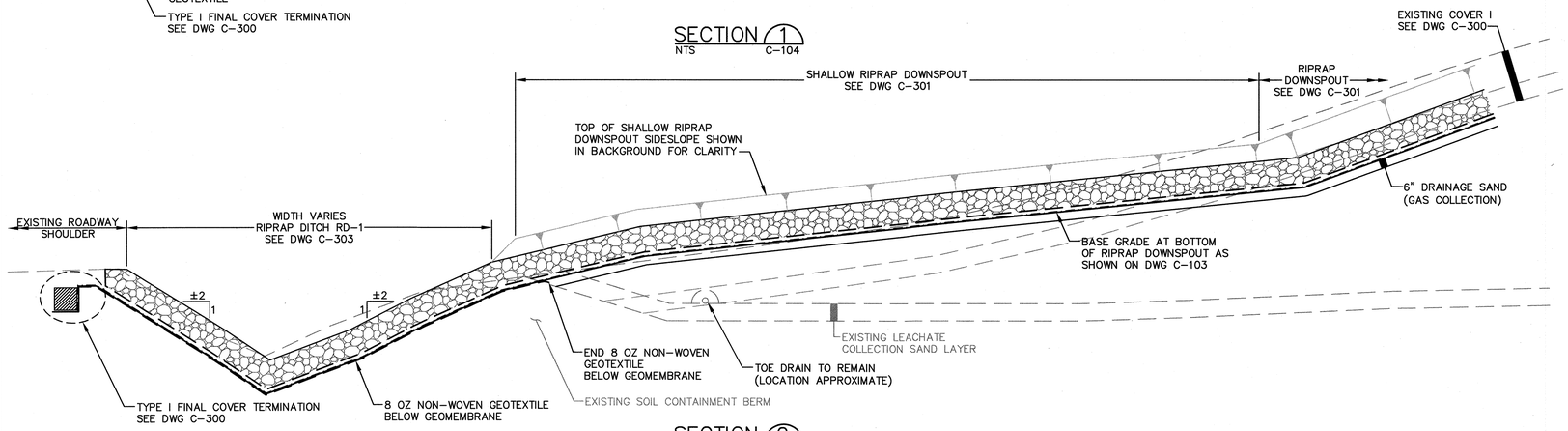


SECTION 1
NTS C-104



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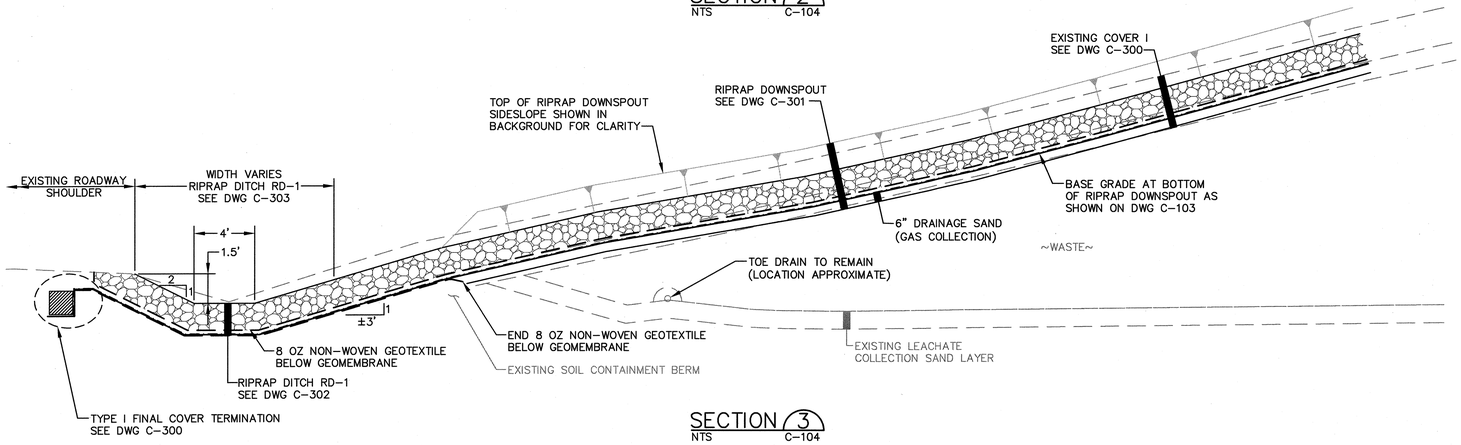

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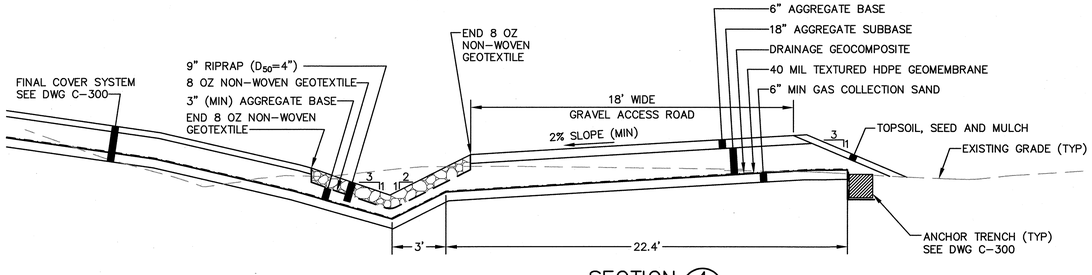

SECTION 4
NTS C-104

REV.	BY	DATE	STATUS
	NMT	11/2016	RECORD DRAWING
	PCM	6/2016	ISSUED FOR CONSTRUCTION
	PCM	4/2016	ISSUED FOR BID

STATE OF MAINE
CLYDE JR
No. 5147
LICENSED
PROFESSIONAL ENGINEER

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

SECTIONS AND DETAILS

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

DESIGN BY:	PCM
DRAWN BY:	SJM
DATE:	4/2016
CHECKED BY:	
LMN:	NONE
CTB:	SME-STD

JOB NO. 15250.00 DWG FILE DETAILS

C-302

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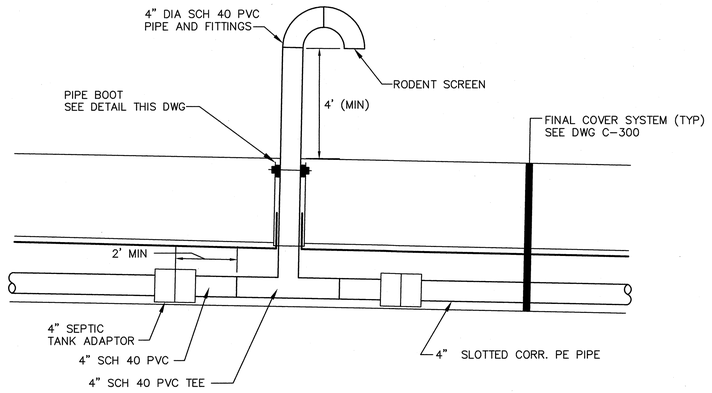
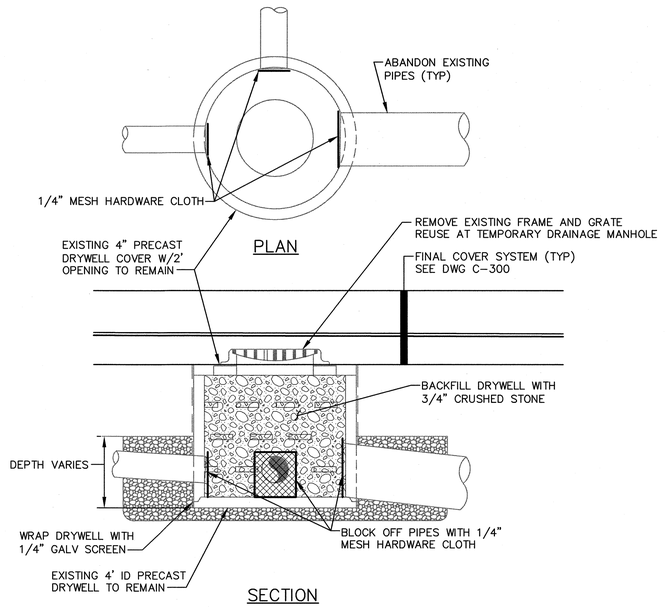
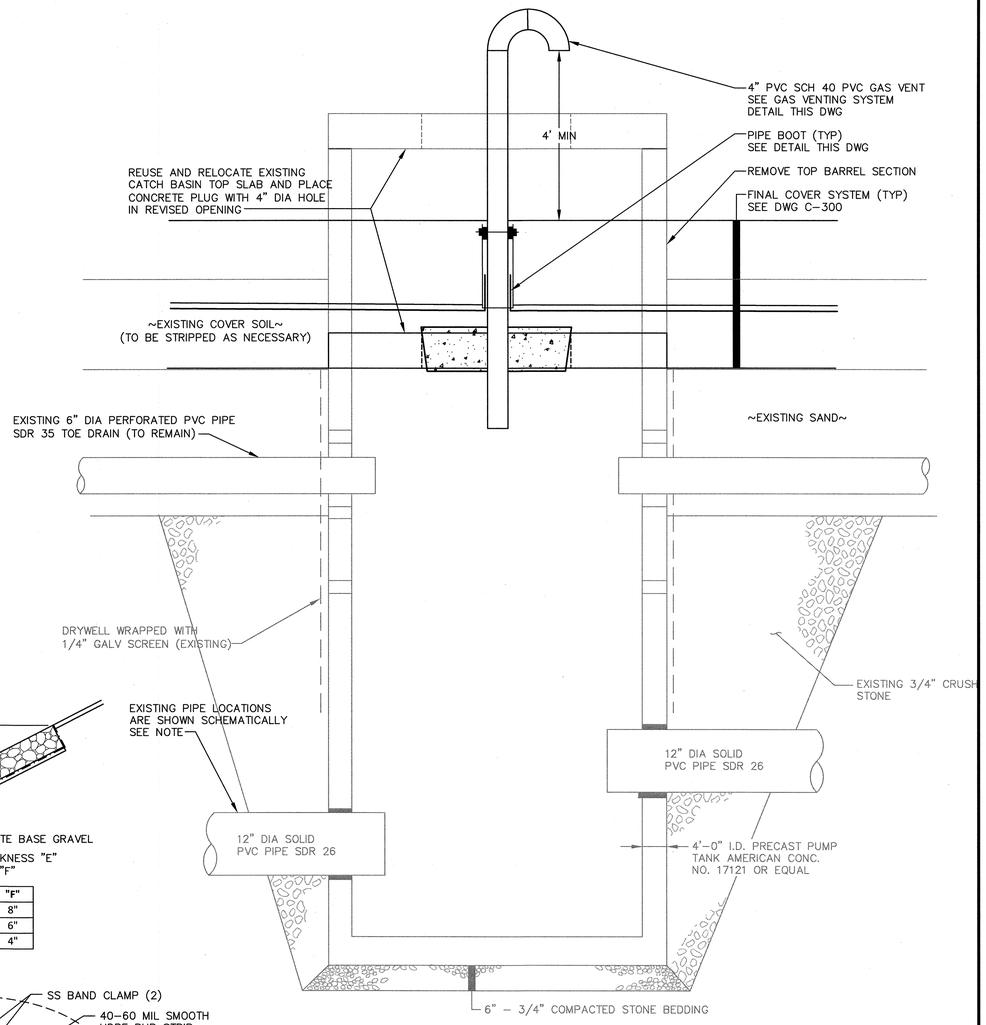


GAS VENTING SYSTEM
NTS

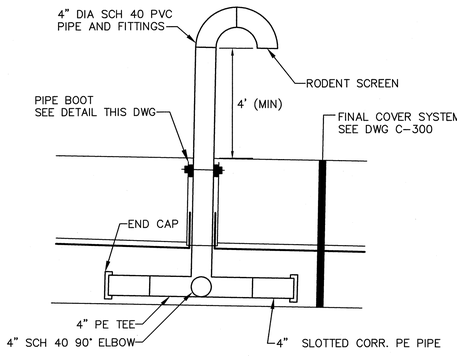


DRAINAGE MANHOLE ABANDONMENT
NTS

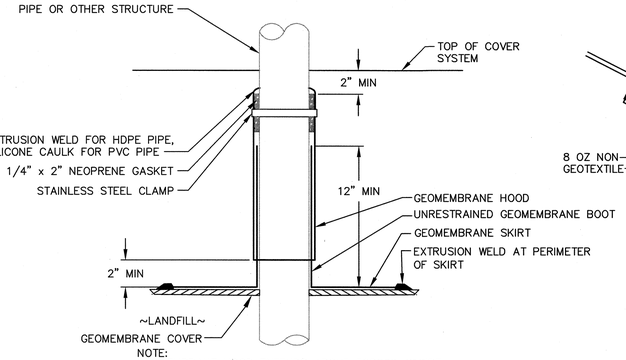


NOTE:
1. CONTRACTOR SHALL FIELD VERIFY PIPE LOCATIONS AND OTHER EXISTING CONDITIONS PRIOR TO ABANDONMENT.
2. COVER SYSTEM MATERIAL OVER CATCH BASINS VARIES TO AS THIN AS 6-8 INCHES.

EXISTING CATCH BASIN ABANDONMENT
NTS

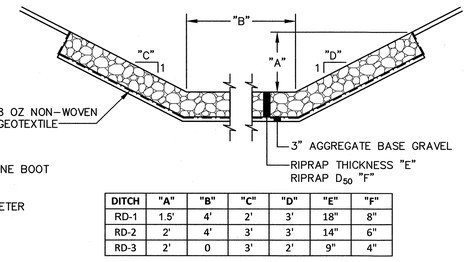


ADDITIONAL GAS VENT
NTS



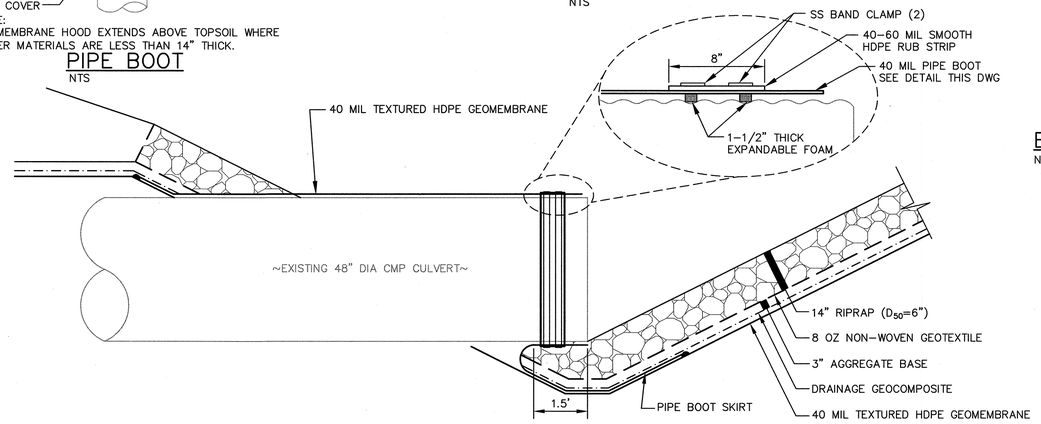
NOTE:
GEOMEMBRANE HOOD EXTENDS ABOVE TOPSOIL WHERE COVER MATERIALS ARE LESS THAN 14" THICK.

PIPE BOOT
NTS



DITCH	"A"	"B"	"C"	"D"	"E"	"F"
RD-1	1.5'	4'	2'	3'	18"	8"
RD-2	2'	4'	3'	3'	14"	6"
RD-3	2'	0	3'	2'	9"	4"

RIPRAP DITCH
NTS



CULVERT PIPE BOOT
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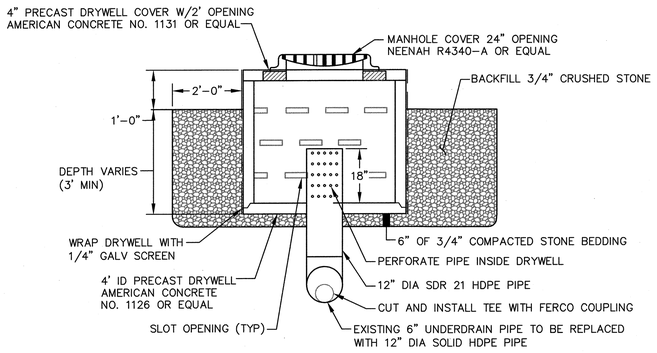

TEMPORARY DRAINAGE MANHOLE
NTS

REV.	BY	DATE	STATUS
	NMT	11/2016	RECORD DRAWING
	PCM	6/2016	ISSUED FOR CONSTRUCTION
	PCM	4/2016	ISSUED FOR BID

STATE OF MAINE
TIMOTHY H. POTE JR.
No. 5137
LICENSED
PROFESSIONAL ENGINEER

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

SECTIONS AND DETAILS

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

DESIGN BY: PCM
DRAWN BY: SJM
DATE: 4/2016
CHECKED BY:
LMN: NONE
CTB: SME-STD

JOB NO. 15250.00 DWG FILE DETAILS

C-303

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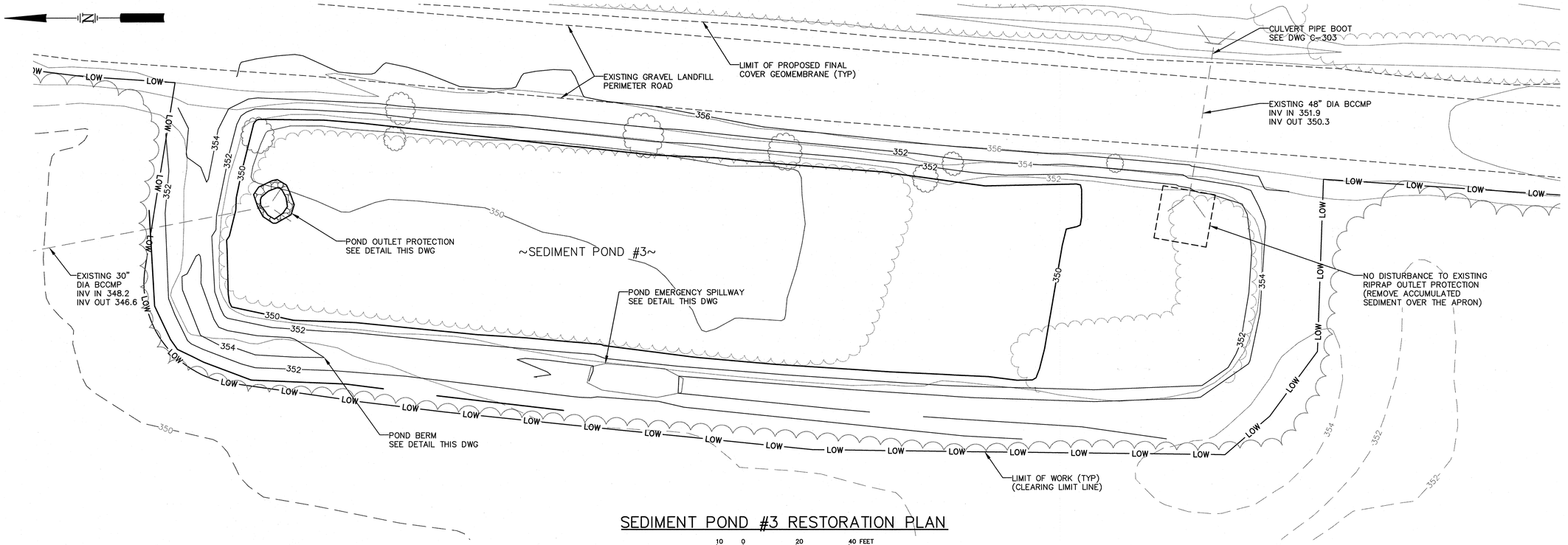
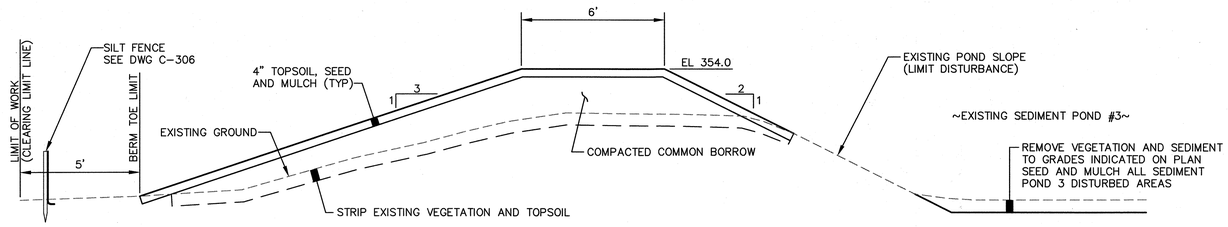
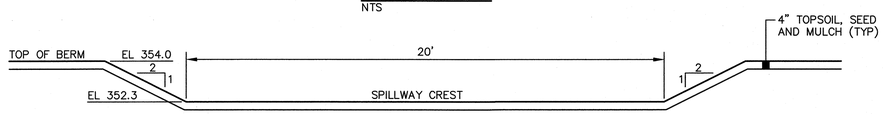


SEDIMENT POND #3 RESTORATION PLAN

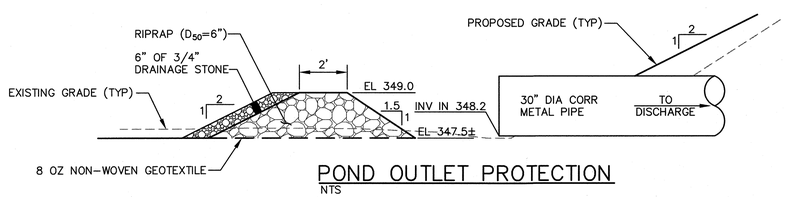
10 0 20 40 FEET



POND BERM
NTS



POND EMERGENCY SPILLWAY
NTS



POND OUTLET PROTECTION
NTS

NOTES

1. BASE MAP PREPARED BY AERIAL SURVEY & PHOTO, NORRIDGEWOCK, MAINE. PHOTO DATE 10/15/2015. HORIZONTAL DATUM MAINE STATE COORDINATE SYSTEM EAST ZONE, NAD 83. GROUND CONTROL BY PLISGA & DAY, BANGOR, MAINE. VERTICAL DATUM: NAVD 1929. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. ADDITIONAL DITCH TOPOGRAPHY ALONG TOE OF LANDFILL BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 10/7/2015.
3. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL BE IN COMPLIANCE WITH MEDEP BEST MANAGEMENT PRACTICES AND EXISTING FEDERAL, STATE, AND LOCAL PERMITS AND PERMITTING REQUIREMENTS FOR THE SITE.

REV.	BY	DATE	STATUS
	NAC	11/2016	RECORD DRAWING
	PCM	6/2016	ISSUED FOR CONSTRUCTION
	PCM	4/2016	ISSUED FOR BID

STATE OF MAINE — NICHOLAS A. CUOMO — No. 5 — LICENSED PROFESSIONAL ENGINEER

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

SEDIMENT POND #3 RESTORATION PLAN AND DETAILS

SME
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Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

DESIGN BY: PCM
DRAWN BY: SJM
DATE: 4/2016
CHECKED BY:
LMN: POND-RESTORE
CTB: SME-STD

JOB NO. 15250.00 DWG FILE BASE

C-305

I:\Maine\dfs\Pond3\COVER UPGRADE\Asset\Rest\Design\Plans\BASE.dwg, 12/7/2016 1:32:01 PM, jf

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EVANSVILLE, IN 47725
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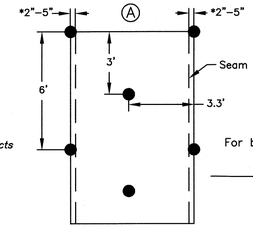
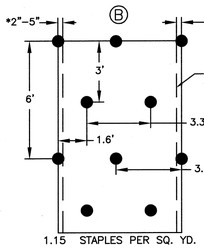


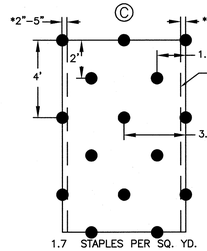
0.7 STAPLES PER SQ. YD.

For blankets with the North American Green DOT System™ place staples through each of the dots.



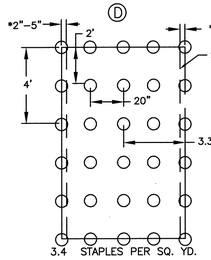
1.15 STAPLES PER SQ. YD.

For blankets with the North American Green DOT System™ place staples through each of the dots.



1.7 STAPLES PER SQ. YD.

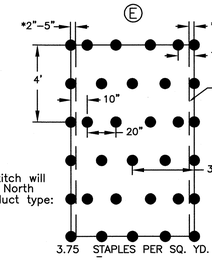
For blankets with the North American Green DOT System™ place staples through each of the dots.



3.4 STAPLES PER SQ. YD.

For blankets with the North American Green DOT System™ place staples through each of the dots.

*Location of Seam Stitch will vary depending on North American Green product type:

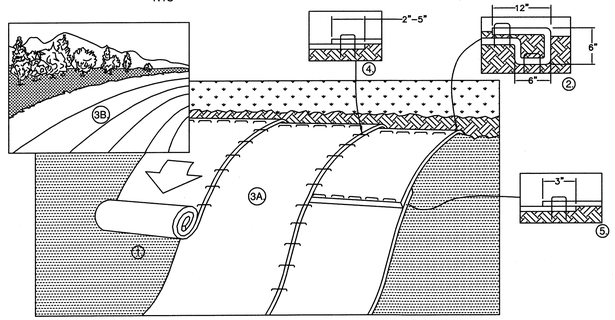


3.75 STAPLES PER SQ. YD.

For blankets with the North American Green DOT System™ place staples through each of the dots.

ECB STAPLE PATTERN GUIDE

NTS

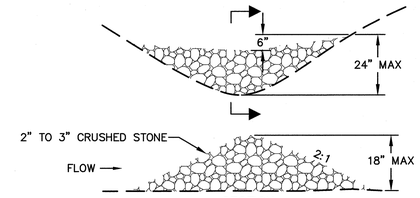


1. PREPARE BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S). INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6"DEEPx6"WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™. STAPLES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.

*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

SLOPE INSTALLATION

NTS



SECTION

STONE CHECK DAM

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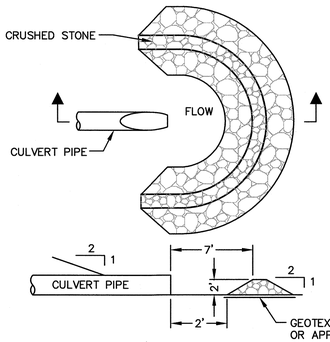

RIPRAP CULVERT INLET PROTECTION (TEMPORARY)

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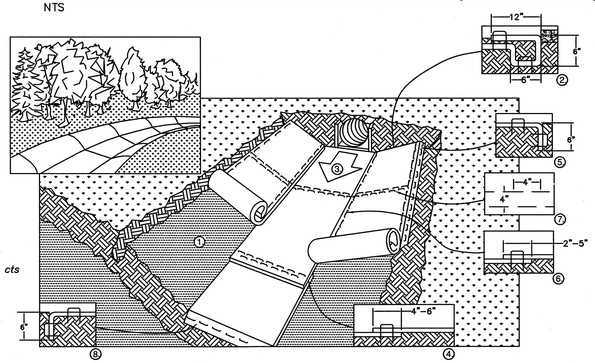
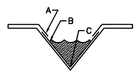


1. PREPARE BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S). INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6"DEEPx6"WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL CENTER RECP'S IN THE DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP'S END OVER END (SHINGLE STYLE) WITH A 4" TO 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECP'S.
5. FULL LENGTH EDGE OF RECP'S AT OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2" TO 5" (DEPENDING ON RECP'S TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF STAPLES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.



CRITICAL POINTS

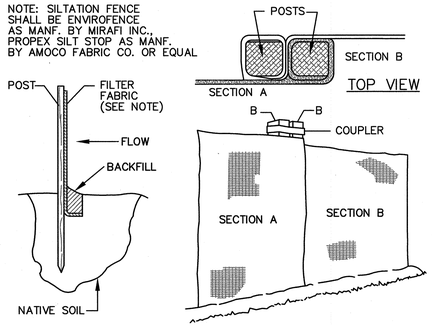
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

CHANNEL INSTALLATION

NTS

NOTE: SILTATION FENCE SHALL BE ENVIROFENCE AS MANF. BY MIRAFI INC., PROPEX SILT STOP AS MANF. BY AMOCO FABRIC CO. OR EQUAL



SILTATION FENCE

NTS

REV.	BY	DATE	STATUS
	NMT	11/2016	RECORD DRAWING
	PCM	6/2016	ISSUED FOR CONSTRUCTION
	PCM	4/2016	ISSUED FOR BID

TEMPORARY AND PERMANENT
EROSION AND SEDIMENTATION CONTROL

A. GENERAL

1. All soil erosion and sediment control will be done in accordance with the Maine Erosion and Sediment Control Best Management Practices, Maine Department of Environmental Protection, March 2003, and as currently revised.
2. The contractor will be responsible for the repair/replacement/ maintenance of all erosion control measures until all disturbed areas are stabilized. Contractor shall be responsible for plan preparation, documentation and inspection in accordance with Maine Construction General Permit obtained for this project.
3. Disturbed areas will be permanently stabilized within 7 days of final grading. Disturbed areas not to be worked upon within 14 days of disturbance, shall be temporarily stabilized within 7 days of the disturbance.
4. In all areas, removal of trees, bushes and other vegetation, as well as disturbance of topsoil will be kept to a minimum while allowing proper site operations.
5. Any suitable topsoil will be stripped and stockpiled for reuse in final grading. Topsoil will be stockpiled in a manner such that natural drainage is not obstructed and no off-site sediment damage will result. If a stockpile is necessary, the side slopes of the topsoil stockpile will not exceed 2:1. Silt fence will be installed around the perimeter of all topsoil stockpiles. Topsoil stockpiles will be surrounded with siltation fencing and will be temporarily seeded with aroostook rye, annual or perennial ryegrass, within 7 days of formation, or temporarily mulched if seeding cannot be done within the recommended seeding dates. Recommended seeding dates and application rates are as follows:

Aroostook Rye: Recommended Seeding Dates: 9/10 – 11/1
Application Rate: 112 lbs/acre

Perennial Ryegrass: Recommended Seeding Dates: 4/1 – 9/10
Application Rate: 85 lbs/acre

Mulch: o Hay or Straw
Application Rate: 2 – 3 tons/acre.
Anchor with tack or 300 lbs/acre fiber mulch

o Wood Fiber Cellulose
Application Rate: 4,000 lbs/acre.
Anchoring not required

B. TEMPORARY MEASURES

1. Silt Fence

(a) Silt fence will be installed prior to and downgradient of all construction activity where soil disturbance may result in erosion.

(b) The height of a silt fence will not exceed 36 inches.

(c) The filter fabric will be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth will be spliced together only at a support post, with a minimum 6-inch overlap, and securely sealed.

(d) Posts will be spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12 inches). When extra strength fabric is used without the wire support fence, post spacing will not exceed 6 feet.

(e) A trench will be excavated approximately 4 inches wide and 4 inches deep along the line of posts and upgradient from the barrier.

(f) The standard strength of filter fabric will be stapled or wired to the fence, and 8 inches of the fabric will be extended into the trench. The fabric will not extend more than 36 inches above the original ground surface. Filter fabric will not be stapled to existing trees.

(g) When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric will be stapled or wired directly to the posts with all other provisions of item (f) applying.

(h) The trench will be backfilled and the soil compacted over the filter fabric.

(i) Silt fences will be removed when they have served their useful purpose, but not before the upgradient areas have been permanently stabilized.

(j) Silt fences will be inspected immediately after each rainfall and at least daily during prolonged rainfall. They will be inspected if there are any signs of erosion or sedimentation below them. Any required repairs will be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, they will be replaced with a temporary crushed stone check dam.

(k) Should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life, and the barrier still be necessary, the fabric will be replaced promptly.

(l) Sediment deposits should be removed after each storm event if significant buildup has occurred or if deposits exceed 15 inches in depth.

B. TEMPORARY MEASURES (CONT)

2. Stone Check Dams

(a) Stone check dams should be constructed of 2 to 3-inch stone. The stone should be placed according to the configuration shown on the drawing. Hand or mechanical placement will be necessary to achieve complete coverage of the ditch or swale and to ensure that the center of the dam is lower than the edges.

(b) Check dams should be installed as the swale is being constructed.

(c) Sediment will be removed from behind the check dams when it has accumulated to one half of the original height of the dam.

(d) Check dams will be removed when the grass has matured sufficiently to protect the ditch or swale. The area beneath the check dams will be seeded and mulched immediately after they are removed.

(e) Regular inspections will be made to ensure that the center of the dam is lower than the edges. Erosion caused by high flows around the edges of the dam will be corrected. If evidence of siltation in the water is apparent downstream from the check dam, the check dam will be inspected and adjusted. Check dams will be checked for sediment accumulation after each significant rainfall.

3. WOOD WASTE COMPOST/BARK FILTER BERMS

(a) The filter berm shall consist of an approved wood waste compost/bark mulch mix or recycled composted bark flume grit and fragmented wood generated from water-flume log handling systems or small shredding of stumpage (6 inches long x 1/2" dia.). The mixture needs to be a well-graded blend of organic and mineral substance. The composition is usually manufactured on or off site and by blending it with a well graded sand and gravel. The objective is a tight, heavy, non-erodible mixture that is not composed of one uniform material, i.e. just bark mulch will not suffice. Comparable composted mixes can be used upon approval of the Department of Environmental Protection, Bureau of Land and Water Quality.

(b) The mix shall conform to the following standards:
* Moisture Content 30 – 60%
* PH-5.0-8.0
* Screen Size – 100% less than 6-inch max; 70% less than 0.75 inch.
* No less than 80% organic material (dry weight) by loss of ignition.
* No stones larger than 4 inch diameter.
* Silts, clays or sugar sands are not acceptable in the mix.

(c) Installation and Size of Berm: The dimensions of the berm are more a function of the strength of the material than the flows (forces) it will encounter. At a minimum the berm shall be 4 feet wide and 18 inches high. The berm shall be placed, uncompacted along a relatively level contour. Wherever possible the existing surface must be scoured and the mixture keyed in like any other sediment control measure.

(d) Maintenance: All deficiencies shall be immediately corrected with additional material place on top of the berm to reach the desired height. When the berm is decomposed, clogged with sediment, eroded, or becomes ineffective, it shall be replaced.

(e) Clean up and Retrieval: At the end of the job, an erosion control berm shall be removed or spread out so that the native earth can be seen below.

4. Erosion Control Mats

(a) During the growing season (April 1 to September 10) use mats indicated on drawings on channel bottoms and steep slopes >3H:1V.

(b) During the fall and winter (September 11 to March 31) use heavy grade mats as recommended by the engineer on all channel bottoms and slopes >4h:1V.

(c) Install mats in accordance with the manufacturer's recommendations.

5. Erosion Control Measures

(a) The smallest practical area of land shall be exposed to construction at any one time.

(b) The temporary erosion control measures shall be maintained until the permanent erosion control measures are present.

(c) All areas disturbed by construction shall have available loam placed before seeding (or an acceptable alternative).

(d) After construction is terminated, all temporary erosion control measures shall be removed and accumulated sediment disposed of in a secure location.

(e) Mulch shall be mowings of acceptable herbaceous growth, free from noxious weeds or woody stems, and shall be dry.

C. PERMANENT MEASURES

1. Riprapped Ditches, Aprons and Plunge Pools

(a) Construct riprapped ditches, aprons and plunge pools in accordance with the details shown on the Drawings.

(b) Stone for riprap will consist of sub-angular field stone or rough unhewn quarry stone. The stone will be hard and of such quality that it will not disintegrate on exposure to water or weathering, be chemically stable and suitable in all other respects for the purpose intended. The bulk specific gravity (saturated surface-dry basis) of the individual stones will be at least 2.5.

(c) The riprap should be placed so that it produces a dense well-graded mass of stone with a minimum of voids. The desired distribution of stones throughout the mass may be obtained by selective loading at the quarry, controlled clumping of successive loads during final placing, or by combination of these methods. The riprap should be placed to its full thickness on one operation. The riprap should not be placed in layers. The riprap should not be placed by dumping into chutes or similar methods which are likely to cause segregation of the various stone sizes. Care should be taken not to dislodge the underlying material when placing the stones.

The finished slope should be free of pockets of small stone or clusters of large stones. Hand placing may be necessary to achieve the required grades and a good distribution of stone sizes. Final thickness of the riprap blanket should be within plus or minus 1/4 of the specified thickness.

(d) Riprap will be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone. If repairs are needed, they should be accomplished immediately.

B. PERMANENT MEASURES (CONT)

2. Topsoil, Seed, Mulch

(a) Topsoil: Use stockpiled materials spread to the depths shown on the plans, if available. Approved topsoil substitutes may be used (refer to Section C-2-2 of Best Management Practices Handbook, see Note 2).

(b) Seeding should be completed by September 15 of each year. Areas not seeded or which do not obtain satisfactory growth by October 1, will be seeded with Aroostook Rye or mulched at rates previously specified herein. After November 1, or the first killing frost, disturbed areas should be treated as indicated in C below:

SEEDING SPECIFICATIONS

Seed	Permanent Seeding (180 lbs/acre)	Temporary Seeding (120 lbs/acre)
Red Fescue	50% by weight	
Red Top	2% by weight	100% by weight
White Cover	5% by weight	
Annual Ryegrass	25% by weight	
Birdsfoot Trefoil	3% by weight	
Kentucky Bluegrass	15% by weight	

Fertilizer: Apply 2 pounds per unit (87 lbs/acre) of nitrogen, phosphoric acid, and potash, or 413 lbs/acre of 19-19-19 fetilizer.

Lime: Apply liquid limestone at a rate of 3 tons per acre (138 lbs/1,000 sq ft).

Mulch: Mulch with weed-free hay or straw at 3.0 tons per acre with tack or 260 lbs/acre fiber mulch.

(c) If permanent vegetated stabilization cannot be established due to the season of the year, all exposed and disturbed areas not to undergo further disturbance are to have dormant seeding applied and be temporarily mulched to protect the site. The following methods may be used to perform a dormant seeding:

(1) Prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After the first killing frost and before snow fall, broadcast or hydroseed the selected seed mixture. Double the regular seeding rates for this type seeding.

(2) When soil conditions permit, between the first killing frost and before snow fall, prepare the seedbed, lime and fertilize, apply the selected seed mixture, and mulch and anchor. Double the regular seeding rates for this type of seeding.

Dormant seedings need to be anchored extremely well on slopes, ditch bases and areas of concentrated flows.

Dormant seeding requires inspection and reseeding as needed in the spring. All areas where cover is inadequate must be immediately reseeded and mulched as soon as possible.

(3) Erosion Control Mats
(a) Install mats as indicated on drawings and in accordance with manufacturers' recommendations

D. MAINTENANCE PLAN

1. Routine Maintenance Inspection shall be performed annually by a qualified person during wet weather to ensure that the facility performs as intended. Inspection priorities shall include checking erosion controls for accumulation of sediments.

2. Grassed Areas

(a) Lime according to a soil test or at a minimum of every five years using a rate of 2 tons per acre (100 pounds per 1,000 sq ft)

(b) Topdress with fertilizer in the early spring (before May 15) one year after planting with a balanced fertilizer, applying 50 pounds of nitrogen/acre (500 pounds of 10-20-20 per acre). Thereafter, fertilize according to a soil test or broadcast biennially, 300 pounds of 10-10-10 or equivalent per acre (7.5 pounds per 1,000 sq ft).

E. INSPECTIONS

1. Inspections will be undertaken by qualified personnel to ensure that temporary and permanent erosion and sedimentation controls are properly installed and correctly functioning, and that additional erosion control measures are installed if needed. Such inspections will occur weekly and before and after each significant rainfall event (1 inch or more within a 24 hour period) during construction until permanent erosion control measures have been properly installed and the site is stabilized.

2. A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and the major observations relating to the operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include: BMP's that need to be maintained; location(s) of BMP's that failed to operate as designed or proved inadequate for a particular location; and location(s) of where additional BMP's area needed that did not exist at the time of inspection. Follow-up to correct deficiencies or enhance controls must also be indicated in the log and dated, including what action was taken and when.

STATE OF MAINE
GUY E. COTE
No. 12116
LICENSED
PROFESSIONAL ENGINEER

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE – PHASE 1
EAST MILLINOCKET, MAINE

SECTIONS AND DETAILS

SME
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DESIGN BY: PCM
DRAWN BY: SJM
DATE: 4/2016
CHECKED BY:
LMN: NONE
CTB: SME-STD

JOB NO. 15250.00 DWG FILE DETAILS

C-306

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MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

TITLE	DWG NO
COVER SHEET	
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SITE BASE GRADING PLAN - PHASE 3	C-104
SITE PLAN - PHASE 2	C-105
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GAS COLLECTION AND FINGER DRAIN PIPING PLAN - PHASE 2	C-107
GAS COLLECTION AND FINGER DRAIN PIPING PLAN - PHASE 3	C-108
UNDERDRAIN PIPING PLAN - PHASE 2	C-109
UNDERDRAIN PIPING PLAN - PHASE 3	C-110
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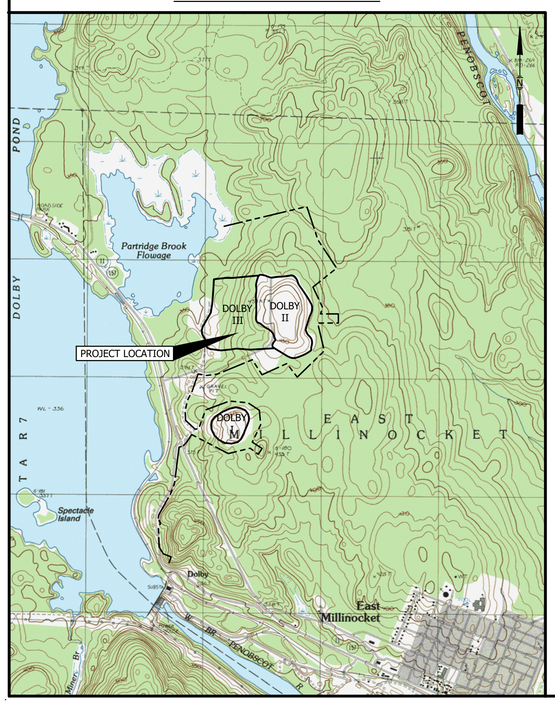
SECTIONS AND DETAILS	C-302
SECTIONS AND DETAILS	C-303

LOCATION MAP



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STATE OF MAINE
BRIAN D. PIERCE
9809
LICENSED
PROFESSIONAL ENGINEER
12/8/2023

RECORD DRAWINGS

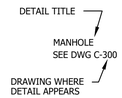
\\Maine-dc\Projects\DOLBY\LF\PDR\DOLBY | Plans 2-3\Submittals\Design Phase\DOLBY-Rec Dwgs-Cover.dwg, C-000, 12/20/2023 2:59:29 PM, bob

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			DRAINAGE COURSE (WITH DIRECTION)	G	UG	UNDERGROUND GAS MAIN
DATE		NORTH ARROW (MAGNETIC)			EDGE OF WATER	T	UT	UNDERGROUND TELEPHONE LINE
N		NORTH ARROW (PLAN NORTH)			WATER ELEVATION (GROUND OR SURFACE)	E	UE	UNDERGROUND ELECTRICAL LINE
25	25	CONTOUR LINES			FENCE LINE (WOOD)	OE	OE	OVERHEAD ELECTRICAL LINE
	INV 25.56	SPOT ELEVATION (INVERT ELEVATION)	X X	X X	FENCE LINE (WIRE)	OT	OT	OVERHEAD TELEPHONE LINE
		EXISTING GROUND			STONE WALL	12" SS	12" SS	SANITARY SEWER
		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION PT.			RETAINING WALL	8" FM	8" FM	FORCE MAIN
		PROPERTY LINE OR R.O.W.			GUARD RAIL	8" W	8" W	WATER MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			BUILDING AND STRUCTURES	12" SD	12" SD	STORM DRAIN
	0+00 1+00	CONSTRUCTION BASELINE		2 1 OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)	8" UD	8" UD	UNDERDRAIN
		BOUNDARY LINE (State, County, Municipality)	TOP OF SLOPE 2	TOP OF SLOPE 2	SLOPES (WITH SLOPE RATIO)	6" PD	6" PD	PERIMETER DRAIN
⊡	■	SURVEY MONUMENT			EDGE OF ROAD	6" LT	6" LT	LEACHATE TRANSPORT
		SURVEY CONTROL		C P	CUT OR FILL LINE	6" LC	6" LC	LEACHATE COLLECTION
○	●	PROPERTY PIN, DRILL HOLE, PK, OR STAKE			BITUMINOUS PAVEMENT	LD	6" LD	LEAK DETECTION
		WOODS OR BRUSH LINE			CONCRETE	GC	6" G	GAS COLLECTION
		INDIVIDUAL TREE	B-12 MW-12 P-12	B-12 MW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER	▷	▶	REDUCER
		MAPPED WETLAND	TP-12	TP-12	TEST PIT AND NUMBER			MECHANICAL CAP OR PLUG
◍	◑	GAS VENT	△ SW-12	▲ SW-12	SURFACE WATER SAMPLE LOCATION			COUPLING
◍		GAS VENT (CAPPED)			GAS EXTRACTION WELL			BEND
⊘	⊘	CLEAN OUT STRUCTURE	○	●	MANHOLE			TEE
		CULVERT	◎	✪	CATCH BASIN			PIPE TO BE ABANDONED
		RAILROAD			WATER OR GAS VALVE			RISER PIPE & INLET GRATE
✪	✪	SLOPE INCLINOMETER			HYDRANT	▤	▤	STORM GRATE
⊠	⊠	VIBRATING WIRE SETTLEMENT CELL			AIR RELEASE VALVE			DRAINAGE INLET STRUCTURE
⊗	⊗	VERTICAL/HORIZONTAL DISPLACEMENT MONUMENT			SURGE RELEASE VALVE	□	■	UNDERDRAIN SUMP
▷	▶	VERTICAL DISPLACEMENT MONUMENT			UTILITY POLE		SF	SILTATION FENCE
⊗	⊗	LIQUID SETTLEMENT GAGE			LIGHT POLE		CLL	CLEARING OR CONSTRUCTION LIMIT LINE

ACCMP	ASPHALT COATED CMP	D	DEGREE OF CURVE	HDPE	HIGH DENSITY POLYETHYLENE	PERF	PERFORATED
ACP	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HORIZ	HORIZONTAL	PP	POWER POLE
AC	ACRE	DEG OR °	DEGREE	HP	HORSEPOWER	PSI	POUNDS PER SQUARE INCH
AGG	AGGREGATE	DEPT	DEPARTMENT	HYD	HYDRANT	PVC	POLYVINYL CHLORIDE
ALUM	ALUMINUM	DI	DUCTILE IRON			PVMT	PAVEMENT
APPD	APPROVED	DIA OR Ø	DIAMETER	ID	INSIDE DIAMETER		
APPROX	APPROXIMATE	DIM	DIMENSION	IN OR "	INCHES	QTY	QUANTITY
ARMH	AIR RELEASE MANHOLE	DIST	DISTANCE	INV	INVERT		
ASB	ASBESTOS	DN	DOWN	INV EL	INVERT ELEVATION	RCP	REINFORCED CONCRETE PIPE
ASP	ASPHALT	DR	DRAIN			ROW	RIGHT OF WAY
AUTO	AUTOMATIC	DWG	DRAWING	LB	POUND	RAD	RADIUS
AUX	AUXILIARY			LC	LEACHATE COLLECTION	REQD	REQUIRED
AVE	AVENUE	EA	EACH	LD	LEAK DETECTION	RT	RIGHT
AZ	AZIMUTH	EG	EXISTING GROUND OR GRADE	LF	LINEAR FEET	RTE	ROUTE
		ELEC	ELECTRIC	LOC	LOCATION		
BCCMP	BITUMINOUS COATED CMP	EL	ELEVATION	LT	LEACHATE TRANSPORT	S	SLOPE
BM	BENCH MARK	ELB	ELBOW			SCH	SCHEDULE
BIT	BITUMINOUS	EOP	EDGE OF PAVEMENT	MH	MANHOLE	SF	SQUARE FEET
BLDG	BUILDING	EQUIP	EQUIPMENT	MJ	MECHANICAL JOINT	SHT	SHEET
BOT	BOTTOM	EST	ESTIMATED	MATL	MATERIAL	SMH	SANITARY MANHOLE
BRG	BEARING	EXC	EXCAVATE	MAX	MAXIMUM	ST	STREET
BV	BALL VALVE	EXIST	EXISTING	MFR	MANUFACTURE	STA	STATION
				MIN	MINIMUM	SY	SQUARE YARD
CB	CATCH BASIN	FG	FINISH GRADE	MISC	MISCELLANEOUS		
CEN	CENTER	FBRGL	FIBERGLASS	MON	MONUMENT	TAN	TANGENT
CEM LIN	CEMENT LINED	FDN	FOUNDATION			TDH	TOTAL DYNAMIC HEAD
CMP	CORRUGATED METAL PIPE	FLEX	FLEXIBLE	NITC	NOT IN THIS CONTRACT	TEMP	TEMPORARY
CO	CLEAN OUT	FLG	FLANGE	NTS	NOT TO SCALE	TYP	TYPICAL
CF	CUBIC FEET	FLR	FLOOR	N/F	NOW OR FORMERLY		
CFS	CUBIC FEET PER SECOND	FPS	FEET PER SECOND	NO OR #	NUMBER	UD	UNDERDRAIN
CI	CAST IRON	FT OR '	FEET				
CL	CLASS	FTG	FOOTING	OC	ON CENTER	V	VOLTS
CONC	CONCRETE			OD	OUTSIDE DIAMETER	VA TEE	VALVE ANCHORING TEE
CONST	CONSTRUCTION	GA	GAUGE			VERT	VERTICAL
CONTR	CONTRACTOR	GAL	GALLON	PC	POINT OF CURVE		
CS	CURB STOP	GALV	GALVANIZED	PD	PERIMETER DRAIN	WG	WATER GATE
CTR	CENTER	GPD	GALLONS PER DAY	PI	POINT OF INTERSECTION	W/	WITH
CU	COPPER	GPM	GALLONS PER MINUTE	PIV	POST INDICATOR VALVE	W/O	WITHOUT
CY	CUBIC YARD			PT	POINT OF TANGENT	YD	YARD

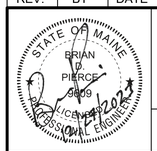
VIEW MARKERS & IDENTIFICATION



GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY FULLY WITH CONDITIONS OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION (MEDEP) OPERATING PERMIT, BOARD ORDER, MEDEP CONSTRUCTION GENERAL PERMIT, MEDEP "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES", AND MAINE DEPARTMENT OF TRANSPORTATION (MDOT) ENTRANCE PERMIT REQUIREMENTS, AS APPLICABLE.
2. THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL ABIDE BY ALL SAFETY REQUIREMENTS ASSOCIATED WITH WORKING AT AN ACTIVE SOLID WASTE LANDFILL FACILITY (i.e., RISK OF WORKER EXPOSURE TO LANDFILL GASES, LEACHATE, SOLID WASTE) INCLUDING THE FOLLOWING:
   - COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS;
   - INCLUDING, BUT NOT LIMITED TO, USE OF HARD HATS, SAFETY GLASSES, AND FLUORESCENT SAFETY VESTS AT ALL TIMES;
   - FOLLOW ALL APPLICABLE OSHA RULES, INCLUDING, BUT NOT LIMITED TO, THOSE RELATED TO MANHOLES, CATCH BASINS, PUMP STATIONS, TEST PITS, TRENCHES, ETC.
3. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO ENSURE THAT NO SILTATION OF STORMWATER DRAINAGE COURSES OCCURS AS A RESULT OF SOIL DISTURBANCE ASSOCIATED WITH THE CONTRACT SCOPE OF WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING COMPLETE PROTECTION OF THE PROJECT DURING CONSTRUCTION FROM ANY ACTS OF NATURE OR MAN, SUCH AS, BUT NOT LIMITED TO, FLOODS, WIND DAMAGE, EARTH SLIDES, AND SLOPE FAILURES. DAMAGE TO THE PROJECT CAUSED BY SUCH ACTS WILL NOT BE SUFFICIENT CAUSE TO INCREASE CONTRACT COSTS TO THE OWNER.
5. THE CONTRACTOR SHALL PROTECT EXISTING ON-SITE STRUCTURES FROM DAMAGE DURING CONSTRUCTION, INCLUDING: MONITORING WELLS, POWER LINES, MAINTENANCE FACILITIES, EXISTING LEACHATE COLLECTION, LINER AND TRANSPORT SYSTEMS, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS REQUIRED TO CORRECT DAMAGE MADE TO EXISTING ON-SITE STRUCTURES DESCRIBED ABOVE RESULTING FROM ANY CONSTRUCTION ACTIVITY.
6. THE DESIGN INTENT, AS DETERMINED BY THE ENGINEER, WILL GOVERN IN THE CASE OF DISCREPANCY IN OR BETWEEN THE DRAWINGS AND SPECIFICATIONS. THE SPECIFICATIONS ARE INTENDED TO SUPPLEMENT AND CLARIFY THE WORK SHOWN IN THE DRAWINGS, AS SOMETIMES WORK IS CALLED FOR IN THE SPECIFICATIONS THAT IS NOT SHOWN ON THE DRAWINGS AND SOMETIMES THE DRAWINGS INDICATE WORK THAT IS NOT MENTIONED IN THE SPECIFICATIONS. BOTH DRAWINGS AND SPECIFICATIONS MUST BE COMPLIED WITH IN ORDER TO FULFILL THE CONTRACT REQUIREMENTS, AND ANY WORK CALLED FOR BY EITHER IS AS BINDING AS THOUGH IT WERE CALLED FOR BY BOTH. THE CONTRACTOR SHALL TAKE NO ADVANTAGE OF ANY ERROR OR OMISSION IN THE DRAWINGS OR OF ANY DISCREPANCY BETWEEN THE DRAWINGS AND SPECIFICATIONS. IN ALL CASES OF DOUBT AS TO THE TRUE MEANING OF THE DRAWINGS AND SPECIFICATIONS, THE DECISION OF THE ENGINEER WILL BE FINAL AND CONCLUSIVE.

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW



MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SYMBOLS AND ABBREVIATIONS

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	NMT
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DATE:	12/2021
CHECKED BY:	BDP
LMN:	NONE
CTB:	SME-STD
JOB NO. 21588.07	DWG FILE SYMSHT

C-100

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NOTES

1. BASE MAP OUTSIDE THE LIMIT OF WORK PREPARED BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 5/4/2021. HORIZONTAL DATUM MAINE STATE COORDINATE SYSTEM EAST ZONE, NAD 83. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. VERTICAL DATUM: NAVD 1929.
3. ADDITIONAL DITCH TOPOGRAPHY ALONG TOE OF DOLBY III LANDFILL BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 10/7/2015
4. PHASED CLOSURE AREAS ARE APPROXIMATE AND ARE SUBJECT TO CHANGE.
5. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL BE IN COMPLIANCE WITH MEDEP BEST MANAGEMENT PRACTICES AND EXISTING FEDERAL, STATE, AND LOCAL PERMITS AND PERMITTING REQUIREMENTS FOR THE SITE.

75 0 150 300 FEET

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN D PIERCE
3809
LICENSED PROFESSIONAL ENGINEER
12/14/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

PHASED CLOSURE PLAN

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DATE:	12/2021
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LMN:	PHASED
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

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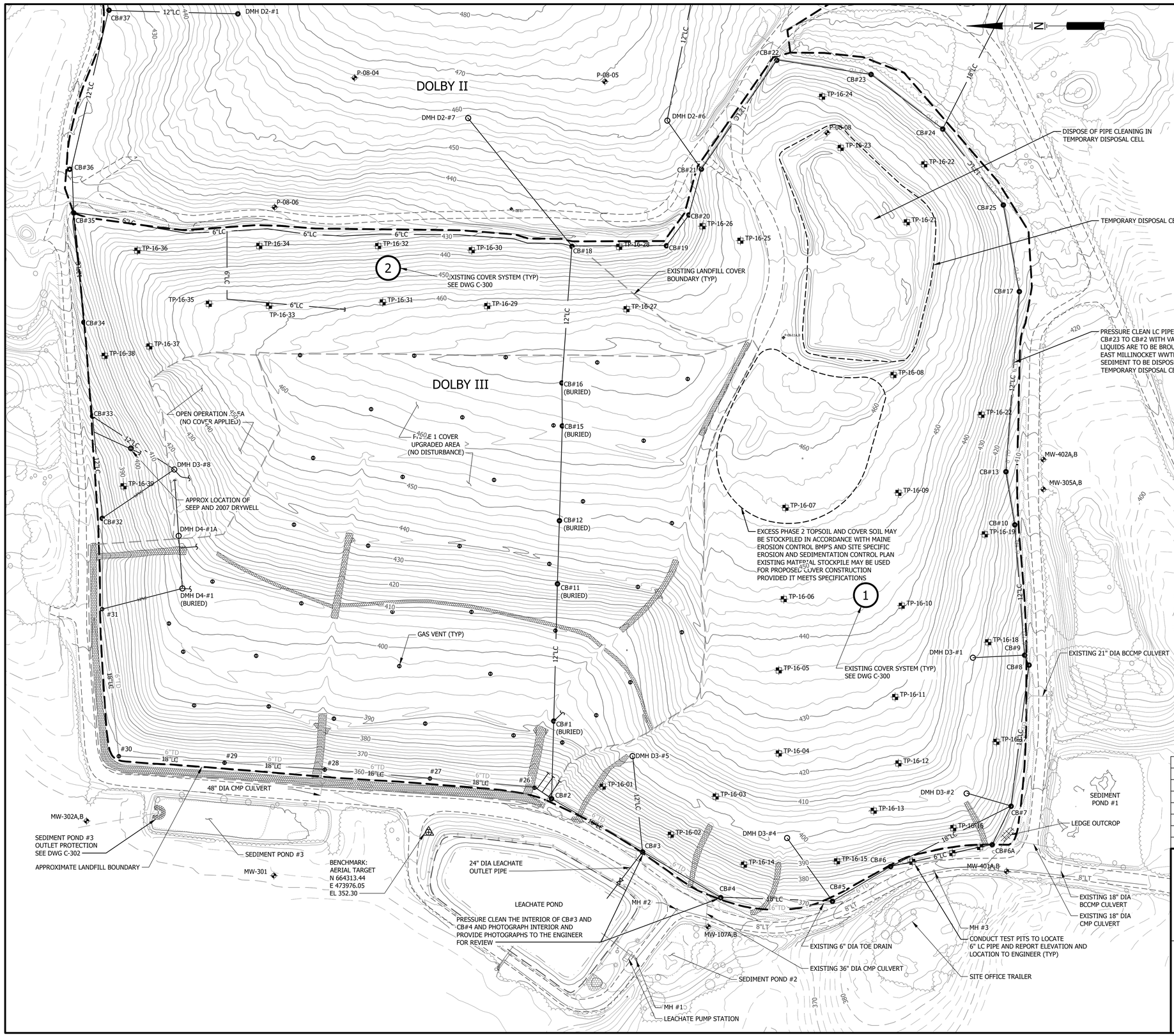

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5. CATCH BASIN DATA AS SHOWN ON HISTORICAL DRAWINGS FOR SITE DEVELOPMENT PLAN CELL 2, CELL 9 AND CELL 14 CONSTRUCTION AND CELL 12 CLOSURE.
6. ALL SITE AND CONSTRUCTION ACTIVITIES (INCLUDING SOIL STOCKPILE AREAS) SHALL BE IN COMPLIANCE WITH MEDEP BEST MANAGEMENT PRACTICES AND EXISTING FEDERAL, STATE, AND LOCAL PERMITS AND PERMITTING REQUIREMENTS FOR THE SITE.

PHASE 2 CATCH BASIN SCHEDULE

CB ID	INV IN	INV OUT
CB#18	422.2 (18") 423.7 (12")	423.2 (18")
CB#19	428.3 (6") 428.0(6")	425.4(12")
CB#20	437.3 (6") 437.3(6")	434.7(12")
CB#21	448.9 (6") 449.1(6") 436.9(12") 445.4(12")	445.5 (12")
CB#32	358.8 (18")	358.65 (18")
CB#33	373.2 (18")	373.2 (18")
CB#34	391.2 (12") 397.0 (8")	391.1 (12")
CB#35	407.2 (12") 415.0 (6") 415.0 (6")	407.1 (12")

PHASE 3 CATCH BASIN SCHEDULE

CB ID	INV IN	INV OUT
CB#2	350.9 (18") 350.5 (18")	350.5 (18")
CB#3	349.0 (18") 348.8 (18")	345.8 (24")
CB#4	352.7 (18") 349.4 (18")	349.23 (18")
CB#5	361.9 (18")	354.1 (18")
CB#6	368.1 (18")	362.2 (18")
CB#6A	378.9 (6")	379.2 (6")
CB#7	371.2 (18")	371.0 (18")
CB#8	375.6 (18")	375.13 (18")
CB#9	378.7 (12") 381.3 (2")	378.1 (18")
CB#10	392.8 (12")	392.5 (12")

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
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STATE OF MAINE
BRIAN D. PIERCE
9809
LICENSED PROFESSIONAL ENGINEER
12/14/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

EXISTING CONDITIONS PLAN

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SEVEE & MAHER ENGINEERS
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Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

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DATE:	12/2021
CHECKED BY:	BDP
LMN:	EXCON
CTB:	SME-STD
JOB NO. 21588.07	DWG FILE BASE

C-102

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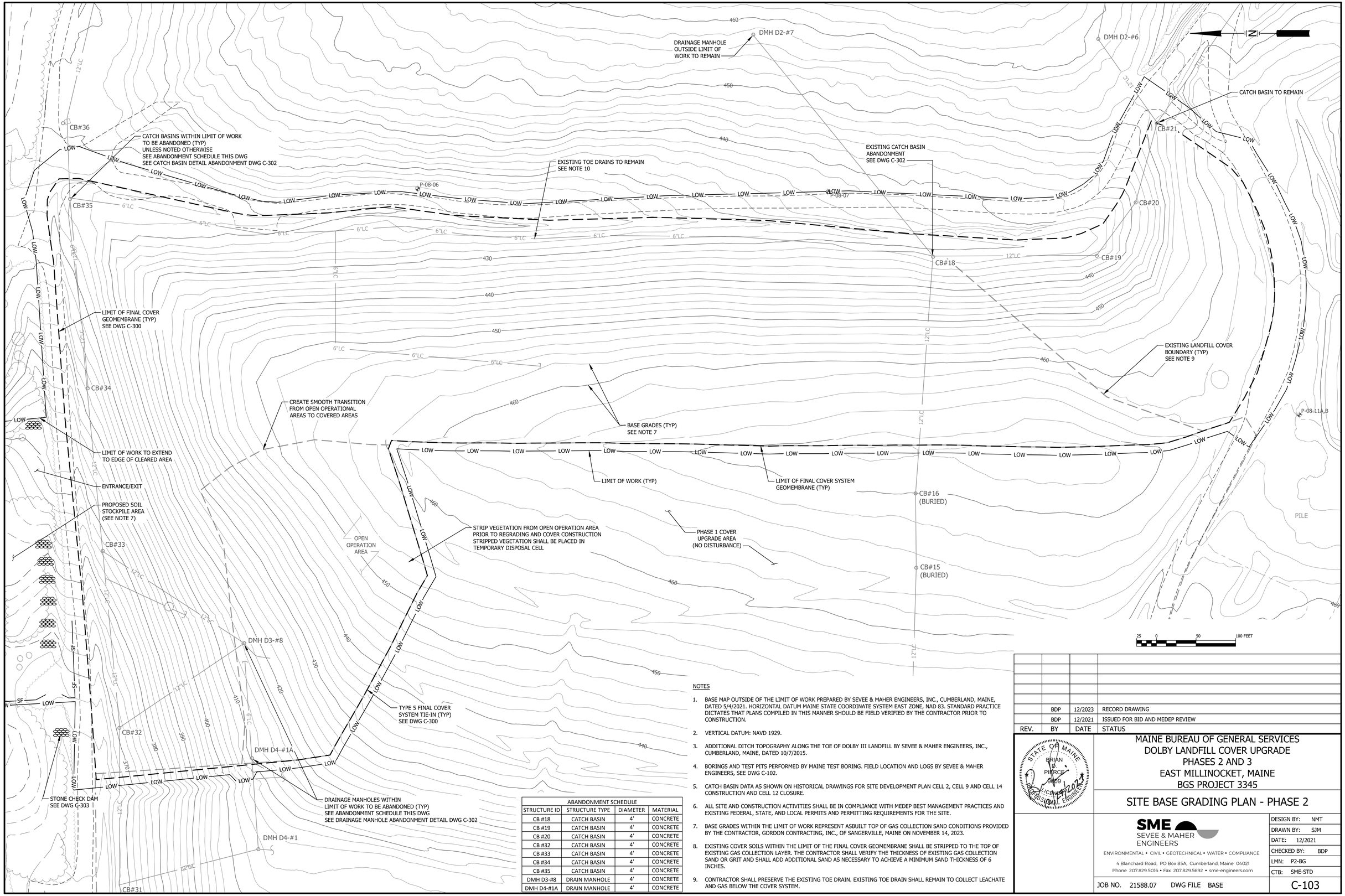

ABANDONMENT SCHEDULE			
STRUCTURE ID	STRUCTURE TYPE	DIAMETER	MATERIAL
CB #18	CATCH BASIN	4'	CONCRETE
CB #19	CATCH BASIN	4'	CONCRETE
CB #20	CATCH BASIN	4'	CONCRETE
CB #32	CATCH BASIN	4'	CONCRETE
CB #33	CATCH BASIN	4'	CONCRETE
CB #34	CATCH BASIN	4'	CONCRETE
CB #35	CATCH BASIN	4'	CONCRETE
DMH D3-#8	DRAIN MANHOLE	4'	CONCRETE
DMH D4-#1A	DRAIN MANHOLE	4'	CONCRETE

NOTES

1. BASE MAP OUTSIDE OF THE LIMIT OF WORK PREPARED BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 5/4/2021. HORIZONTAL DATUM MAINE STATE COORDINATE SYSTEM EAST ZONE, NAD 83. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. VERTICAL DATUM: NAVD 1929.
3. ADDITIONAL DITCH TOPOGRAPHY ALONG THE TOE OF DOLBY III LANDFILL BY SEVEE & MAHER ENGINEERS, INC., CUMBERLAND, MAINE, DATED 10/7/2015.
4. BORINGS AND TEST PITS PERFORMED BY MAINE TEST BORING. FIELD LOCATION AND LOGS BY SEVEE & MAHER ENGINEERS, SEE DWG C-102.
5. CATCH BASIN DATA AS SHOWN ON HISTORICAL DRAWINGS FOR SITE DEVELOPMENT PLAN CELL 2, CELL 9 AND CELL 14 CONSTRUCTION AND CELL 12 CLOSURE.
6. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL BE IN COMPLIANCE WITH MEDEP BEST MANAGEMENT PRACTICES AND EXISTING FEDERAL, STATE, AND LOCAL PERMITS AND PERMITTING REQUIREMENTS FOR THE SITE.
7. BASE GRADES WITHIN THE LIMIT OF WORK REPRESENT ASBUILT TOP OF GAS COLLECTION SAND CONDITIONS PROVIDED BY THE CONTRACTOR, GORDON CONTRACTING, INC., OF SANGERVILLE, MAINE ON NOVEMBER 14, 2023.
8. EXISTING COVER SOILS WITHIN THE LIMIT OF THE FINAL COVER GEOMEMBRANE SHALL BE STRIPPED TO THE TOP OF EXISTING GAS COLLECTION LAYER. THE CONTRACTOR SHALL VERIFY THE THICKNESS OF EXISTING GAS COLLECTION SAND OR GRIT AND SHALL ADD ADDITIONAL SAND AS NECESSARY TO ACHIEVE A MINIMUM SAND THICKNESS OF 6 INCHES.
9. CONTRACTOR SHALL PRESERVE THE EXISTING TOE DRAIN. EXISTING TOE DRAIN SHALL REMAIN TO COLLECT LEACHATE AND GAS BELOW THE COVER SYSTEM.

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN D. PIERCE
3809
LICENSED PROFESSIONAL ENGINEER
12/7/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SITE BASE GRADING PLAN - PHASE 2

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LMN:	P2-BG
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

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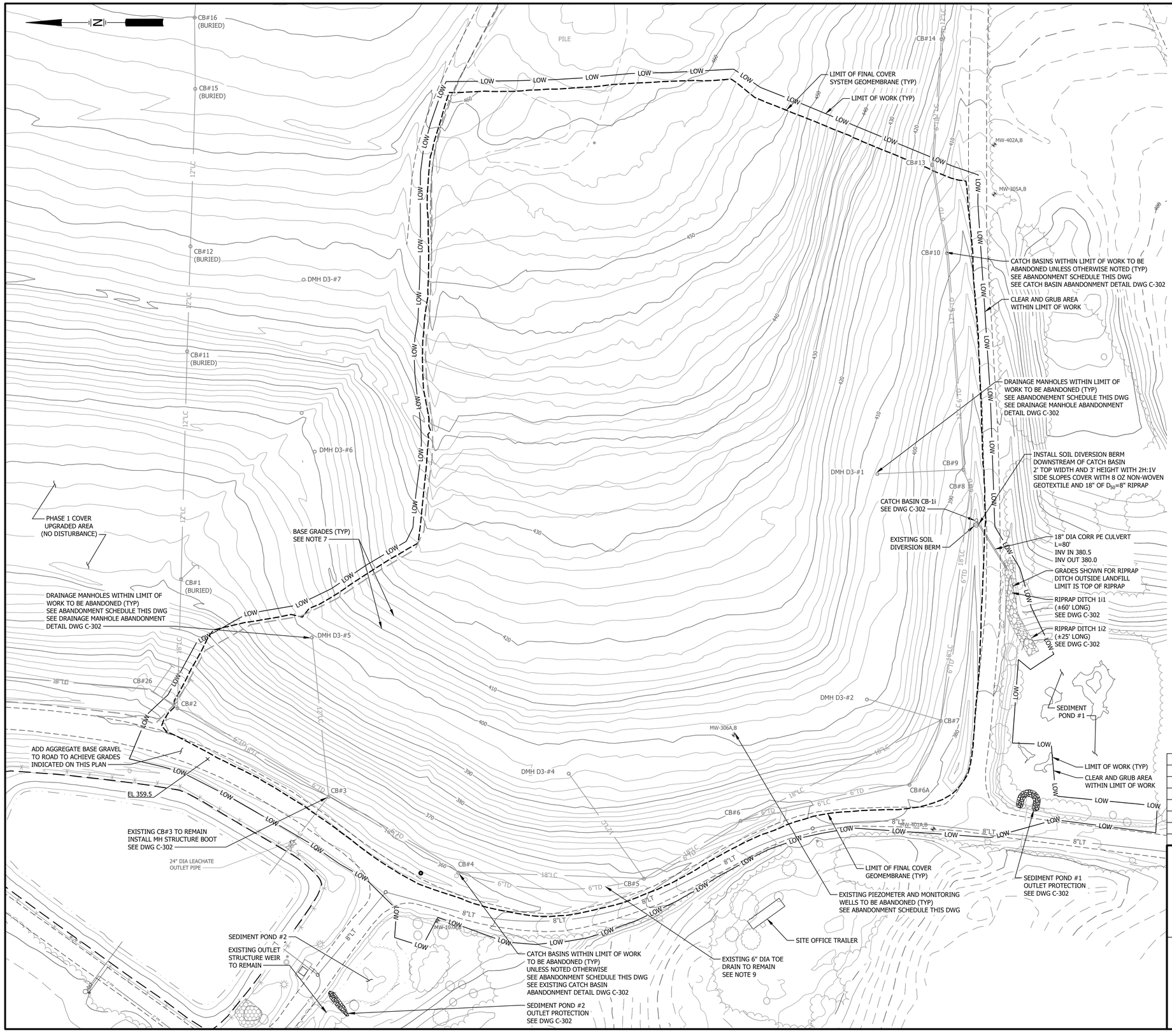

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ABANDONMENT SCHEDULE

STRUCTURE ID	STRUCTURE TYPE	DIAMETER	MATERIAL
CB #2	CATCH BASIN	4'	CONCRETE
CB #4	CATCH BASIN	4'	CONCRETE
CB #5	CATCH BASIN	4'	CONCRETE
CB #6	CATCH BASIN	4'	CONCRETE
CB #6A	CATCH BASIN	4'	CONCRETE
CB #7	CATCH BASIN	4'	CONCRETE
DMH D3-#2	DRAIN MANHOLE	4'	CONCRETE
DMH D3-#4	DRAIN MANHOLE	4'	CONCRETE
DMH D3-#5	DRAIN MANHOLE	4'	CONCRETE
MW-306 A,B	MONITORING WELL	1"	PVC
CB #8	CATCH BASIN	4'	CONCRETE
CB #9	CATCH BASIN	4'	CONCRETE
CB #10	CATCH BASIN	4'	CONCRETE
CB #13	CATCH BASIN	4'	CONCRETE
CB #17	CATCH BASIN	4'	CONCRETE
CB #21	CATCH BASIN	4'	CONCRETE
CB #22	CATCH BASIN	4'	CONCRETE
CB #23	CATCH BASIN	4'	CONCRETE
CB #24	CATCH BASIN	4'	CONCRETE
CB #25	CATCH BASIN	4'	CONCRETE
P-08-08	PIEZOMETER	1"	PVC
P-08-11A	PIEZOMETER	1"	PVC
P-08-11B	PIEZOMETER	1"	PVC
MW-204A	MONITORING WELL	1"	PVC
MW-204B	MONITORING WELL	1"	PVC
MW-307A	MONITORING WELL	1"	PVC
MW-307B	MONITORING WELL	1"	PVC

REV.	BY	DATE	STATUS
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STATE OF MAINE
BRIAN D. PIERCE
9809
LICENSED PROFESSIONAL ENGINEER
12/14/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SITE BASE GRADING PLAN - PHASE 3

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LMN: P3-BG
CTB: SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-104

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CB#36
CB#35
CB#34
CB#33
CB#32
CB#31
CB#21
CB#20
CB#19
CB#18
CB#16 (BURIED)
CB#15 (BURIED)
DMH D2-#7
DMH D2-#6
DMH D3-#8
DMH D4-#1A
DMH D4-#1
RIPRAP DITCH RD-4/RD-5 SEE DWG C-302
RIPRAP DITCH RD-4 SEE DWG C-302
RIPRAP DITCH RD-5 SEE DWG C-302
TYPE 1 FINAL COVER TERMINATION (TYP) SEE DWG C-300
FINAL COVER GRADE (TYP)
LIMIT OF WORK (TYP)
SURFACE SWALE (TYP) SEE DWG C-300
SWALE SLOPE 2% TO 4% (FIELD FIT AND MODIFY AS NEEDED)
TYPE 5 FINAL COVER SYSTEM TIE-IN (TYP) SEE DWG C-300
PHASE 1 COVER UPGRADED AREA (NO DISTURBANCE)
LIMIT OF FINAL COVER GEOMEMBRANE (TYP) SEE DWG C-300
MATCH INTO EXISTING SURFACE SWALE
TYPE 4 FINAL COVER TERMINATION (TYP) SEE DWG C-300
P-08-11A,B
PILE
N
25 0 50 100 FEET

FINAL COVER TIE-IN/TERMINATION LEGEND

- 1 — TYPE 1 FINAL COVER TERMINATION
- 4 — TYPE 4 FINAL COVER TERMINATION
- 5 — TYPE 5 FINAL COVER SYSTEM TIE-IN

NOTE: FOR DETAILS SEE DWG C-300

NOTES

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REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE BRIAN D. PIERCE 9809 LICENSED PROFESSIONAL ENGINEER 12/21/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SITE PLAN - PHASE 2

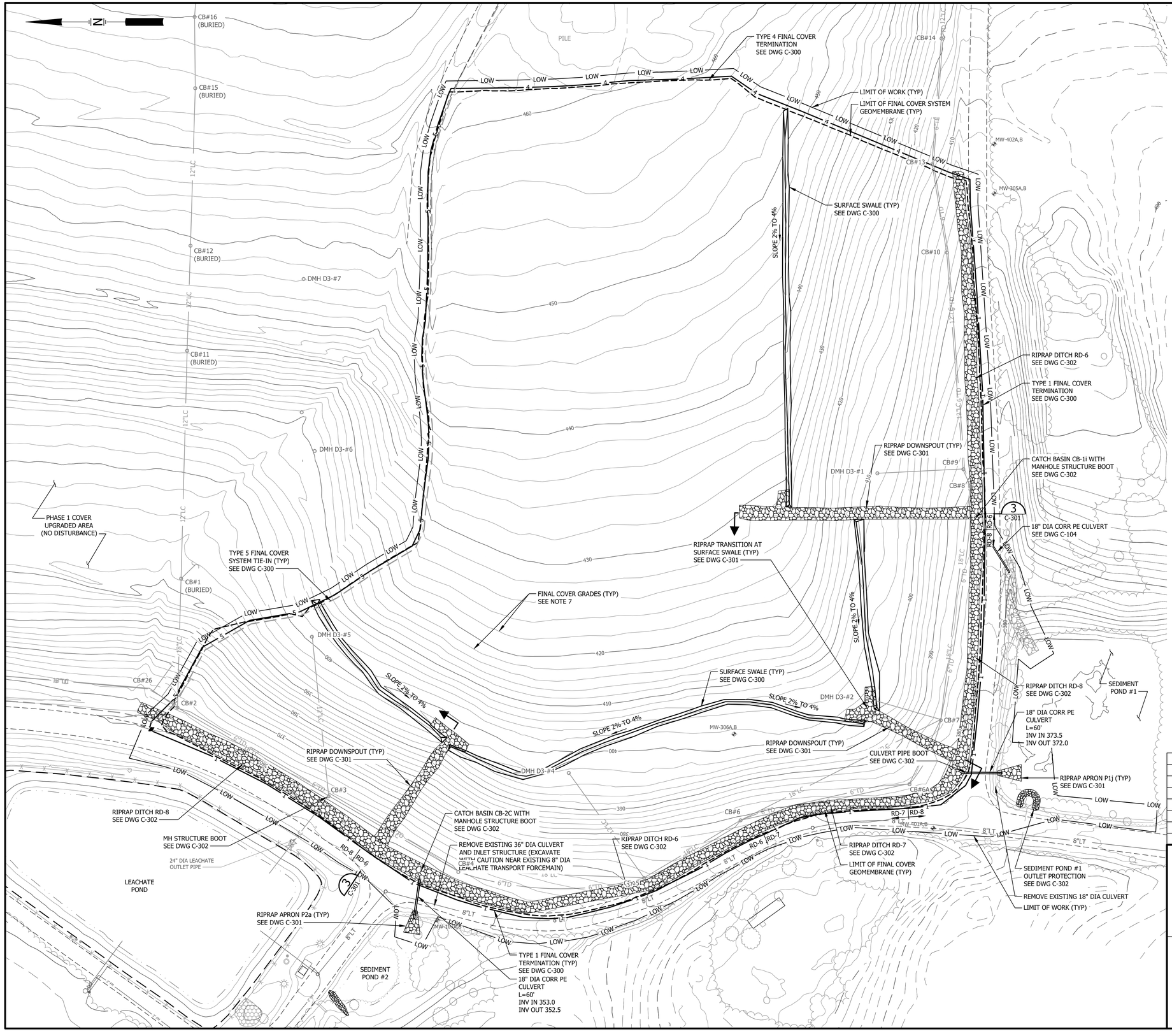
SME SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	NMT
DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	P2-SITE
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-105

\\sme-nfs01\projects\DOLDY\EVE\PGRADE2021 Phase 2-3\Acad\Plots\pgrPhase3ASE.dwg, C-105, 12/22/2023 1:54:19 PM, bwh



NOTES

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FINAL COVER TIE-IN/TERMINATION LEGEND

- 1 — TYPE 1 FINAL COVER TERMINATION
- 4 — TYPE 4 FINAL COVER SYSTEM TIE-IN
- 5 — TYPE 5 FINAL COVER TERMINATION

NOTE: FOR DETAILS SEE DWG C-300

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE — BRIAN D. PIERCE — 9809 — LICENSED PROFESSIONAL ENGINEER — 12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
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SITE PLAN - PHASE 3

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DRAWN BY:	SJM
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CHECKED BY:	BDP
LMN:	P3-SITE
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-106

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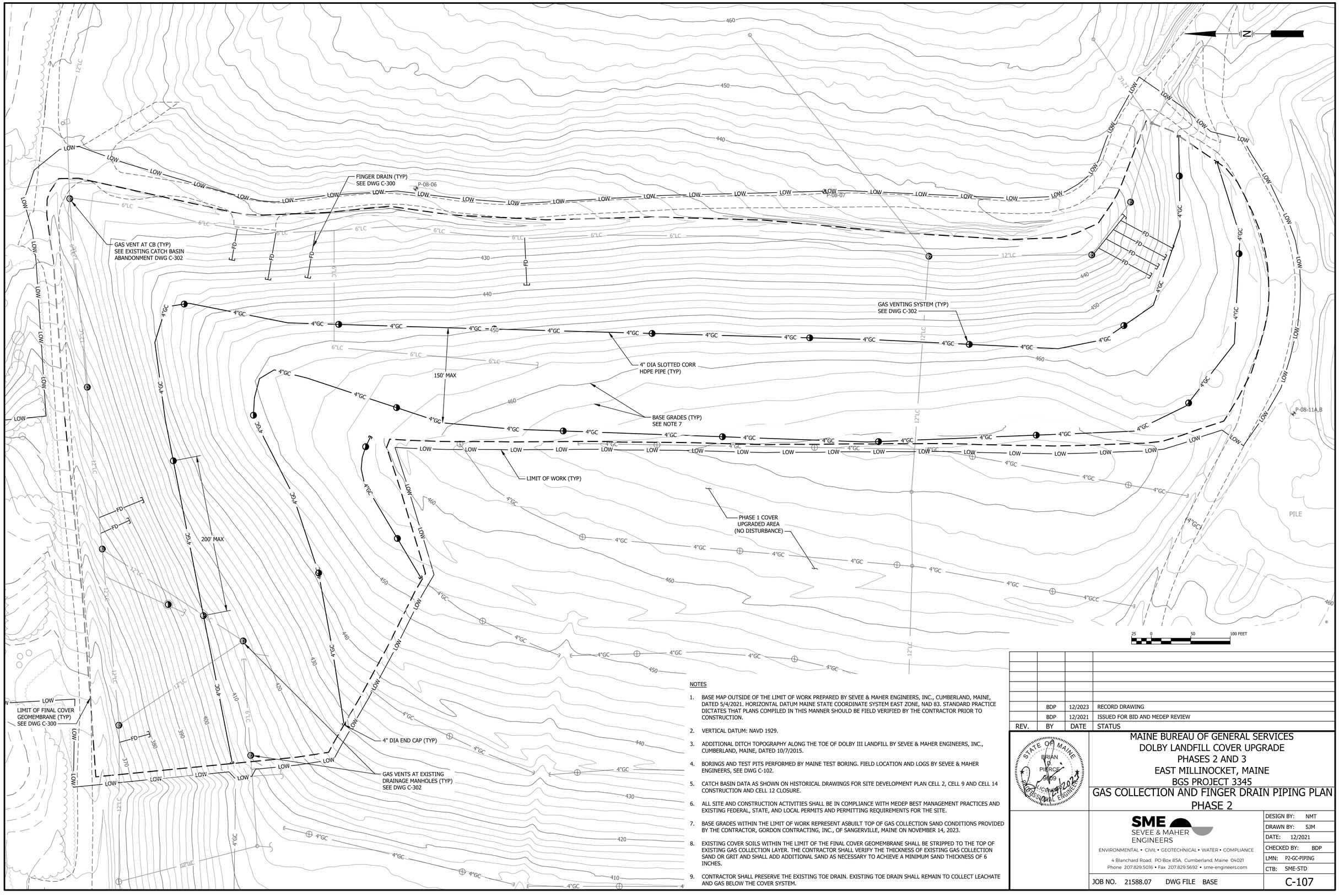

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STATE OF MAINE
BRIAN P. PIERCE
3809
LICENSED PROFESSIONAL ENGINEER
12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

GAS COLLECTION AND FINGER DRAIN PIPING PLAN PHASE 2

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SEVEE & MAHER ENGINEERS
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DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	P2-GC-PIPING
CTB:	SME-STD
JOB NO. 21588.07	DWG FILE BASE
	C-107

\\Server\Projects\DOLBY\LIF\21588.07\Phase 2 & 3\Acad\Plots\Dwg\Phase2&3LEE.dwg, C-107, 12/21/2023 12:23:17 PM, bwh

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30 0 60 120 FEET

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	BDP	12/2021	ADDENDUM #1
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN D. PIERCE
21589
LICENSED PROFESSIONAL ENGINEER
12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

GAS COLLECTION AND FINGER DRAIN PIPING PLAN PHASE 3

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4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

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DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	P3-GCPIPING
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-108

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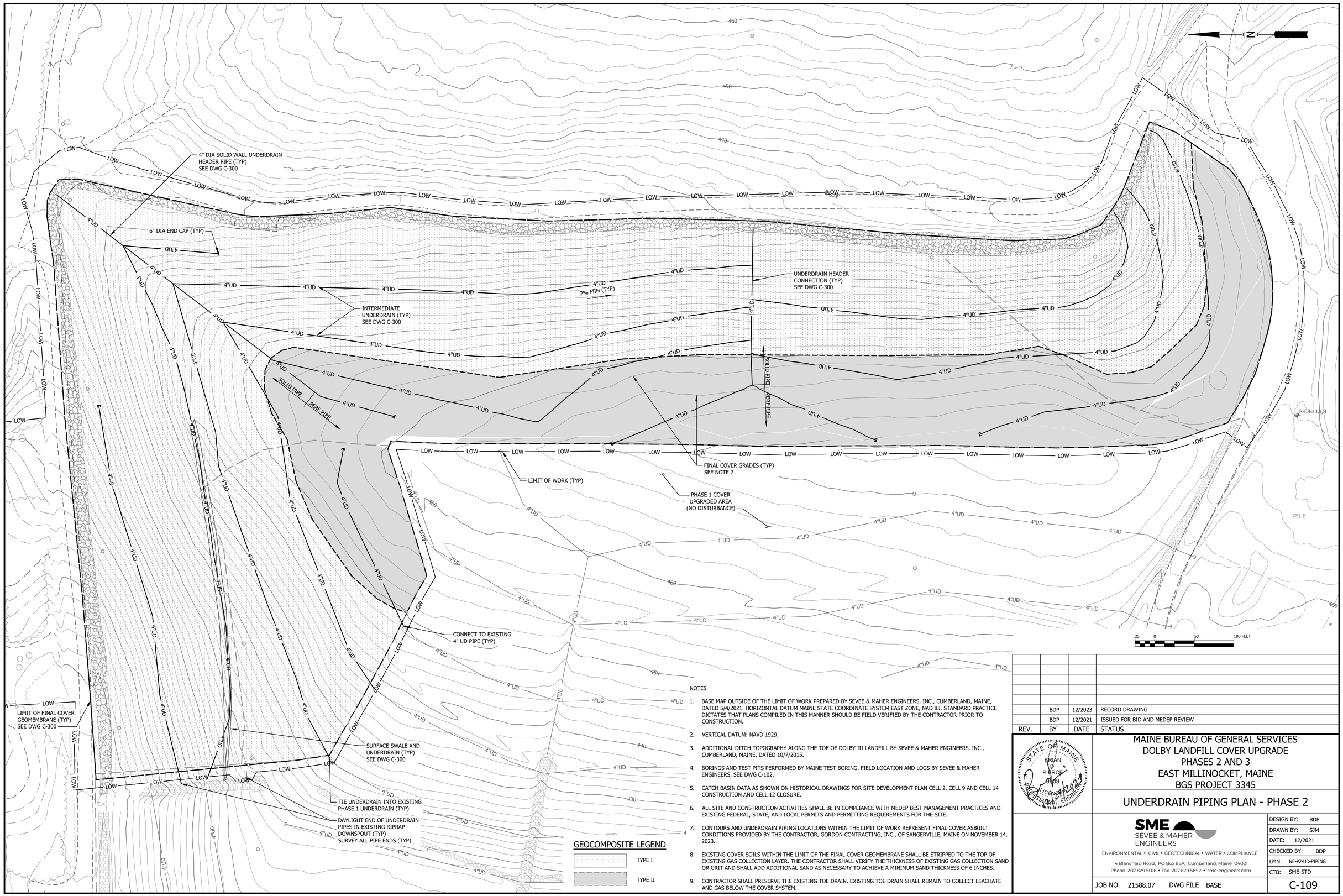

GEOCOMPOSITE LEGEND

TYPE I

TYPE II

NOTES

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STATE OF MAINE
BRIAN D. PIERCE
9809
LICENSED PROFESSIONAL ENGINEER
12/14/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

UNDERDRAIN PIPING PLAN - PHASE 2

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4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
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DESIGN BY:	BDP
DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	NE-P2-UD-PIPING
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-109

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NOTES

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GEOCOMPOSITE LEGEND

TYPE I

TYPE II

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
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	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN J. PIERCE
3809
LICENSED PROFESSIONAL ENGINEER
12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

UNDERDRAIN PIPING PLAN - PHASE 3

SME
SEVEE & MAHER ENGINEERS
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4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	BDP
DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	P3-UDPIPING
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE BASE

C-110

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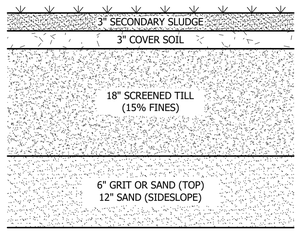
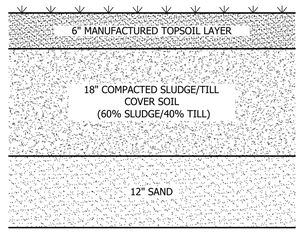


DOLBY III - EXISTING COVER 1
NTS



DOLBY III - EXISTING COVER 2
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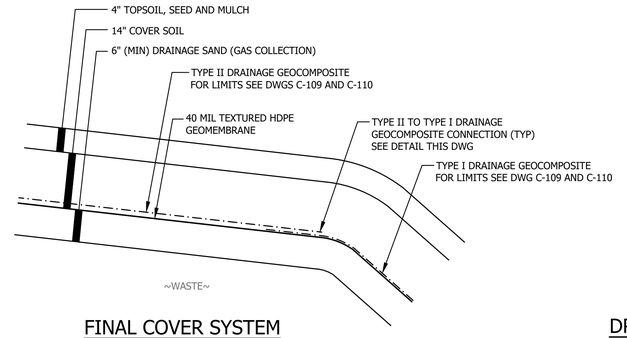

FINAL COVER SYSTEM
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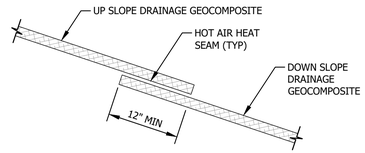
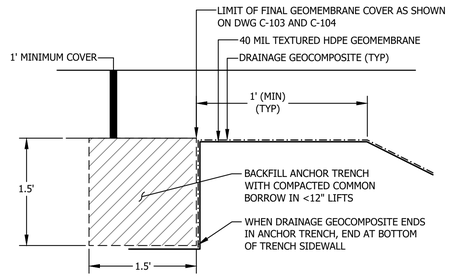


NOTE:
CONTRACTOR SHALL MAKE CONNECTION AT LOCATIONS SHOWN ON THE DRAWINGS.

TYPE II TO TYPE I
DRAINAGE GEOCOMPOSITE CONNECTION
NTS



ANCHOR TRENCH
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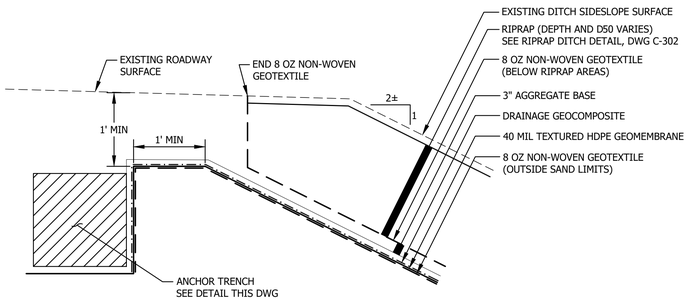

TYPE 1 FINAL COVER TERMINATION
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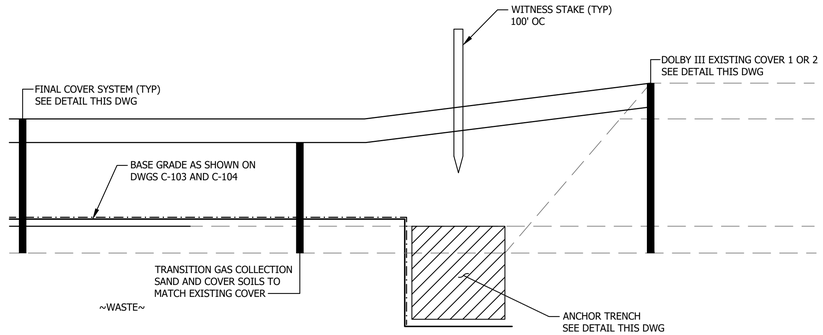

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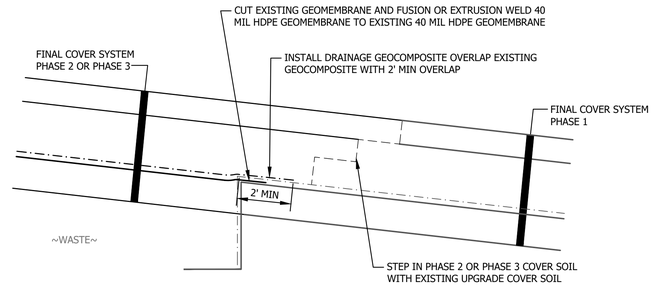

TYPE 5 FINAL COVER SYSTEM TIE-IN
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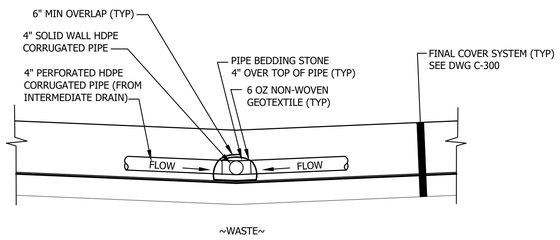
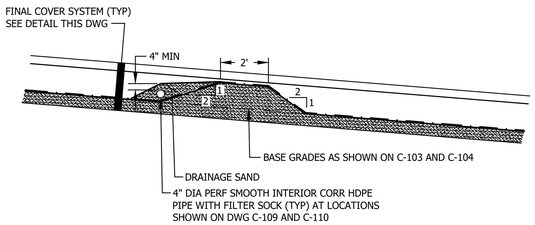
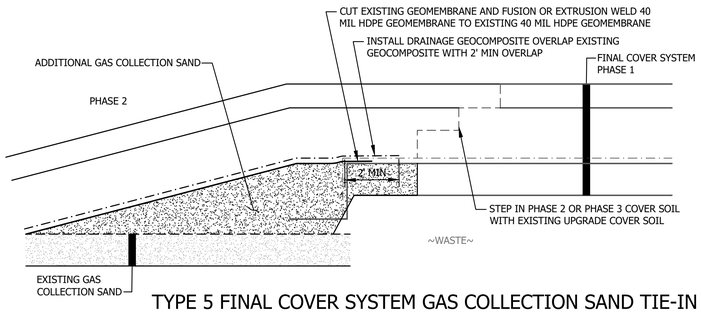


UNDERDRAIN HEADER PIPE
NTS

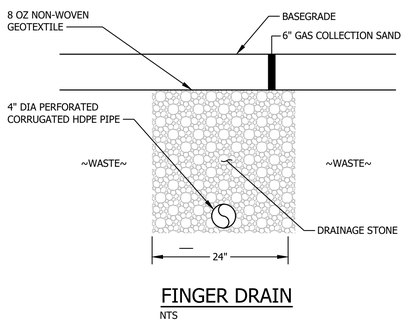


NOTE:
BERM FOR INTERMEDIATE UNDERDRAIN SHALL BE CONSTRUCTED WITH DRAINAGE SAND.

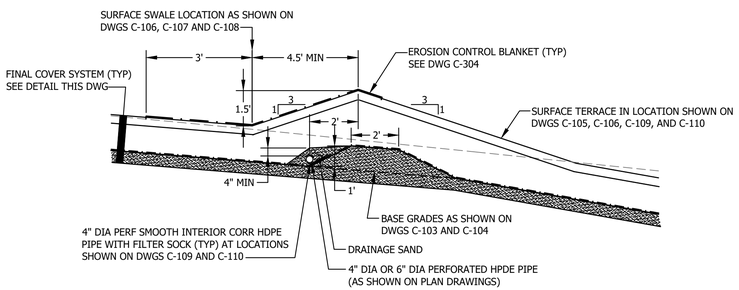
INTERMEDIATE UNDERDRAIN
NTS



TYPE 5 FINAL COVER SYSTEM GAS COLLECTION SAND TIE-IN
NTS



FINGER DRAIN
NTS



SURFACE SWALE AND UNDERDRAIN
NTS

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SECTIONS AND DETAILS

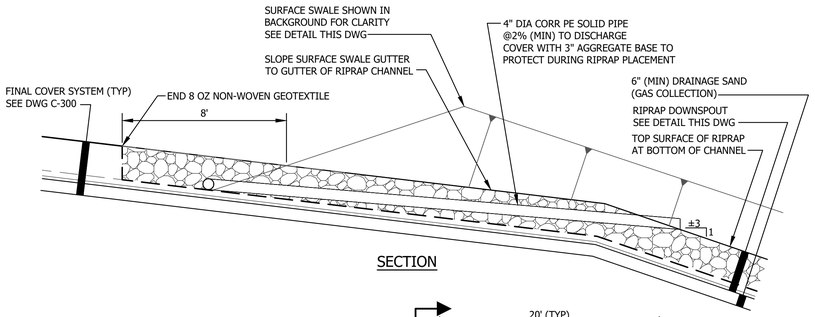
SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY:	NMT
DRAWN BY:	SJM
DATE:	12/2021
CHECKED BY:	BDP
LMN:	NONE
CTB:	SME-STD

JOB NO. 21588.07 DWG FILE DETAILS

C-300

\\fsnarwhal\Projects\DOLBY\DOLBY LF\PHASE 2&3\ Phase 2-3 Dwg\Plans\Dwg\Plan Sheet\DET-FIG-E.dwg C-300, 12/7/2023 1:09:09 PM, bwh



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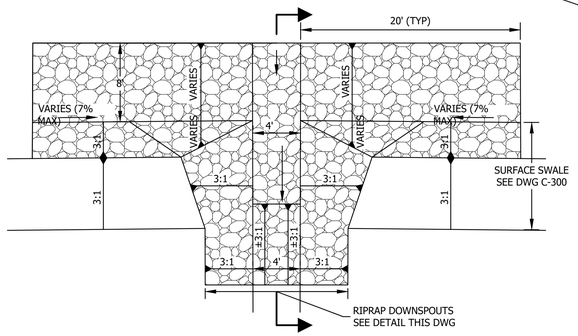
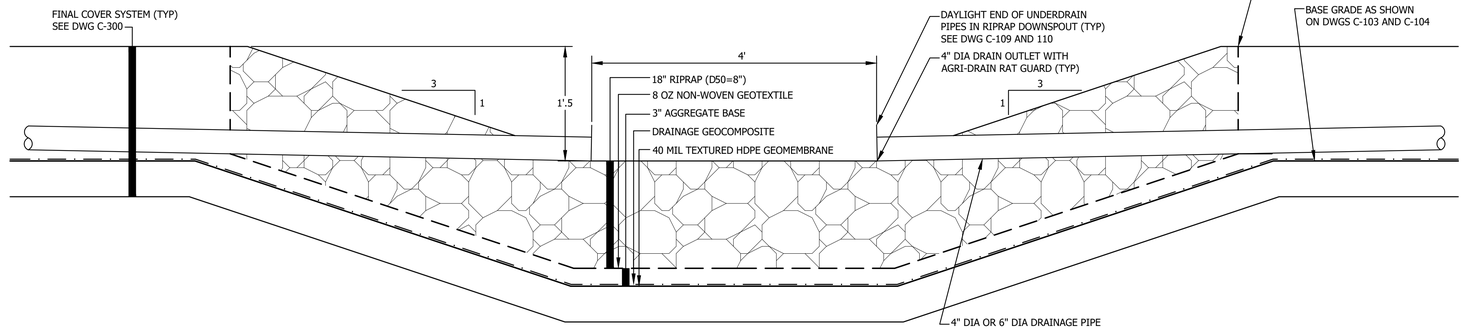


PLAN VIEW

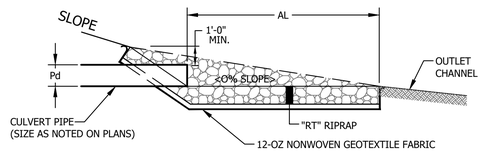
RIPRAP TRANSITION AT SURFACE SWALE

NTS

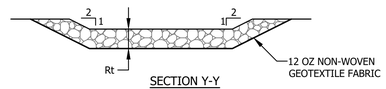


RIPRAP DOWNSPOUT

NTS



SECTION Z-Z



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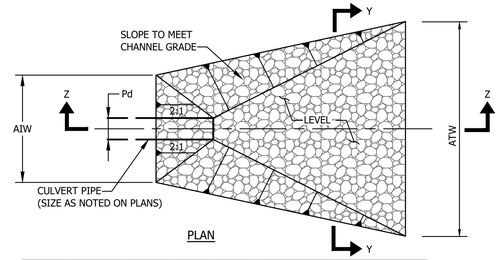
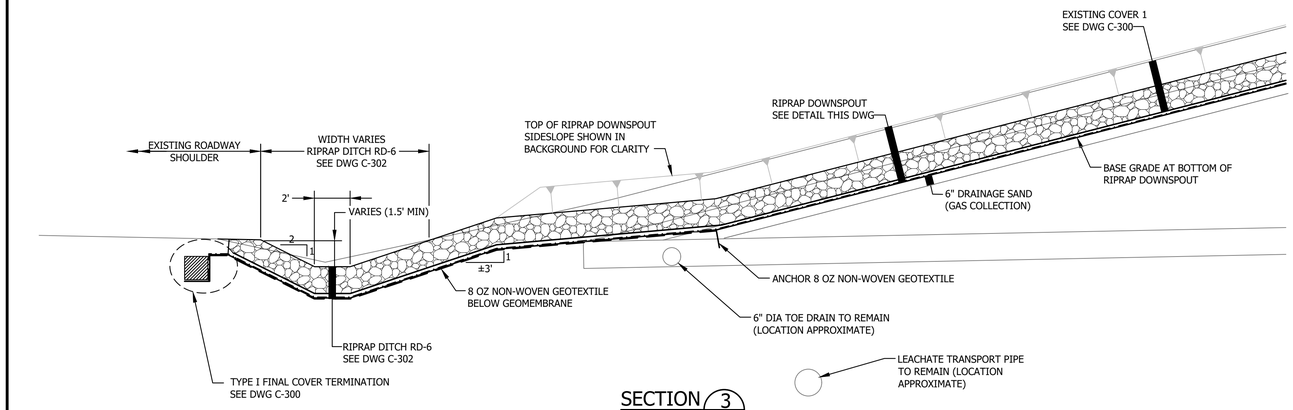


PLAN

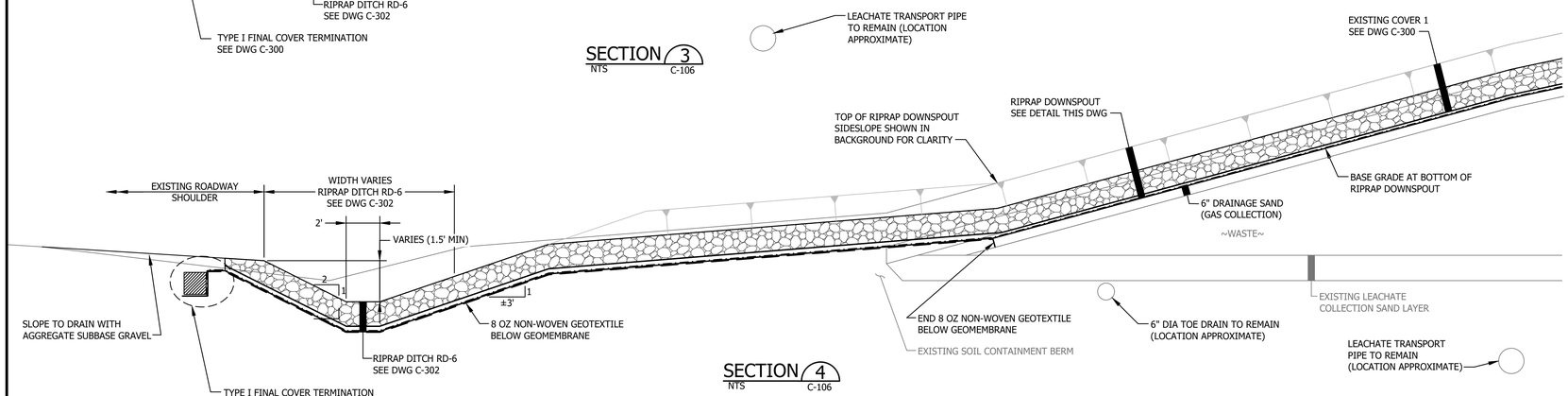
OUTLET NO.	PIPE DIA. Pd (IN)	D50	THICK RT (IN)	LENGTH AL (FT)	INITIAL WIDTH AIW (FT)	TERMINAL WIDTH ATW (FT)
P1j	18	6	14	20	6	22
P2a	18	18	27	20	6	22

RIPRAP APRON AT PIPE INLET/OUTLET

NTS



SECTION 3
NTS C-106



SECTION 4
NTS C-106

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE — BRIAN D. PIERCE — 9809 — LICENSED PROFESSIONAL ENGINEER — 12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SECTIONS AND DETAILS

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LMN: NONE
CTB: SME-STD

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C-301

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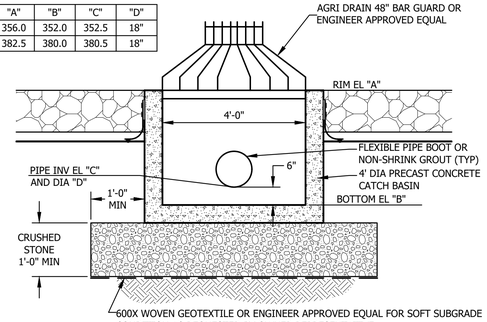
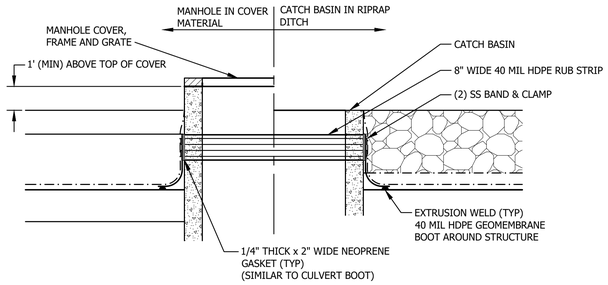
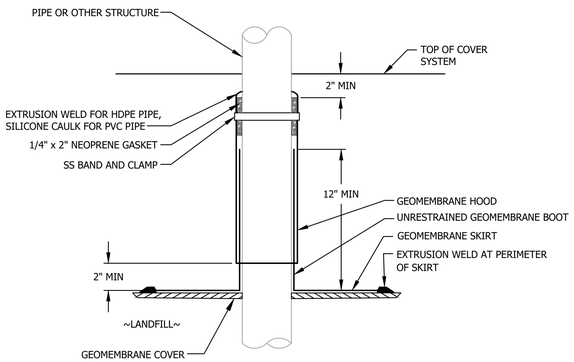
CB	"A"	"B"	"C"	"D"
CB-2c	356.0	352.0	352.5	18"
CB-1i	382.5	380.0	380.5	18"



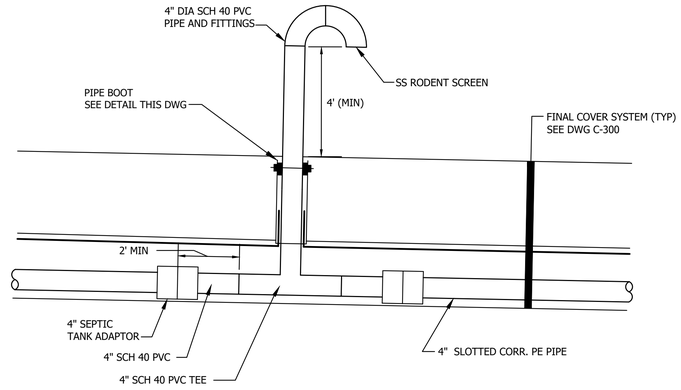
CATCH BASIN
NTS



MH/CB STRUCTURE BOOT
NTS

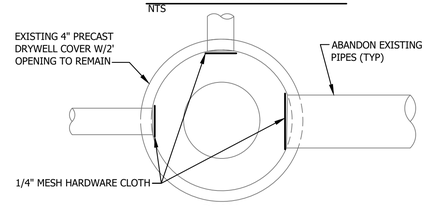


PIPE BOOT
NTS

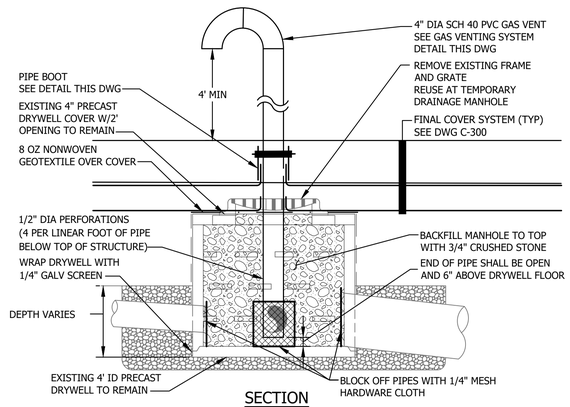


NOTE:
ALL PVC TO PVC CONNECTIONS SHALL BE GLUED.

GAS VENTING SYSTEM
NTS

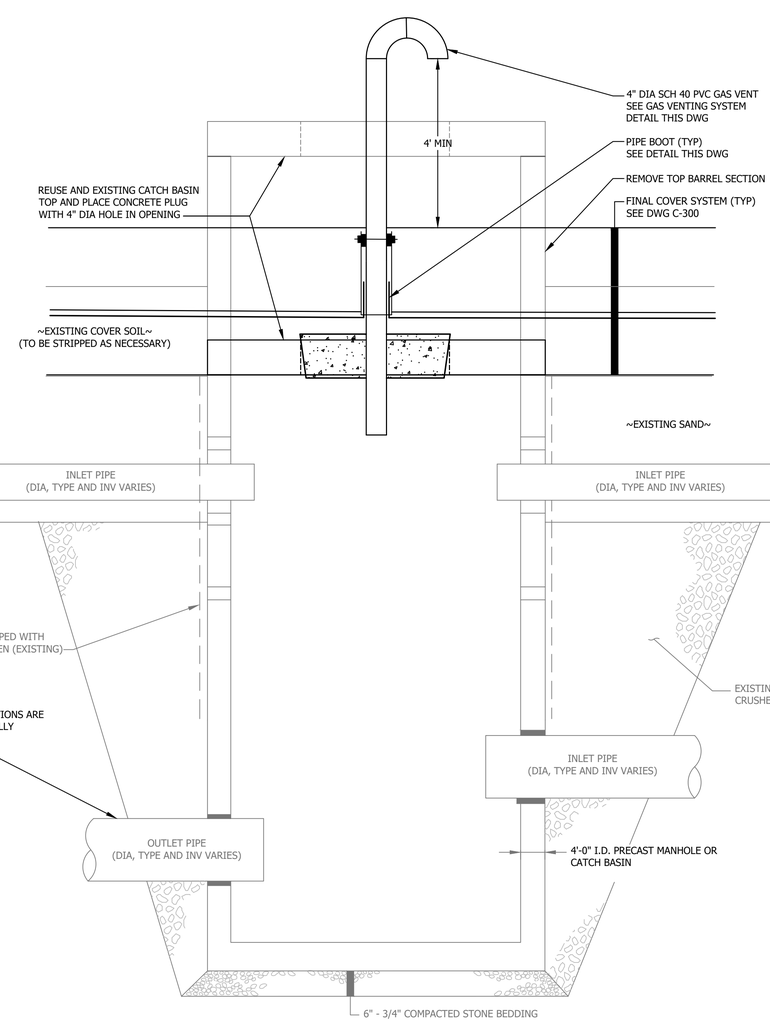


PLAN



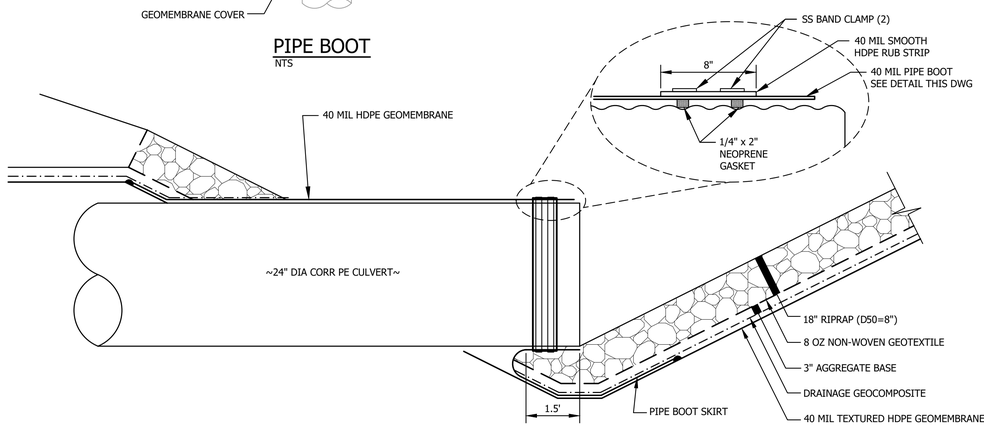
SECTION

DRAINAGE MANHOLE ABANDONMENT
NTS

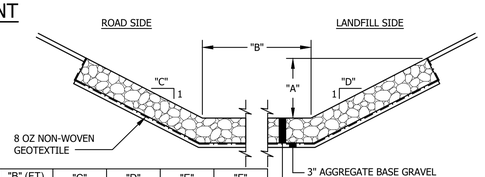


NOTE:
CONTRACTOR SHALL FIELD VERIFY PIPE LOCATIONS AND OTHER EXISTING CONDITIONS PRIOR TO ABANDONMENT.

EXISTING CATCH BASIN ABANDONMENT
NTS

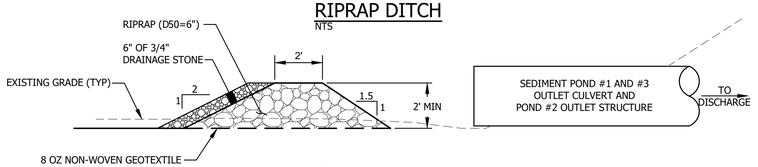


CULVERT PIPE BOOT
NTS



DITCH	"A" (FT)	"B" (FT)	"C"	"D"	"E"	"F"
RD-4	2	2	2	3	14"	6"
RD-5	1.5	4	2	3	27"	12"
RD-6	1.5	2'	2	3	18"	8"
RD-7	1.5	0	2	3	14"	6"
RD-8	1.5	2'	2	3	14"	6"
RD-9	1.5	2'	3	3	14"	6"
RD-1i1	1.5	2'	3	3	18"	8"
RD-1i2	1.5	4'	3	3	18"	8"

RIPRAP DITCH
NTS



POND OUTLET PROTECTION
NTS

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN P. PIERCE
5809
LICENSED PROFESSIONAL ENGINEER
12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
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JOB NO. 21588.07 DWG FILE DETAILS

C-302

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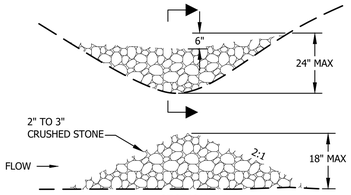
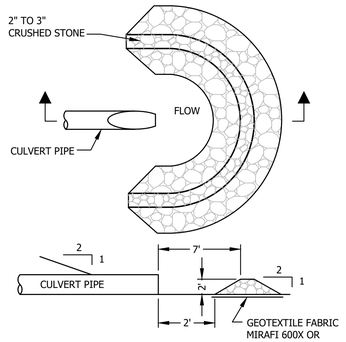


SECTION

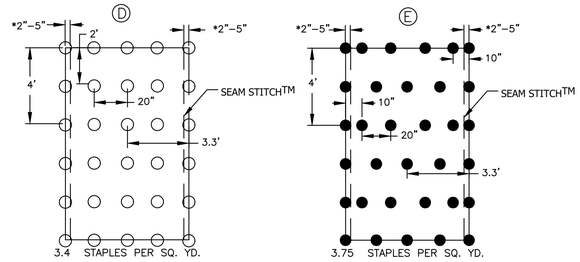
STONE CHECK DAM

NTS



RIPRAP CULVERT INLET PROTECTION (TEMPORARY)

NTS

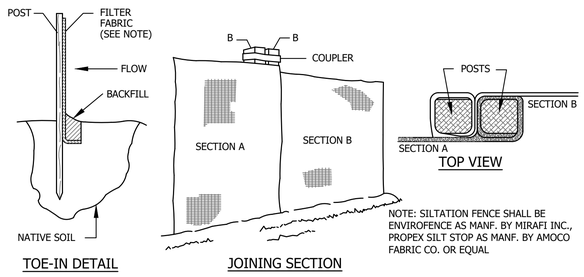


*LOCATION OF SEAM STITCH WILL VARY DEPENDING ON NORTH AMERICAN GREEN PRODUCT TYPE

FOR BLANKETS WITH THE NORTH AMERICAN GREEN DOT SYSTEM™ PLACE STAPLES THROUGH EACH OF THE DOTS.

ECB STAPLE PATTERN GUIDE

NTS

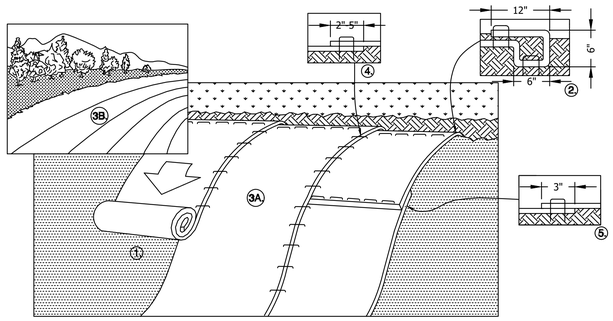


TOE-IN DETAIL JOINING SECTION

NOTE: SILTATION FENCE SHALL BE ENVIROFENCE AS MANF. BY MIRAFI INC., PROPEX SILT STOP AS MANF. BY AMOCO FABRIC CO. OR EQUAL

SILTATION FENCE

NTS

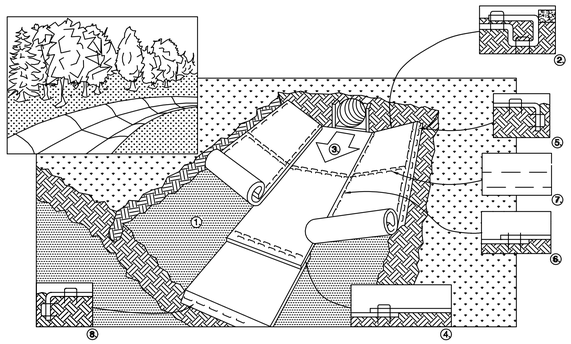


1. PREPARE BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S). INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6"DEEPx6"WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.

*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

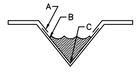
SLOPE INSTALLATION

NTS



1. PREPARE BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S). INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6"DEEPx6"WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL CENTER RECP'S IN THE DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP'S END OVER END (SHINGLE STYLE) WITH A 4" TO 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECP'S.
5. FULL LENGTH EDGE OF RECP'S AT OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2" TO 5" (DEPENDING ON RECP'S TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF STAPLES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.



CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

CHANNEL INSTALLATION

NTS

TEMPORARY AND PERMANENT
EROSION AND SEDIMENTATION CONTROL

A. GENERAL

1. All soil erosion and sediment control will be done in accordance with the Maine Erosion and Sediment Control Best Management Practices, Maine Department of Environmental Protection, October 2016, and as currently revised.
2. The contractor will be responsible for the repair/replacement/ maintenance of all erosion control measures until all disturbed areas are stabilized. Contractor shall be responsible for plan preparation, documentation and inspection in accordance with Maine Construction General Permit obtained for this project.
3. Disturbed areas will be permanently stabilized within 7 days of final grading. Disturbed areas not to be worked upon within 14 days of disturbance, shall be temporarily stabilized within 7 days of the disturbance.
4. In all areas, removal of trees, bushes and other vegetation, as well as disturbance of topsoil will be kept to a minimum while allowing proper site operations.
5. Any suitable topsoil will be stripped and stockpiled for reuse in final grading. Topsoil will be stockpiled in a manner such that natural drainage is not obstructed and no off-site sediment damage will result. If a stockpile is necessary, the side slopes of the topsoil stockpile will not exceed 2:1. Silt fence will be installed around the perimeter of all topsoil stockpiles. Topsoil stockpiles will be surrounded with siltation fencing and will be temporarily seeded with aroostook rye, annual or perennial ryegrass, within 7 days of formation, or temporarily mulched if seeding cannot be done within the recommended seeding dates. Recommended seeding dates and application rates are as follows:

Aroostook Rye: Recommended Seeding Dates: 9/10 - 11/1
Application Rate: 112 lbs/acre

Perennial Ryegrass: Recommended Seeding Dates: 4/1 - 9/10
Application Rate: 85 lbs/acre

Mulch: o Hay or Straw
Application Rate: 2 - 3 tons/acre.
Anchor with tack or 300 lbs/acre fiber mulch

o Wood Fiber Cellulose (Up to August)
Application Rate: 4,000 lbs/acre.
Anchoring not required

B. TEMPORARY MEASURES

1. Silt Fence

(a) Silt fence will be installed prior to and downgradient of all construction activity where soil disturbance may result in erosion.

(b) The height of a silt fence will not exceed 36 inches.

(c) The filter fabric will be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth will be spliced together only at a support post, with a minimum 6-inch overlap, and securely sealed.

(d) Posts will be spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12 inches). When extra strength fabric is used without the wire support fence, post spacing will not exceed 6 feet.

(e) A trench will be excavated approximately 4 inches wide and 4 inches deep along the line of posts and upgradient from the barrier.

(f) The standard strength of filter fabric will be stapled or wired to the fence, and 8 inches of the fabric will be extended into the trench. The fabric will not extend more than 36 inches above the original ground surface. Filter fabric will not be stapled to existing trees.

(g) When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric will be stapled or wired directly to the posts with all other provisions of item (f) applying.

(h) The trench will be backfilled and the soil compacted over the filter fabric.

(i) Silt fences will be removed when they have served their useful purpose, but not before the upgradient areas have been permanently stabilized.

(j) Silt fences will be inspected immediately after each rainfall and at least daily during prolonged rainfall. They will be inspected if there are any signs of erosion or sedimentation below them. Any required repairs will be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, they will be replaced with a temporary crushed stone check dam.

(k) Should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life, and the barrier still be necessary, the fabric will be replaced promptly.

(l) Sediment deposits should be removed after each storm event if significant buildup has occurred or if deposits exceed 15 inches in depth.

2. Stone Check Dams

(a) Stone check dams should be constructed of 2 to 3-inch stone. The stone should be placed according to the configuration shown on the drawing. Hand or mechanical placement will be necessary to achieve complete coverage of the ditch or swale and to ensure that the center of the dam is lower than the edges.

(b) Check dams should be installed as the swale is being constructed.

(c) Sediment will be removed from behind the check dams when it has accumulated to one half of the original height of the dam.

(d) Check dams will be removed when the grass has matured sufficiently to protect the ditch or swale. The area beneath the check dams will be seeded and mulched immediately after they are removed.

(e) Regular inspections will be made to ensure that the center of the dam is lower than the edges. Erosion caused by high flows around the edges of the dam will be corrected. If evidence of siltation in the water is apparent downstream from the check dam, the check dam will be inspected and adjusted. Check dams will be checked for sediment accumulation after each significant rainfall.

3. Wood Waste Compost/Bark Filter Berms

(a) The filter berm shall consist of an approved wood waste compost/bark mulch mix or recycled composted bark flume grit and fragmented wood generated from water-flume log handling systems or small shredding of stumpage (6 inches long x 1/2" dia.). The mixture needs to be a well-graded blend of organic and mineral substance. The composition is usually manufactured on or off site and by blending it with a well graded sand and gravel. The objective is a tight, heavy, non-erodible mixture that is not composed of one uniform material, i.e. just bark mulch will not suffice. Comparable composted mixes can be used upon approval of the Department of Environmental Protection, Bureau of Land and Water Quality.

(b) The mix shall conform to the following standards:
* Moisture Content 30 - 60%
* PH-5.0-8.0
* Screen Size - 100% less than 6-inch max; 70% less than 0.75 inch.
* No less than 80% organic material (dry weight) by loss of ignition.
* No stones larger than 4 inch diameter.
* Silts, clays or sugar sands are not acceptable in the mix.

(c) Installation and Size of Berm: The dimensions of the berm are more a function of the strength of the material than the flows (forces) it will encounter. At a minimum the berm shall be 4 feet wide and 18 inches high. The berm shall be placed, uncompacted along a relatively level contour. Wherever possible the existing surface must be scoured and the mixture keyed in like any other sediment control measure.

(d) Maintenance: All deficiencies shall be immediately corrected with additional material place on top of the berm to reach the desired height. When the berm is decomposed, clogged with sediment, eroded, or becomes ineffective, it shall be replaced.

(e) Clean up and Retrieval: At the end of the job, an erosion control berm shall be removed or spread out so that the native earth can be seen below.

B. TEMPORARY MEASURES (Cont)

4. Erosion Control Mats

(a) During the growing season (April 1 to September 10) use mats indicated on drawings on channel bottoms and steep slopes >3H:1V.

(b) During the fall and winter (September 11 to March 31) use heavy grade mats as recommended by the engineer on all channel bottoms and slopes >4h:1V.

(c) Install mats in accordance with the manufacturer's recommendations.

5. Erosion Control Measures

(a) The smallest practical area of land shall be exposed to construction at any one time.

(b) The temporary erosion control measures shall be maintained until the permanent erosion control measures are present.

(c) All areas disturbed by construction shall have available loam placed before seeding (or an acceptable alternative).

(d) After construction is terminated, all temporary erosion control measures shall be removed and accumulated sediment disposed of in a secure location.

(e) Mulch shall be mowings of acceptable herbaceous growth, free from noxious weeds or woody stems, and shall be dry.

C. Permanent Measures

1. Riprapped Ditches, Aprons and Plunge Pools

(a) Construct riprapped ditches, aprons and plunge pools in accordance with the details shown on the Drawings.

(b) Stone for riprap will consist of sub-angular field stone or rough unhewn quarry stone. The stone will be hard and of such quality that it will not disintegrate on exposure to water or weathering, be chemically stable and suitable in all other respects for the purpose intended. The bulk specific gravity (saturated surface-dry basis) of the individual stones will be at least 2.5.

(c) The riprap should be placed so that it produces a dense well-graded mass of stone with a minimum of voids. The desired distribution of stones throughout the mass may be obtained by selective loading at the quarry, controlled clumping of successive loads during final placing, or by combination of these methods. The riprap should be placed to its full thickness on one operation. The riprap should not be placed in layers. The riprap should not be placed by dumping into chutes or similar methods which are likely to cause segregation of the various stone sizes. Care should be taken not to dislodge the underlying material when placing the stones.

The finished slope should be free of pockets of small stone or clusters of large stones. Hand placing may be necessary to achieve the required grades and a good distribution of stone sizes. Final thickness of the riprap blanket should be within plus or minus 1/4 of the specified thickness.

(d) Riprap will be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone. If repairs are needed, they should be accomplished immediately.

2. Topsoil, Seed, Mulch

(a) Topsoil: Use stockpiled materials spread to the depths shown on the plans, if available. Approved topsoil substitutes may be used (refer to Section C-2-2 of Best Management Practices Handbook, see Note 2).

(b) Seeding should be completed by September 15 of each year. Areas not seeded or which do not obtain satisfactory growth by October 1, will be seeded with Aroostook Rye or mulched at rates previously specified herein. After November 1, or the first killing frost, disturbed areas should be treated as indicated in C below:

SEEDING SPECIFICATIONS

Seed	Permanent Seeding (180 lbs/acre)	Temporary Seeding (120 lbs/acre)
Red Fescue	50% by weight	Winter Rye
Red Top	2% by weight	100% by weight
White Cover	5% by weight	
Annual Ryegrass	25% by weight	
Birdsfoot Trefoil	3% by weight	
Kentucky Bluegrass	15% by weight	

Fertilizer: Apply 2 pounds per unit (87 lbs/acre) of nitrogen, phosphoric acid, and potash, or 413 lbs/acre of 19-19-19 fertilizer.

Lime: Apply liquid limestone at a rate of 3 tons per acre (138 lbs/1,000 sq ft).

Mulch: Mulch with weed-free hay or straw at 3.0 tons per acre with tack or 260 lbs/acre fiber mulch.

(c) If permanent vegetated stabilization cannot be established due to the season of the year, all exposed and disturbed areas not to undergo further disturbance are to have dormant seeding applied and be temporarily mulched to protect the site. The following methods may be used to perform a dormant seeding:

(1) Prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After the first killing frost and before snow fall, broadcast or hydroseed the selected seed mixture. Double the regular seeding rates for this type seeding.

(2) When soil conditions permit, between the first killing frost and before snow fall, prepare the seedbed, lime and fertilize, apply the selected seed mixture, and mulch and anchor. Double the regular seeding rates for this type of seeding.

Dormant seedings need to be anchored extremely well on slopes, ditch bases and areas of concentrated flows.

Dormant seeding requires inspection and reseeding as needed in the spring. All areas where cover is inadequate must be immediately reseeded and mulched as soon as possible.

(3) Erosion Control Mats
(a) Install mats as indicated on drawings and in accordance with manufacturers' recommendations

D. MAINTENANCE PLAN

1. Routine Maintenance Inspection shall be performed annually by a qualified person during wet weather to ensure that the facility performs as intended. Inspection priorities shall include checking erosion controls for accumulation of sediments.

2. Grassed Areas

(a) Lime according to a soil test or at a minimum of every five years using a rate of 2 tons per acre (100 pounds per 1,000 sq ft)

(b) Topdress with fertilizer in the early spring (before May 15) one year after planting with a balanced fertilizer, applying 50 pounds of nitrogen/acre (500 pounds of 10-20-20 per acre). Thereafter, fertilize according to a soil test or broadcast biennially, 300 pounds of 10-10-10 or equivalent per acre (7.5 pounds per 1,000 sq ft).

E. INSPECTIONS

1. Inspections will be undertaken by qualified personnel to ensure that temporary and permanent erosion and sedimentation controls are properly installed and correctly functioning, and that additional erosion control measures are installed if needed. Such inspections will occur weekly and before and after each significant rainfall event (1 inch or more within a 24 hour period) during construction until permanent erosion control measures have been properly installed and the site is stabilized.

2. A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and the major observations relating to the operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include: BMP's that need to be maintained; location(s) of BMP's that failed to operate as designed or proved inadequate for a particular location; and location(s) of where additional BMP's area needed that did not exist at the time of inspection. Follow-up to correct deficiencies or enhance controls must also be indicated in the log and dated, including what action was taken and when.

F. HOUSEKEEPING

1. Spill prevention. Controls must be used to prevent pollutants from being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.
2. Groundwater protection. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.
3. Fugitive sediment and dust. Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.
4. Debris and other materials. Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.
5. Trench or foundation de-watering. Trench de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the department.
6. Non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges.
7. Additional requirements. Additional requirements may be applied on a site-specific basis.

REV.	BY	DATE	STATUS
	BDP	12/2023	RECORD DRAWING
	BDP	12/2021	ISSUED FOR BID AND MEDEP REVIEW

STATE OF MAINE
BRIAN D. PIERCE
8409
LICENSED
PROFESSIONAL ENGINEER
12/2023

MAINE BUREAU OF GENERAL SERVICES
DOLBY LANDFILL COVER UPGRADE
PHASES 2 AND 3
EAST MILLINOCKET, MAINE
BGS PROJECT 3345

SECTIONS AND DETAILS

SME
SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

DESIGN BY: NMT
DRAWN BY: SJM
DATE: 12/2021
CHECKED BY: BDP
LMN: NONE
CTB: SME-STD

JOB NO. 21588.07 DWG FILE DETAILS

C-303

N:\Current Projects\21588.07 DOLBY LANDFILL COVER UPGRADE\2021 Phase 3 Design\Plans\Dwg\Plan\21588.07 ALL 3.dwg C-303, 12/21/2023 1:08:02 PM, bdp

GENERAL NOTES

1. UTILITIES AND AGENCIES

BANGOR AND AROOSTOOK RAILROAD
MAINE DEPARTMENT OF TRANSPORTATION - DIVISION OFFICE, BANGOR, MAINE
BANGOR HYDRO-ELECTRIC CO. – ROUTE 2, LINCOLN, MAINE
NYNEX
DIG SAFE

2. NOTES

–REFER TO DRAWING YB–22974 FOR MANHOLE AND STRUCTURE SCHEDULE
–PAVEMENT AND BASES REMOVED BY THE PIPELINE CONSTRUCTION SHALL BE REPLACED TO THE SAME THICKNESS OF THE ADJACENT LAYERS.
–ALL AREAS DISTURBED BY THE PIPELINE CONSTRUCTION AND NOT RESURFACED SHALL BE COVERED WITH TWO (2") INCHES OF LOAM, GRADED, SEEDED, AND MULCHED.
–THRUST RESTRAINT REQUIRED ON ALL FORCE MAIN BENDS GREATER THAN 22.5°. SEE DETAIL YB–22977

LEGEND

	EXISTING	PROPOSED
STRUCTURES		
MANHOLE		
CONTOUR	211	211
WETLAND EDGE		
LEACHATE LINE		
SURVEY BASELINE		
TREE LINE		
OVERHEAD TELEPHONE	O.T.	
UTILITY POLE		
TEST PIT	37	37
WETLAND SETBACK BUFFER		
RAILROAD		
FILL OR CUT AREA (PROFILE)		

DATUM

HORIZONTAL DATUM FROM STATION 0+20 TO STATION 167+00 IS BASED ON MAINE STATE GRID (EAST ZONE) 1927 NORTH AMERICAN DATUM.

VERTICAL DATUM FROM STATION 0+00 TO STATION 167+00 IS BASED ON NGVD29.

HORIZONTAL AND VERTICAL CONTROL

SQUAW BAY CONTROL POINT #1 = BRASS DISK IN TOP OF CONCRETE MANHOLE ON WESTERLY SIDE OF LEACHATE POND.

COORDINATES: NORTH 664363.732
EAST 473676.782

ELEVATION: 348.59

IDENTIFICATION: "MON.#1"

SQUAW BAY CONTROL POINT #2 = BRASS DISK IN TOP OF CONCRETE PUMP STATION ON SOUTHERLY SIDE OF LEACHATE POND.

COORDINATES: NORTH 663871.733
EAST 473715.008

ELEVATION: 356.99

IDENTIFICATION: "MON.#2"

SQUAW BAY CONTROL POINT #29 = BRASS DISK IN TOP OF CONCRETE CYLINDER ON NORTHWEST CORNER OF FRSP RECYCLE BUILDING.

COORDINATES: NORTH 653349.381
EAST 478333.704

ELEVATION: 318.24

IDENTIFICATION: CONTROL MON. 705A

VERTICAL DATUM CONVERSION FACTOR

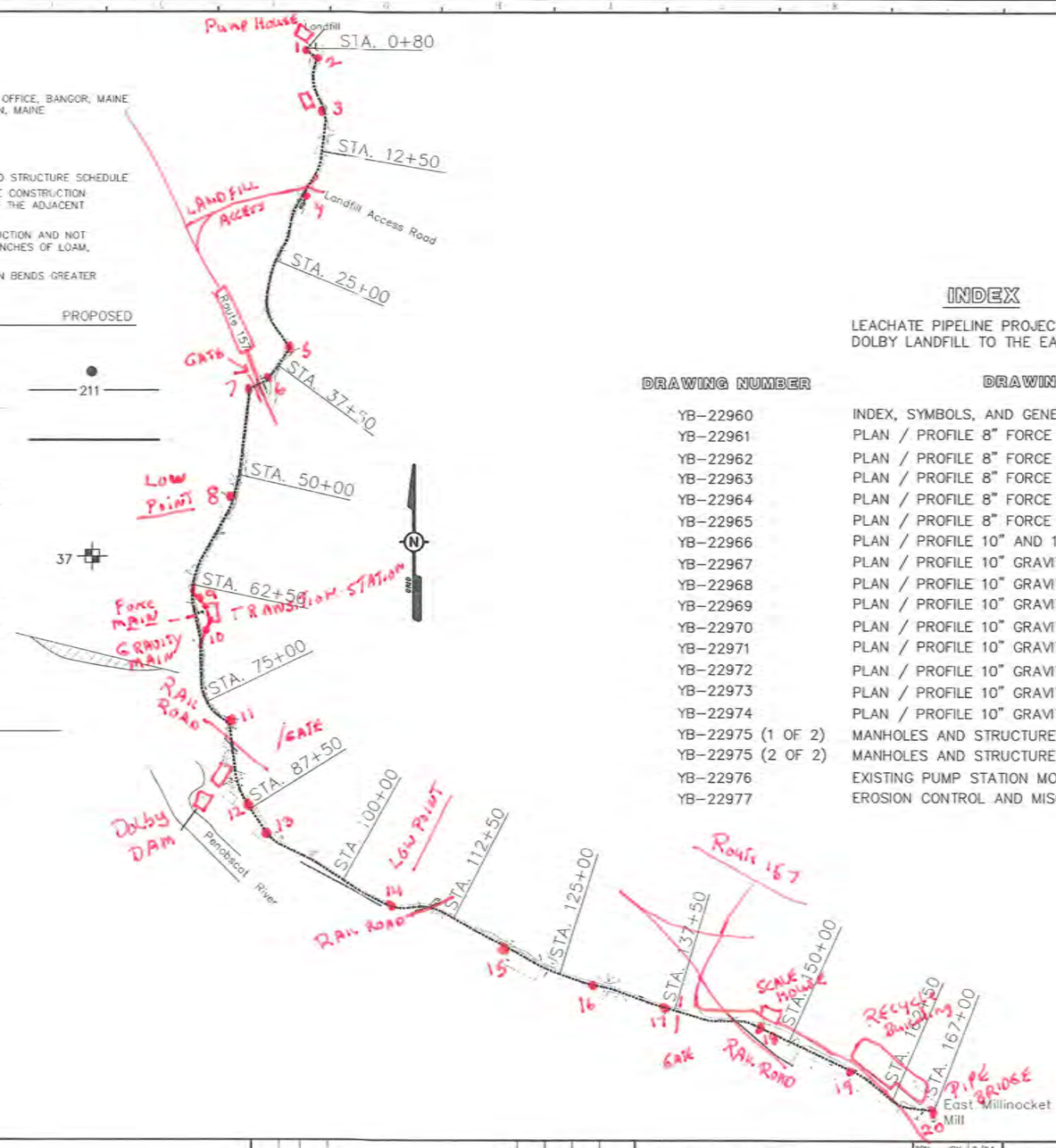
TO CONVERT NGVD (29) TO "MILL DATUM, ADD 11.59'.
TO CONVERT MILL DATUM TO NGVD (29) SUBTRACT 11.59'.

TEMPORARY BENCHMARKS (TBM)

TBM, PL-13 – TOP OF BOULDER – ELEV. 386.56 – STA. 31+00, 45'W.

TBM, SCOUT RD – TOP OF GRIND STONE – ELEV. 389.70 – STA. 64+35, 50'W.

TBM, GROUNDWOOD BLDG – PAINT MARK ON BLDG ELEV. 307.41 – STA. 167+00 165'W.



INDEX

LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION

DRAWING NUMBER	DRAWING TITLE
YB–22960	INDEX, SYMBOLS, AND GENERAL NOTES
YB–22961	PLAN / PROFILE 8" FORCE MAIN – STA. 0+80 TO STA. 12+50
YB–22962	PLAN / PROFILE 8" FORCE MAIN – STA. 12+50 TO STA. 25+00
YB–22963	PLAN / PROFILE 8" FORCE MAIN – STA. 25+00 TO STA. 37+50
YB–22964	PLAN / PROFILE 8" FORCE MAIN – STA. 37+50 TO STA. 50+00
YB–22965	PLAN / PROFILE 8" FORCE MAIN – STA. 50+00 TO STA. 62+50
YB–22966	PLAN / PROFILE 10" AND 12" GRAVITY TRANSITION – STA. 62+50 TO STA. 75+00
YB–22967	PLAN / PROFILE 10" GRAVITY SECTION STA. 75+00 TO STA. 87+50
YB–22968	PLAN / PROFILE 10" GRAVITY SECTION STA. 87+50 TO STA. 100+00
YB–22969	PLAN / PROFILE 10" GRAVITY SECTION STA. 100+00 TO STA. 112+50
YB–22970	PLAN / PROFILE 10" GRAVITY SECTION STA. 112+50 TO STA. 125+00
YB–22971	PLAN / PROFILE 10" GRAVITY SECTION STA. 125+00 TO STA. 137+50
YB–22972	PLAN / PROFILE 10" GRAVITY SECTION STA. 137+50 TO STA. 150+00
YB–22973	PLAN / PROFILE 10" GRAVITY SECTION STA. 150+00 TO STA. 162+50
YB–22974	PLAN / PROFILE 10" GRAVITY SECTION STA. 162+50 TO STA. 167+00
YB–22975 (1 OF 2)	MANHOLES AND STRUCTURES – MISCELLANEOUS DETAILS
YB–22975 (2 OF 2)	MANHOLES AND STRUCTURES – MISCELLANEOUS DETAILS
YB–22976	EXISTING PUMP STATION MODIFICATIONS – PLANS AND DETAILS
YB–22977	EROSION CONTROL AND MISCELLANEOUS DETAILS

STATE OF MAINE
PETER J. TUBBS
2879
REGISTERED PROFESSIONAL ENGINEER
4-3-96

C	3/96	RECVD DRAWING	MSB	PBT			
C	6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		22846	
B	4/95	ISSUED FOR BIDS	MSB	PBT		22846	
P	4/25	PRELIMINARY CONSTRUCTION ISSUE	MSB	JRK		22846	
CODE	VR	DATE	REVISION	BY	CHK	APPVD	JOB NO.

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE
P - Prelim. B - Bids
W - WE T.O. C - Const.
SCALE N.T.S.

BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 0+80. TO STA. 167+00
8" FORCE MAIN
INDEX, SYMBOLS, AND GENERAL NOTES

JOB NO. 22846
ENG. REQ. NO. ____
FILE NO. 2-092-4783

YB–22960
SHEET 1 OF 1

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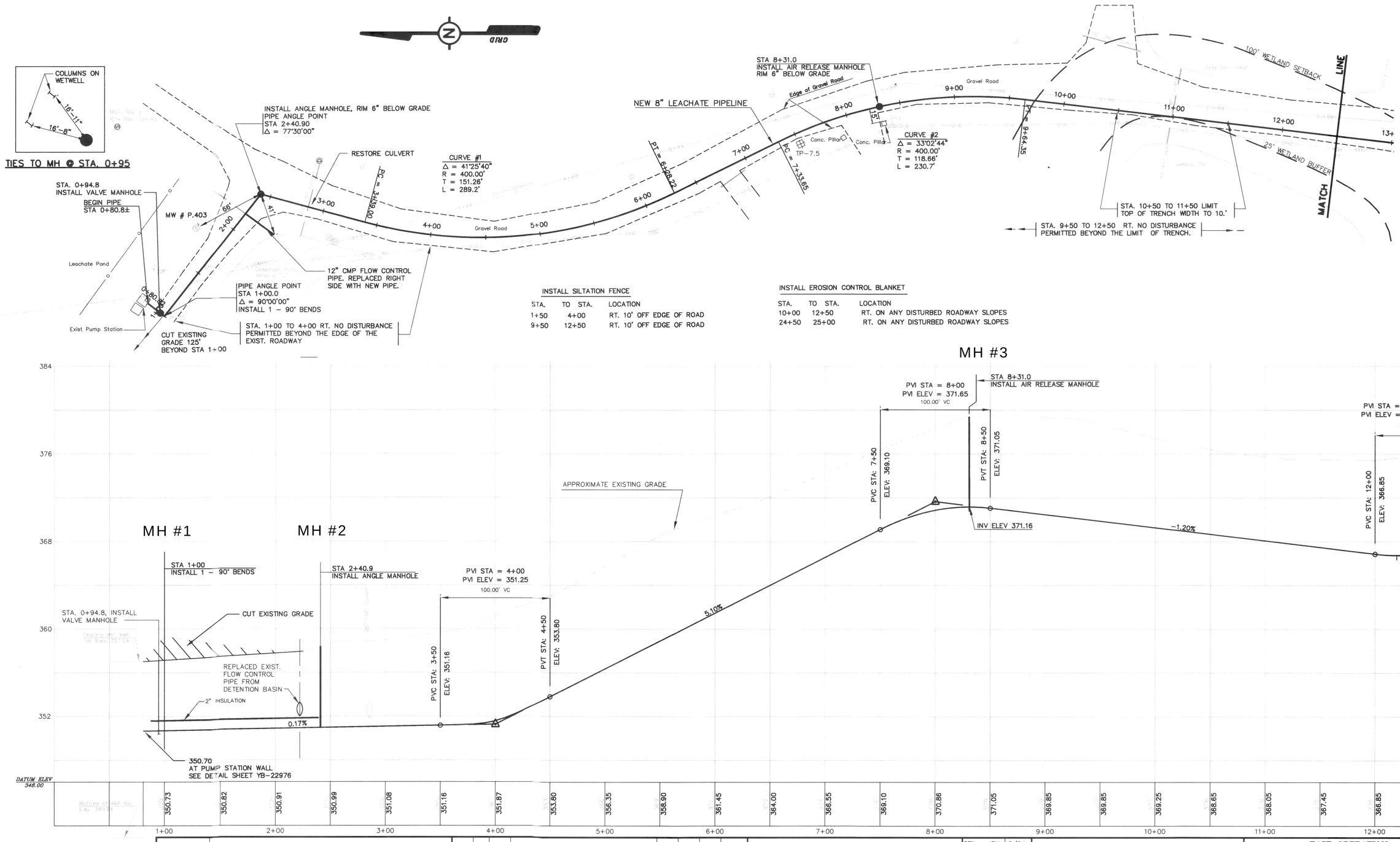

YB-14801	DOLBY 3 LANDFILL, INTERPRETIVE GEOLOGIC PROFILES							
YB-14800	DOLBY 3 LANDFILL, PHREATIC SURFACE MAP							
YB-14799	DOLBY 3 LANDFILL, BEDROCK SURFACE TOPOGRAPHY MAP	C	3/96	RECORD DRAWING	MSB	PBT		
YB-14797	DOLBY 3 LANDFILL, SITE DEVELOPMENT	C	6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
YB-14796-A	DOLBY 3 LANDFILL, SITE DEVELOPMENT DETAILS	B	4/95	ISSUED FOR BIDS	MSB	PBT		
YB-14795	DOLBY 3 LANDFILL, LEACHATE POND DETAILS	P	4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
SB-14888	DOLBY LANDFILL LEACHATE PUMP STATION, PLANS & SECTIONS	P	12/94	SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		

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DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE
P - Prelim | B - Bids
M - Mtl T.O. | C - Const.
SCALE 1"=40'H; 1'=4'V

BOWATER
Great Northern Paper

EAST OPERATION

LEACHATE PIPELINE PROJECT

DOLBY LANDFILL TO THE EAST OPERATION
STA. 0+80.8 TO STA. 12+50
8" FORCE MAIN
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22961
SHEET 1 OF 1

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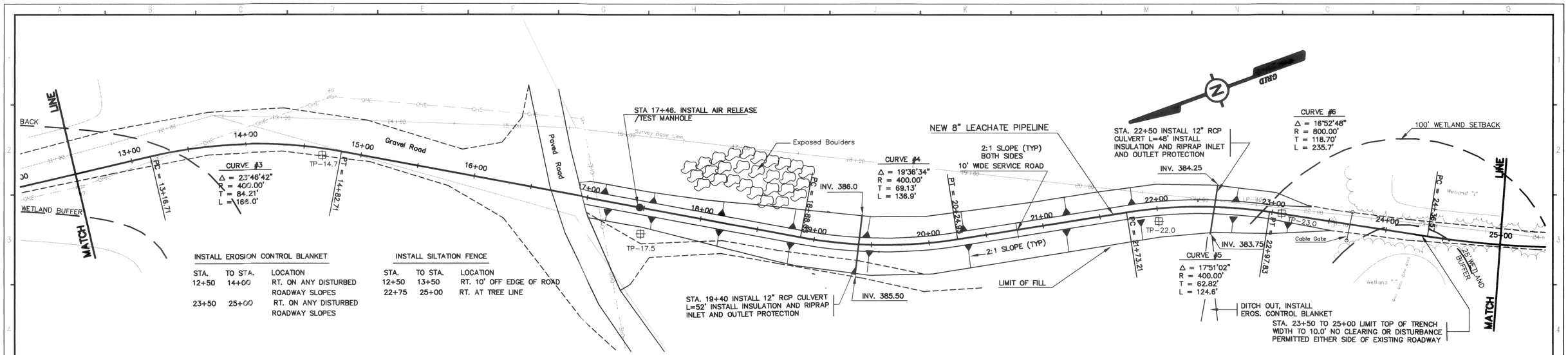

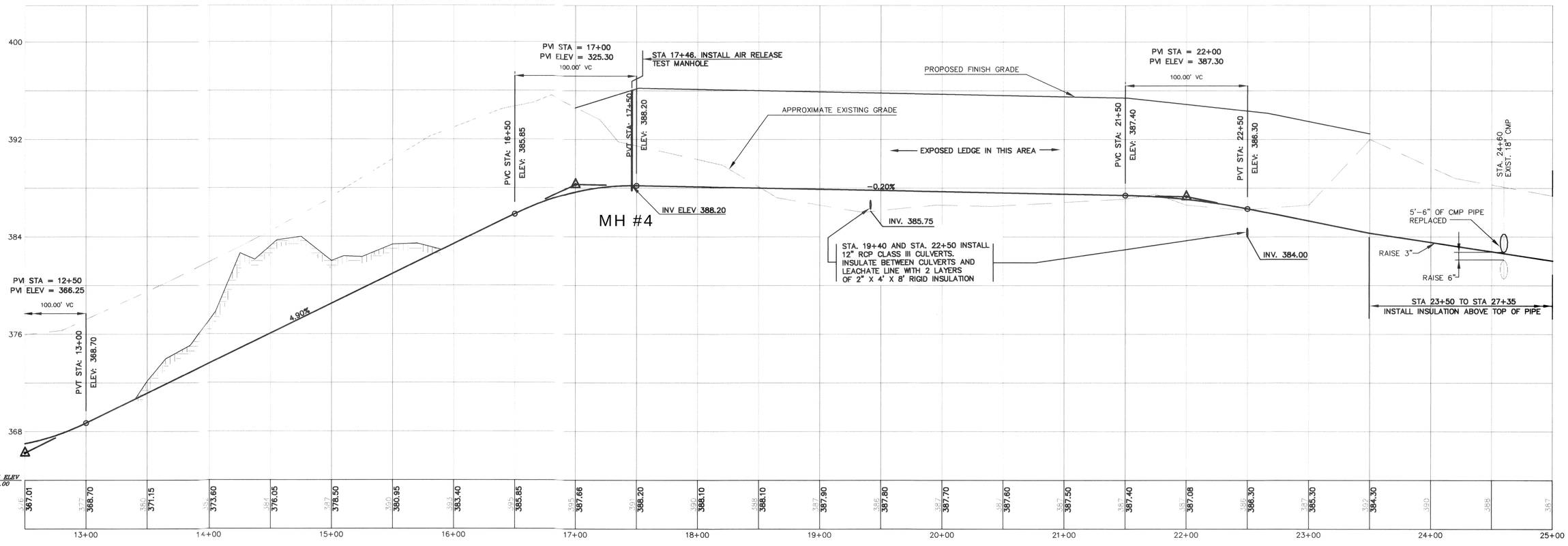

STATE OF MAINE
PETER B TUBBS
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REGISTERED PROFESSIONAL ENGINEER
4-3-96

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
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		C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
		B		4/95	ISSUED FOR BIDS	RMC	PBT		
		P		4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
		P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		

SQUAW BAY CORP
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DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE: P – Prelim | B – Bids | M – Mtl T.O. | C – Const.

SCALE 1"=40'H;1"=4'V

BOWATER
Great Northern Paper

EAST OPERATION

LEACHATE PIPELINE PROJECT

DOLBY LANDFILL TO THE EAST OPERATION
STA. 12+50 TO STA. 25+00
8" FORCE MAIN
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22962
SHEET 1 OF 1

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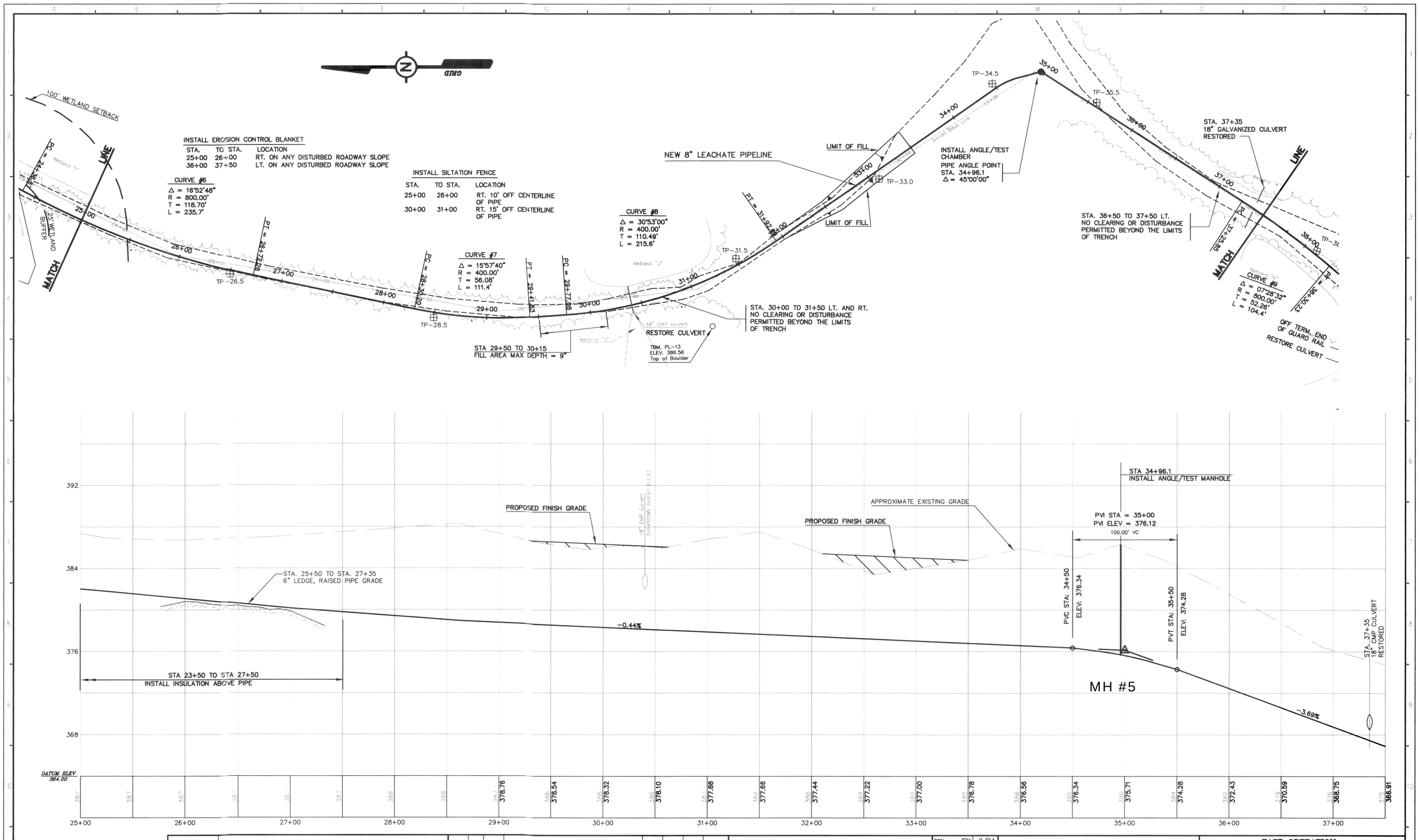

C		3/96	RECORD DRAWING	MSB	PBT		
C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
B		4/95	ISSUED FOR BIDS	RMC	PBT		
P		4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		
DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.

STATE OF MAINE
PETER B TUBBS 2678
REGISTERED PROFESSIONAL ENGINEER

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE
P – Prelim B – Bids
M – Mtl T.O. C – Const.
SCALE 1"=40'H;1"=4'V

BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 25+00 TO STA. 37+50
8" FORCE MAIN
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22963
SHEET 1 OF 1

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STA. 37+50 TO 39+00 RT.
NO CLEARING OR DISTURBANCE
PERMITTED BEYOND THE LIMITS
OF TRENCH

INSTALL ANGLE MANHOLE
PIPE ANGLE POINT
STA. 38+93.7
Δ = 22°30'00"

CULVERT

MATCH LINE

PC = 37+25.77

TP-38.0

38+00

PT = 38+30.23

CURVE #9
Δ = 07°28'32"
R = 800.00'
T = 52.26'
L = 104.4'

39+00

TP-39.0

42'

48.5'

OFF TERM. END
OF GUARD RAIL

RESTORE CULVERT

ROUTE 157

To East Millinocket

To Millinocket

40+00

STA. 39+13 TO STA. 40+13
INSTALL 100' OF 24" DIA.
STEEL CASING PIPE BY
HORIZONTAL BORING

STEEL DOUBLE LEAF SWING
GATE INSTALLED

27'

41+00

TP-41.0

39'

REPLACE CULVERT
RESTORE DRAINAGE

Woods Road

STA 41+00
INSTALL ANGLE MANHOLE
Δ = 60°00'00"

GRID NORTH

TP-38.0

NEW 8" LEACHATE PIPELINE

42+00

43+00

44+00

TP-44.0

45+00

46+00

47+00

48+00

49+00

50+00

TP-50.0

MATCH LINE

STA. 46+00 TO 50+0 LT. NO CLEARING
OR DISTURBANCE PERMITTED BEYOND
LIMIT OF EXISTING ROAD

PC = 49+63.75

25' WETLAND BUFFER

PIPE DEFLECTED 4' RT. @ STA. 48+0
AROUND 20 C.Y.± BOULDER

STA. 46+50 TO 50+00 LIMIT
TOP OF TRENCH WIDTH TO 10.0'

100' WETLAND SETBACK

INSTALL SILTATION FENCE

STA.	TO STA.	LOCATION
37+50	39+00	RT. AT TREE LINE
46+00	50+00	LT. 5' OFF EDGE OF RD.
49+00	50+00	RT. AT TREE LINE

MH #6

MH #7

STA 38+94
INSTALL ANGLE MANHOLE

ELEV: 363.22

STA 41+00
INSTALL ANGLE MANHOLE

APPROXIMATE EXISTING GRADE

PVI STA = 45+00
PVI ELEV = 354.12
100.00' VC

PVC STA: 44+50
ELEV: 354.82

PVT STA: 45+50
ELEV: 352.82

368

360

352

344

CASING INV. = 362.72

3"

2" INSULATION

RESTORED 18" CULVERT

STA. 39+13 - 40+13
INSTALL 100' OF 24" DIA. STEEL
CASING PIPE BY HORIZONTAL
BORING
REFER TO HWY. LOCATION PERMIT

CASING INV. = 358.48

STA. 40+10 TO STA. 43+00
INSTALL INSULATION ABOVE PIPE

-2.60%

DATUM ELEV
340.00

38+00	39+00	40+00	41+00	42+00	43+00	44+00	45+00	46+00	47+00	48+00	49+00	50+00
			358.22	357.73	357.25	356.76	356.27	355.79	355.30	353.97	353.97	352.82	351.52	350.22	348.92	347.62	346.32	345.02	343.72	342.42	341.12

STATE OF MAINE
PETER B TUBBS
2678
REGISTERED PROFESSIONAL ENGINEER
4-3-96

C		3/96	RECORD DRAWING	MSB	PBT		
C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
P		4/95	ISSUED FOR BIDS	RMC	PBT		
P		4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		
18	STATE HIGHWAY COMMISSION – PROJECT NO. S-0315(2)						
SHEET NO.		BOOK	PAGE	REVISED	BY	CK	CHKD	JOB NO.

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE	
P – Prelim	B – Bids
M – Mtl T.O.	C – Const.

SCALE 1"=40'H; 1"=4'V

BOWATER
Great Northern Paper

EAST OPERATION

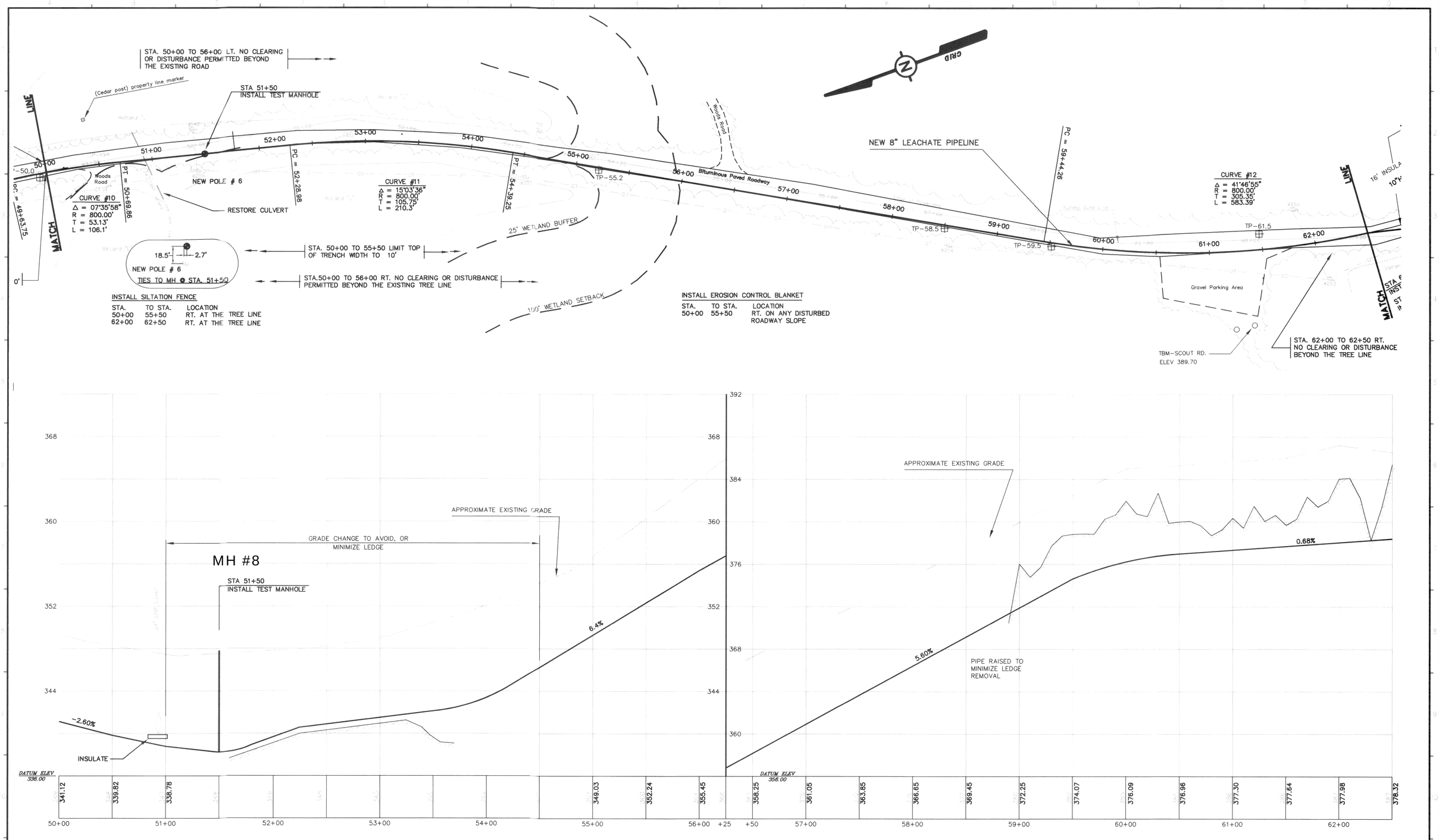
LEACHATE PIPELINE PROJECT

DOLBY LANDFILL TO THE EAST OPERATION
STA. 37+50 TO STA. 50+00
8" FORCE MAIN
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22964
SHEET 1 OF 1

U:\94-227\ACAD\9422PA12 Thu Apr 4 16:15:17 1996



STATE OF MAINE
PETER B TUBBS
2678
REGISTERED PROFESSIONAL ENGINEER
4-3-96

C		3/96	RECORD DRAWING	MSB	PBT		
C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
B		4/95	ISSUED FOR BIDS	MSB	PBT		
P		4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		
ISSUE CODE		
P - Prelim	B - Bids	
M - Mtl T.O.	C - Const.	
SCALE 1"=40'H;1"=4'V		

BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 50+00 TO STA. 62+50
8" FORCE MAIN
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22965
SHEET 1 OF 1

U:\94-227\ACAD\94227R12 Thu Apr 4 15:47:18 1996

TRANSITION STATION

NEW 8" LEACHATE PIPELINE

16' INSULATION

10"HDPE

12" HDPE GRAVITY PIPELINE TO STA 66+50

STATION 63+75, 53'L
INSTALL FLOW TRANSITION ASSEMBLY
SEE FLOW TRANSITION STRUCTURE DETAIL, SHEET YB-22975

PT = 65+27.66

LIMIT OF FILL

NEW 10" LEACHATE PIPELINE

LIMIT OF FILL

PC = 67+98.8

PT = 69+78.7

CURVE #14
Δ = 11°26'39"
R = 400.00'
T = 40.08'
L = 79.9'

PC = 72+73.7

PT = 74+25.9

CURVE #15
Δ = 21°53'27"
R = 400.00'
T = 77.36'
L = 152.8'

MATCH LINE

MATCH LINE

DITCH

DITCH

32+00 63+00 64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00

TP-65.5

TP-73.0

STA 63+10 (BACK)
INSTALL 1-45° BEND

STA 63+20
INSTALL 8"X10" HDPE CONCENTRIC REDUCER, SEE DETAIL THIS SHEET

STA 64+34 (AHEAD)
INSTALL 1-45° BEND

STA. 64+05, INSTALL TEST MANHOLE

STA 66+50
INSTALL 12"X10" HDPE CONCENTRIC REDUCER, SEE DETAIL THIS SHEET

STA.62+50 TO 63+00 RT.
NO CLEARING OR DISTURBANCE PERMITTED BEYOND THE TREE LINE

STA. 63+40, INSTALL TEST MANHOLE

MH #9

MH #10

GRID N

FUSION WELDED BUTT JOINT

8" HDPE PIPE

HDPE CONCENTRIC REDUCER AT STATION 63+20

10"HDPE PIPE

TRANSITION STRUCTURE

12" HDPE PIPE

HDPE CONCENTRIC REDUCER AT STATION 66+50

10"HDPE PIPE

FUSION WELDED BUTT JOINT

DETAIL YB-22966 1

NOTE:
STATION 64+34 TO STATION 77+00 LINE SHIFTED 6'± TO THE EAST TO REDUCE DAMAGE TO EXIST. TREES.

INSTALL SILTATION FENCE

STA.	TO STA.	LOCATION
62+50	63+50	RT. AT TREE LINE

INSTALL EROSION CONTROL BLANKET

STA.	TO STA.	LOCATION
66+00	72+50	LT. AND RT. ON FILL SLOPES

STA. 64+64 TO STA. 77+00
NOTE:
LINE SHIFTED 6'± TO THE EAST TO REDUCE DAMAGE TO THE EXISTING TREES.

384
376
368
360

S=-2.6%

0.68%

-2.40%

-2.40%

STA 63+20 TRANSITION FROM 8" TO 10" WITH CONCENTRIC REDUCER SEE DETAIL THIS SHEET

STA 66+50 TRANSITION FROM 12" TO 10" WITH CONCENTRIC REDUCER SEE DETAIL THIS SHEET

FLOW TRANSITION ASSEMBLY
STA 63+10 TO STA 64+34

PROPOSED FINISH GRADE

APPROXIMATE EXISTING GRADE

DATUM ELEV. 354.00

STA	63+00	63+20	64+00	65+00	66+00	67+00	68+00	69+00	70+00	71+00	72+00	73+00	74+00	75+00
ELEV.	378.32	378.66	378.80 (8") 378.72 (10")	380.12	379.74	378.54	377.34	376.14	374.94 (12") 375.02 (10")	373.82	372.62	371.42	370.22	369.02	367.82	366.62	365.42	364.22	363.02	361.82	360.62	359.42	358.22	357.02	355.82	354.62

STATE OF MAINE
PETER B TUBBS
2678
REGISTERED PROFESSIONAL ENGINEER
4-3-96

C		3/96	RECORD DRAWING	MSB	PBT		
C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
B		4/95	ISSUED FOR BIDS	RMC	PBT		
P		4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		

DRAWING NO. | ASSOCIATED DRAWING TITLE | NOTE | NO. | DATE | REVISION | BY | CHK'D | APPV'D | JOB NO.

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE

P - Prelim	B - Bids
M - Mtl T.O.	C - Const.

SCALE 1"=40'H;1"=4'V

BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 62+50 TO STA. 75+00
8" FORCE MAIN/12" & 10" GRAVITY TRANSITION
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22966
SHEET 1 OF 1

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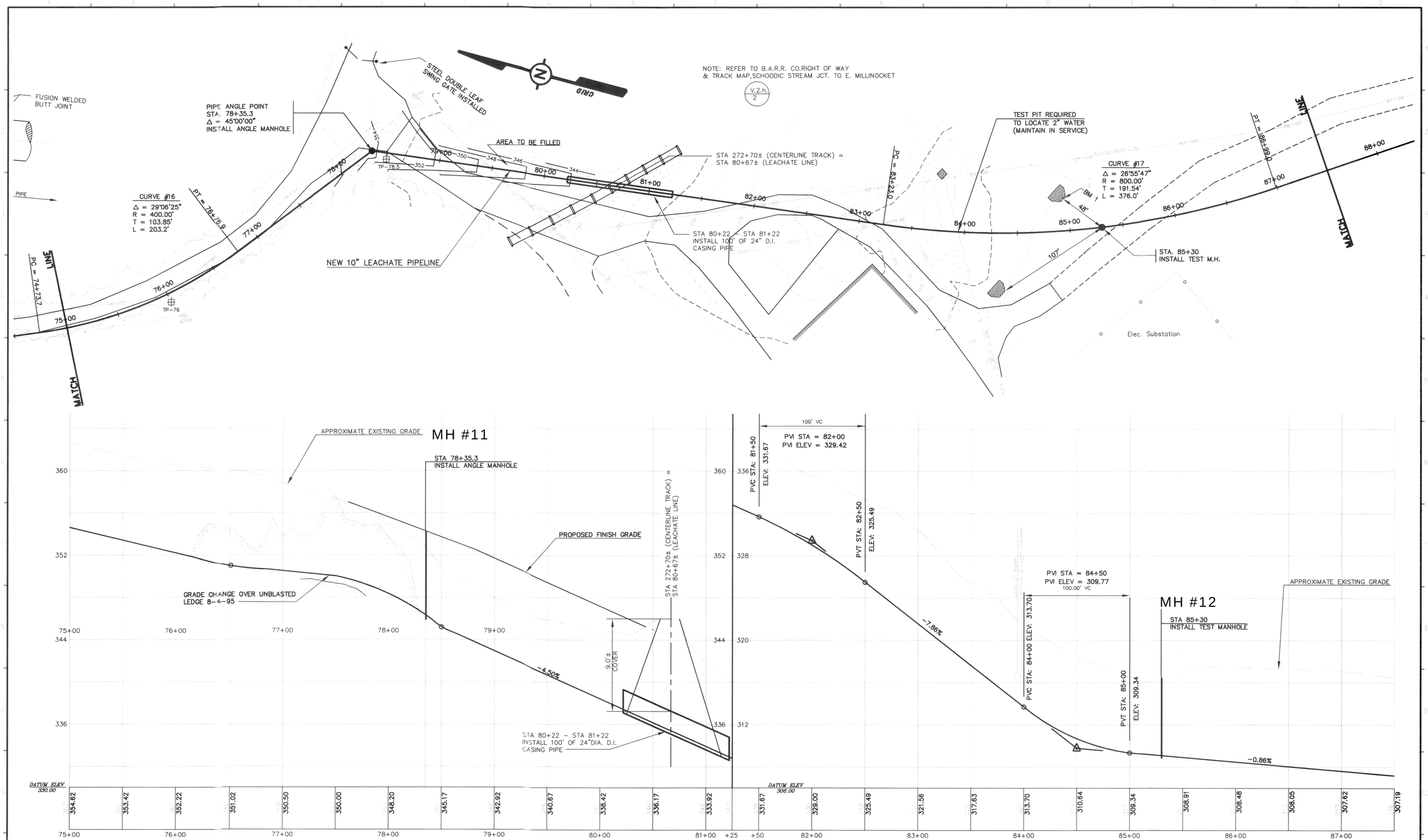


STATE OF MAINE
PETER B TUBBS
2676
REGISTERED PROFESSIONAL ENGINEER
7-3-96

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C		3/96	RECORD DRAWING	MSB	PBT		
		C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
		B		4/95	ISSUED FOR BIDS	MSB	PBT		
				4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
				3/15/95	SUBMITTED FOR R.R. APPROVAL	PBT	PBT		
V2h-2	B.A.R.R. Co. RIGHT OF WAY & TRACK MAP, SCHOODIC STREAM JCT. TO E. MILLINOCKET	P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE
P - Prelim | B - Bids
M - Mtl T.O. | C - Const.
SCALE 1"=40'H;1"=4'V

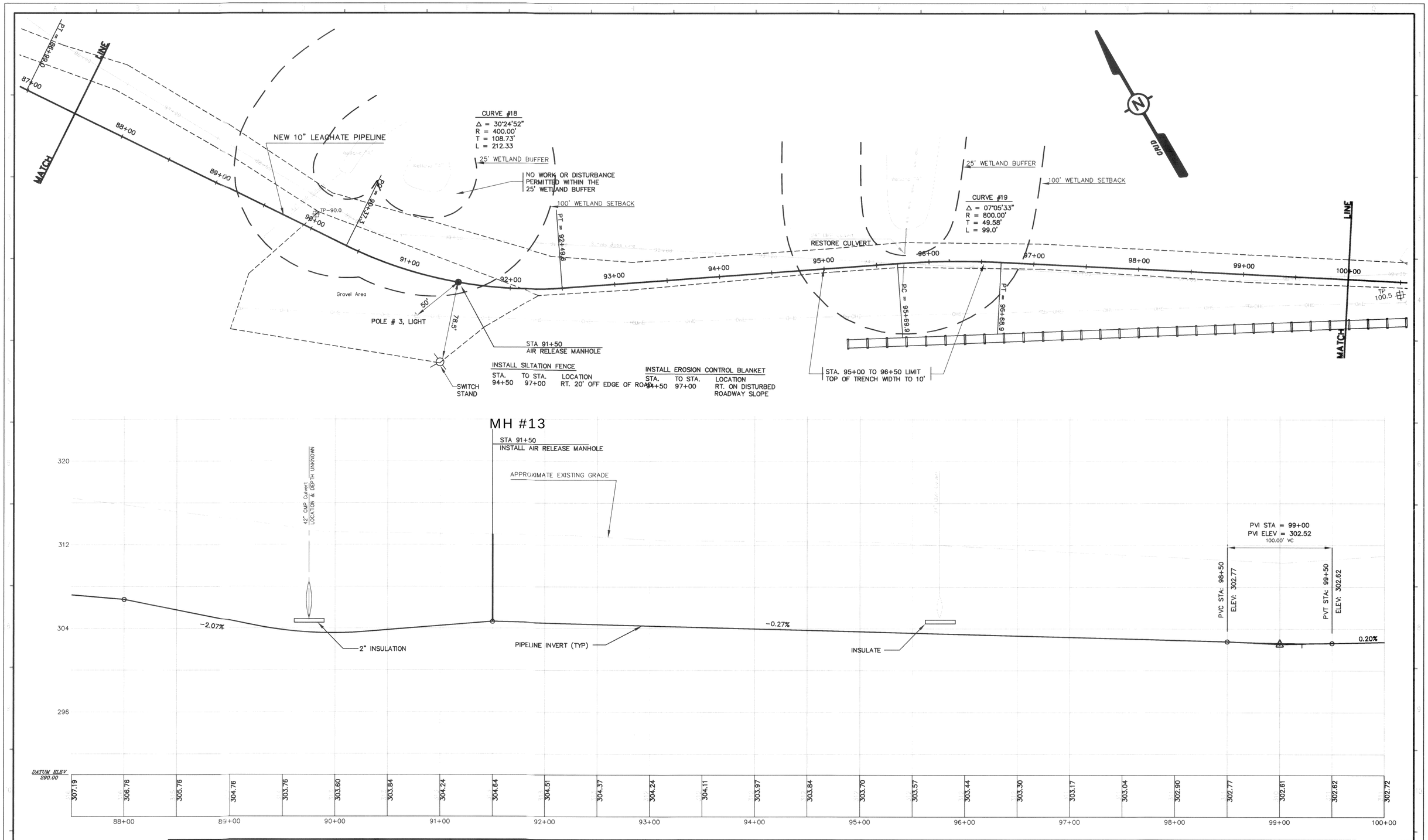
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 75+00 TO STA. 87+50
10" GRAVITY SECTION
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22967
SHEET 1 OF 1

D:\94-227\ACAD\94227R12 Thu Apr 4 15:54:25 1996



STATE OF MAINE
PETER B TUBBS 7678
REGISTERED PROFESSIONAL ENGINEER

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C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT	
B		4/95	ISSUED FOR BIDS	RMC	PBT	
P		4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT	
P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT	

DRAWING NO. | SUPERSEDED DRAWING NO. | REVISION | BY | CHK | APPVD | JOB NO.

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE: P – Prelim; B – Bids; M – MH T.O.; C – Const.
SCALE 1"=40'H; 1"=4'V

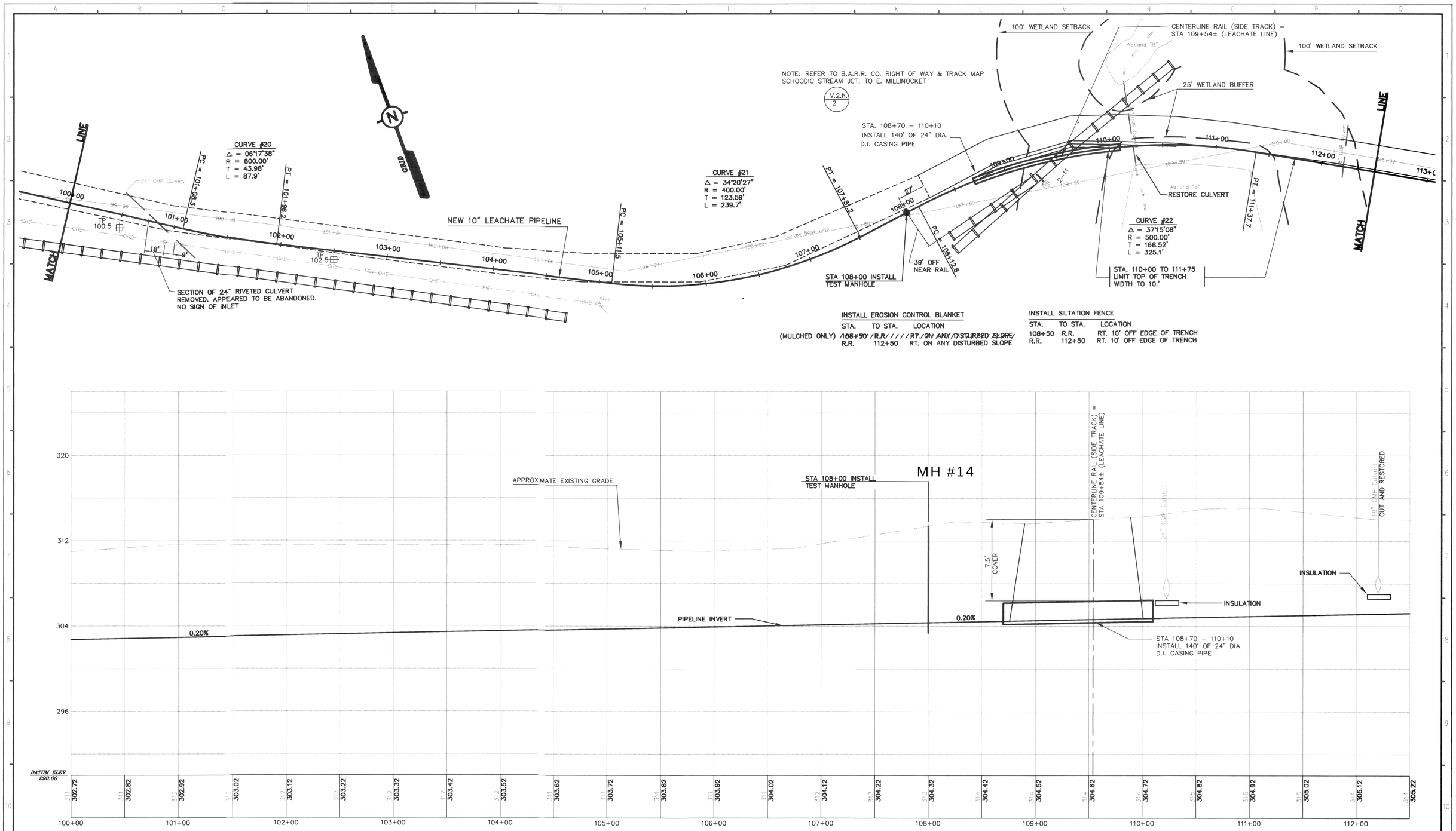
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 87+50 TO STA. 100+00
10" GRAVITY SECTION
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22968
SHEET 1 OF 1

U: \94-227\ACAD\9422H12 Thu Apr 4 15:13:16 1996



INSTALL EROSION CONTROL BLANKET

STA.	TO STA.	LOCATION
(MULCHED ONLY) ~~108+50~~	~~R.R.~~	~~RT. ON ANY DISTURBED SLOPE~~
R.R.	112+50	RT. ON ANY DISTURBED SLOPE

INSTALL SILTATION FENCE

STA.	TO STA.	LOCATION
108+50	R.R.	RT. 10' OFF EDGE OF TRENCH
R.R.	112+50	RT. 10' OFF EDGE OF TRENCH

STATE OF MAINE PETER B TUBBS 2578 REGISTERED PROFESSIONAL ENGINEER 4-3-96

DRAWING NO.	REFERENCE DRAWING TITLE
V2h-2	B.A.R.R. Co. RIGHT OF WAY & TRACK MAP, SCHOODIC STREAM JCT. TO E. MILLINOCKET

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C		3/96	RECORD DRAWING	MSB	PBT		
C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
B		4/95	ISSUED FOR BIDS	MSB	PBT		
P		4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
		3/15/95	SUBMITTED FOR R.R. APPROVAL	JRK	PBT		
P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE: P – Prelim | B – Bids | M – Mtl T.O. | C – Const.

SCALE 1"=40'H; 1"=4'V

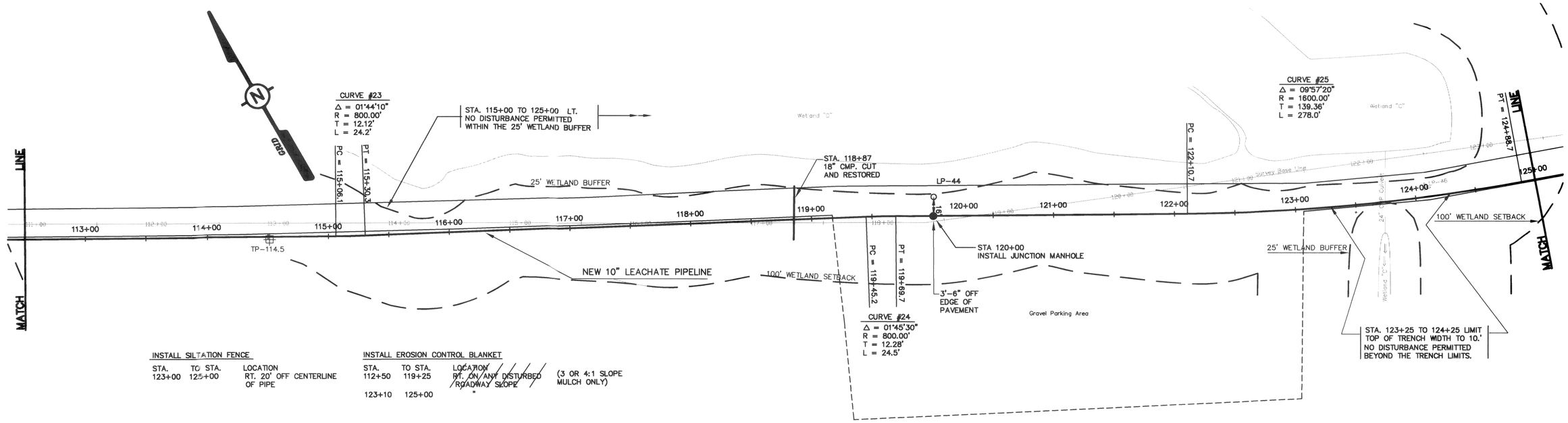
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 100+00 TO STA. 112+50
10" GRAVITY SECTION
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22969
SHEET 1 OF 1

D:\94-227\ACAD\94227H12 Thu Mar 28 14:55:52 1996

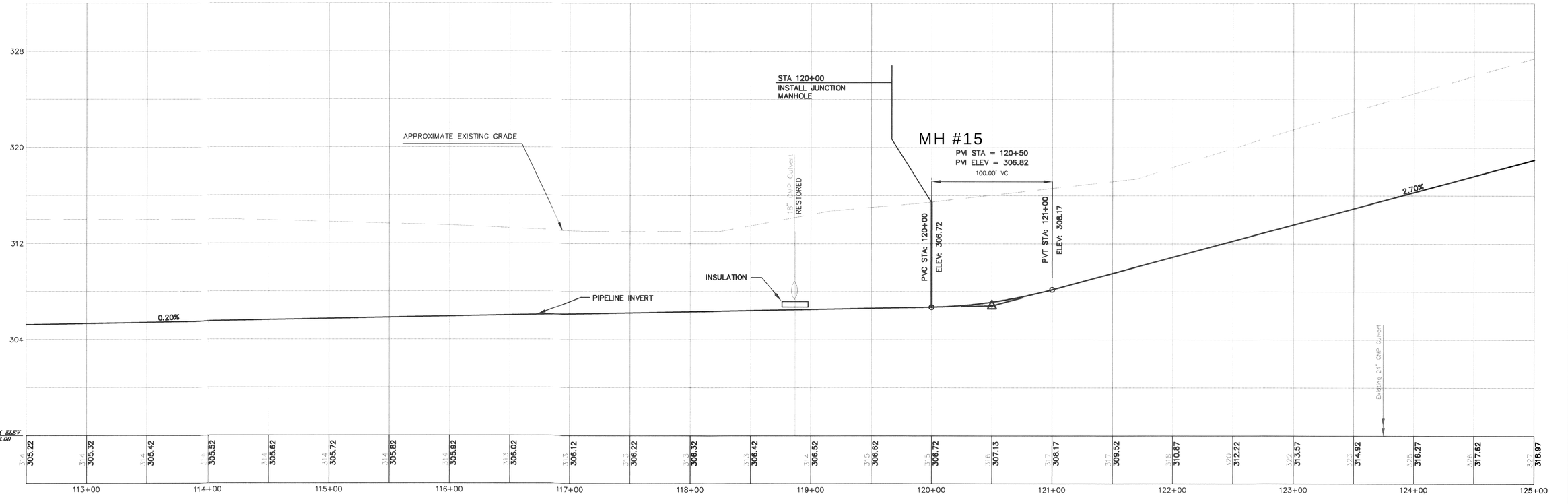


INSTALL SILTATION FENCE

STA.	TO STA.	LOCATION
123+00	125+00	RT. 20' OFF CENTERLINE OF PIPE

INSTALL EROSION CONTROL BLANKET

STA.	TO STA.	LOCATION	
112+50	119+25	RT. ON ANY DISTURBED ROADWAY SLOPE	(3 OR 4:1 SLOPE MULCH ONLY)
123+10	125+00	"	



STATE OF MAINE
PETER B TUBBS
2878
REGISTERED
PROFESSIONAL ENGINEER
4-3-96

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C		3/96	RECORD DRAWING	MSB	PBT		
		C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
		B		4/95	ISSUED FOR BIDS	RMC	PBT		
		P		4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
		P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE: P - Prelim; B - Bids; M - Mtl T.O.; C - Const.

SCALE 1"=40'H;1"=4'V

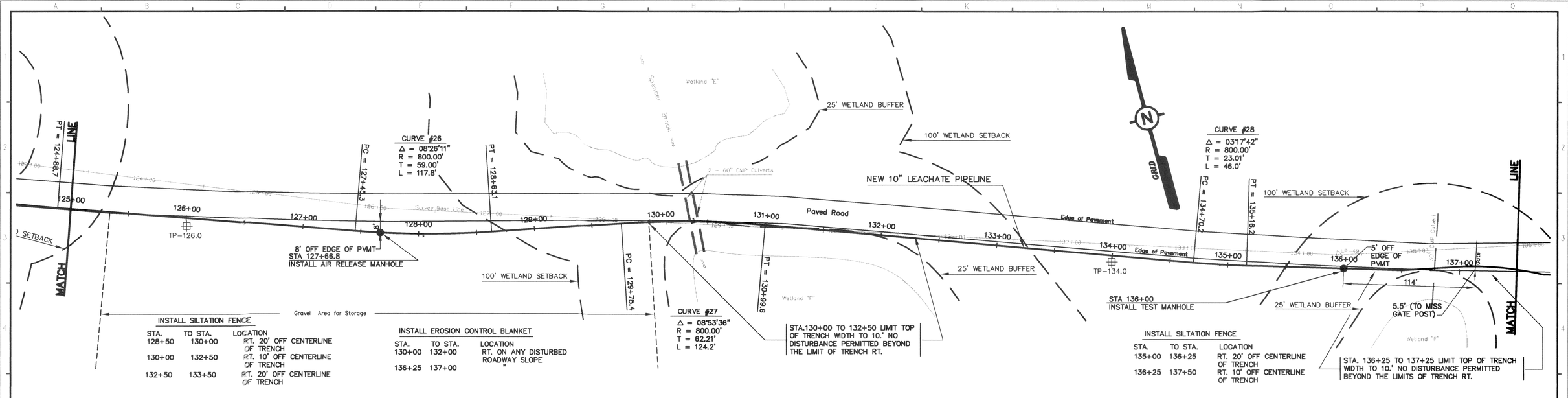
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 112+50 TO STA. 125+00
10" GRAVITY SECTION
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22970
SHEET 1 OF 1

D:\94-227\ACAD\94227R12 Thu Mar 28 15:00:43 1996



STATE OF MAINE
PETER B TUBBS
2678
REGISTERED PROFESSIONAL ENGINEER
7-3-96

C		3/96	RECORD DRAWING	MSB	PBT			
C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT			
B		4/95	ISSUED FOR BIDS	RMC	PBT			
P		4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT			
P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT			
DRAWING NO.		REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE: P – Prelim; B – Bids; M – Mtl T.O.; C – Const.
SCALE 1"=40'H; 1"=4'V

BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 125+00 TO STA. 137+50
10" GRAVITY SECTION
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22971
SHEET 1 OF 1

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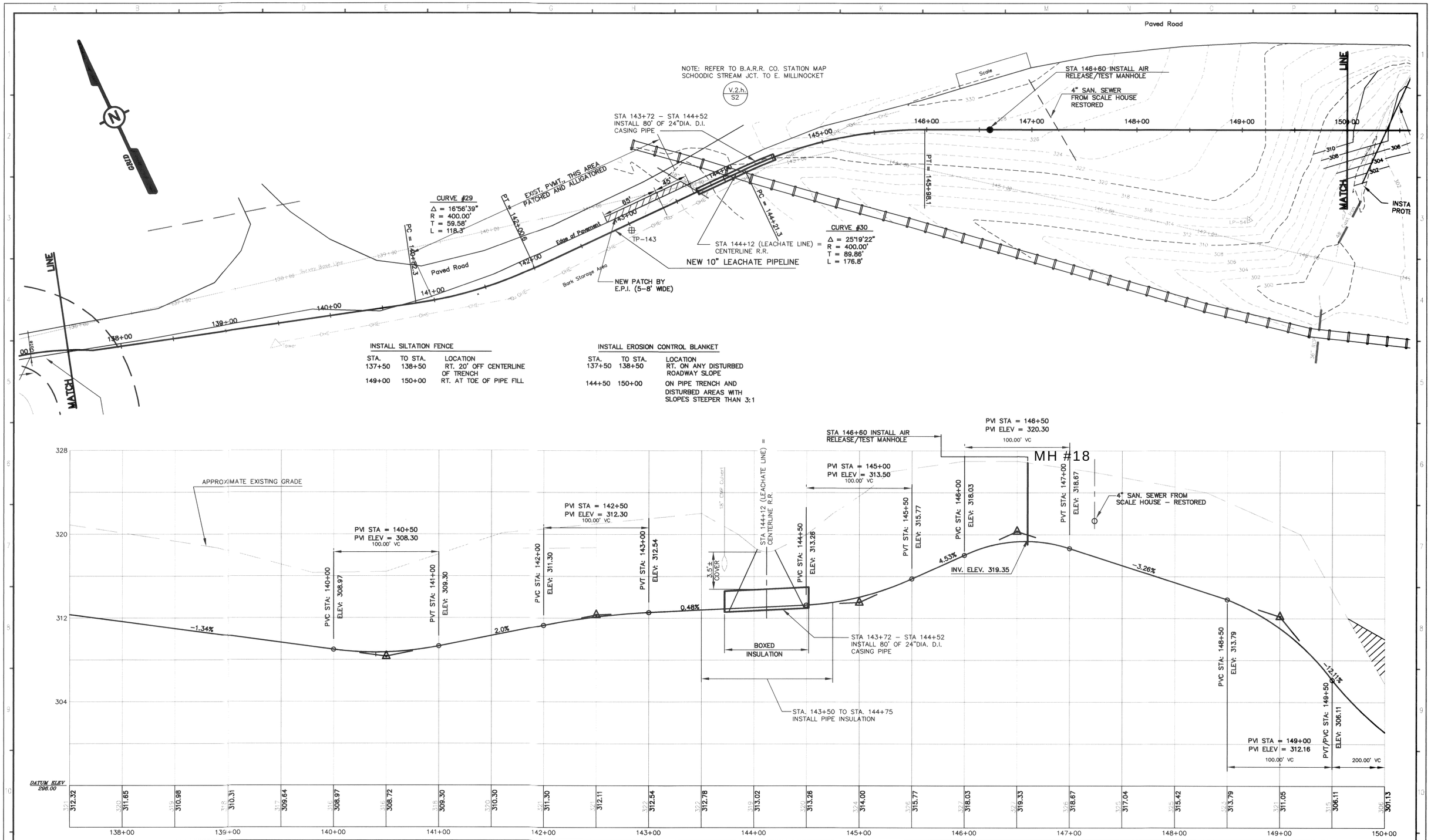

		C	3/96	RECORD DRAWING	MSB	PBT		
		C	6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
		B	4/95	ISSUED FOR BIDS	RMC	PBT		
		P	4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
			3/15/95	SUBMITTED FOR R.R. APPROVAL	PBT	PBT		
V2h–S2	B.A.R.R. Co. STATION MAP SCHOODIC STREAM JCT. TO E. MILLINOCKET	P		SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		
DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.

STATE OF MAINE
PETER B TUBBS
2878
REGISTERED PROFESSIONAL ENGINEER
4-3-96

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE
P – Prelim | B – Bids
M – Mtl T.O. | C – Const.
SCALE 1"=40'H; 1"=4'V

BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 137+50 TO STA. 150+00
10" GRAVITY SECTION
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22972
SHEET 1 OF 1

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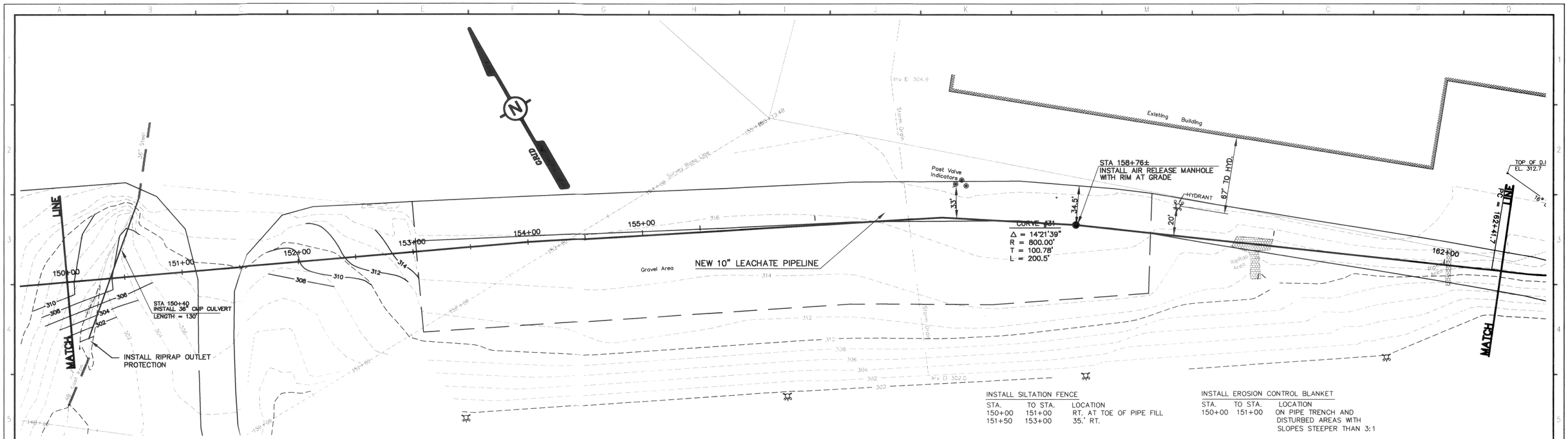
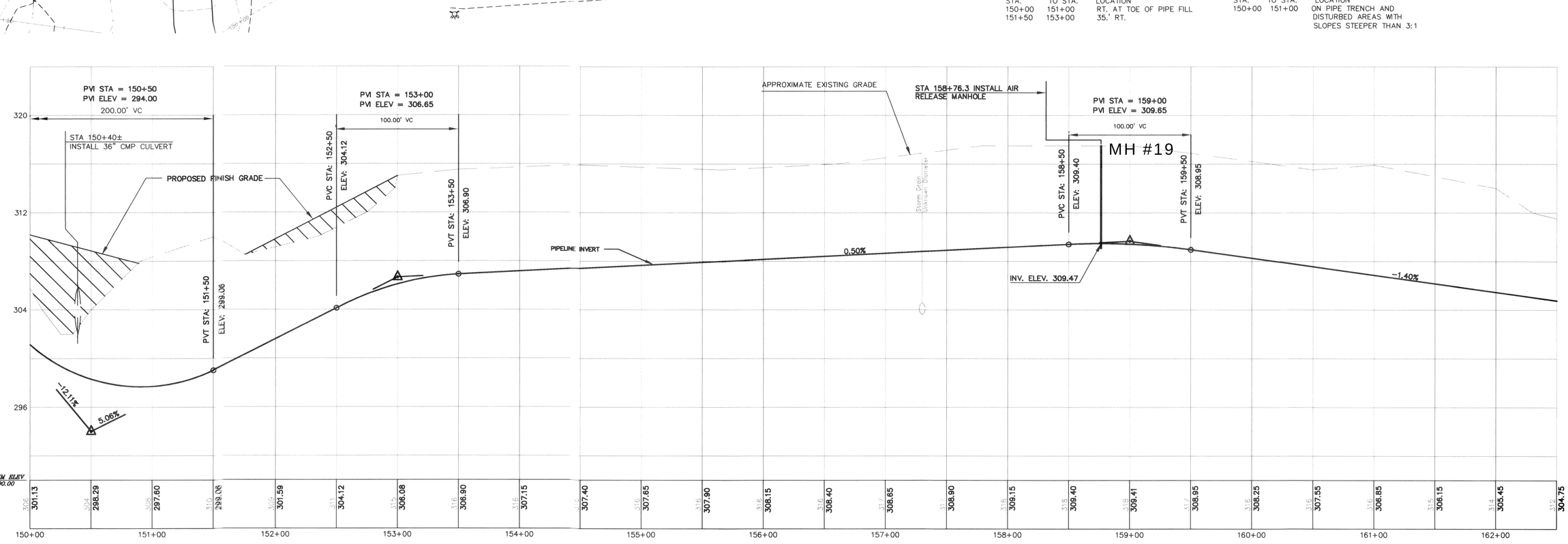




STATE OF MAINE
PETER B TUBBS
2676
REGISTERED
PROFESSIONAL ENGINEER
4-5-96

YB-20978 — RECYCLE FIBER PLANT – UNDERGROUND UTILITIES SHEETS 1–6
DRAWING NO. — REFERENCE DRAWING TITLE

CODE	NO.	DATE	REVISION	BY	CK'D	APPV'D	JOB No.
C		3/96	RECORD DRAWING	MSB	PBT		
C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
B		4/95	ISSUED FOR BIDS	MSB	PBT		
P		4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE: P – Prelim; B – Bids; M – MH T.O.; C – Const.
SCALE 1"=40'H; 1"=4'V

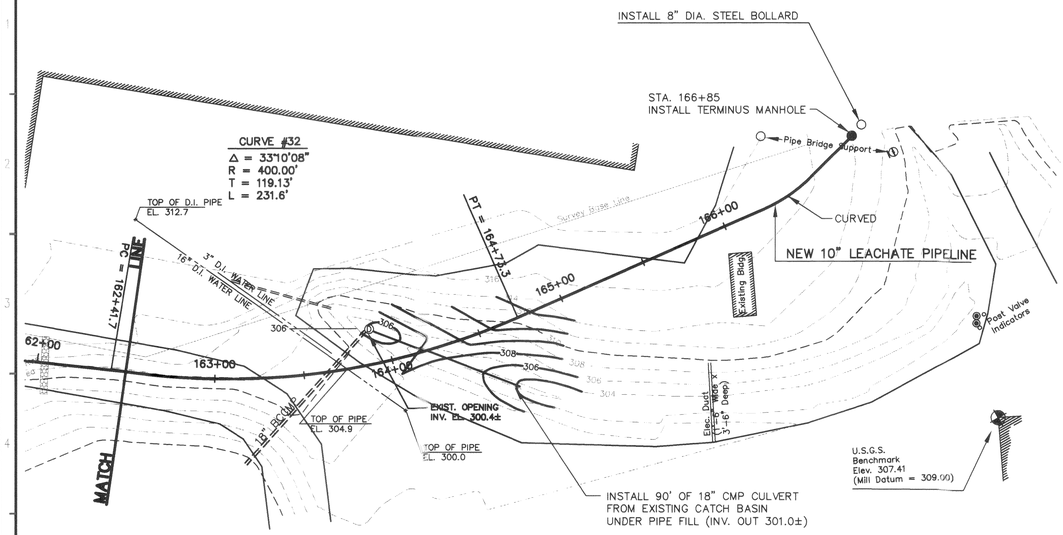
BOWATER
Great Northern Paper

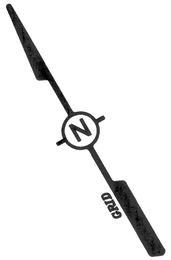
EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 150+00 TO STA. 162+50
10" GRAVITY SECTION
PLAN & PROFILE

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB–22973
SHEET 1 OF 1

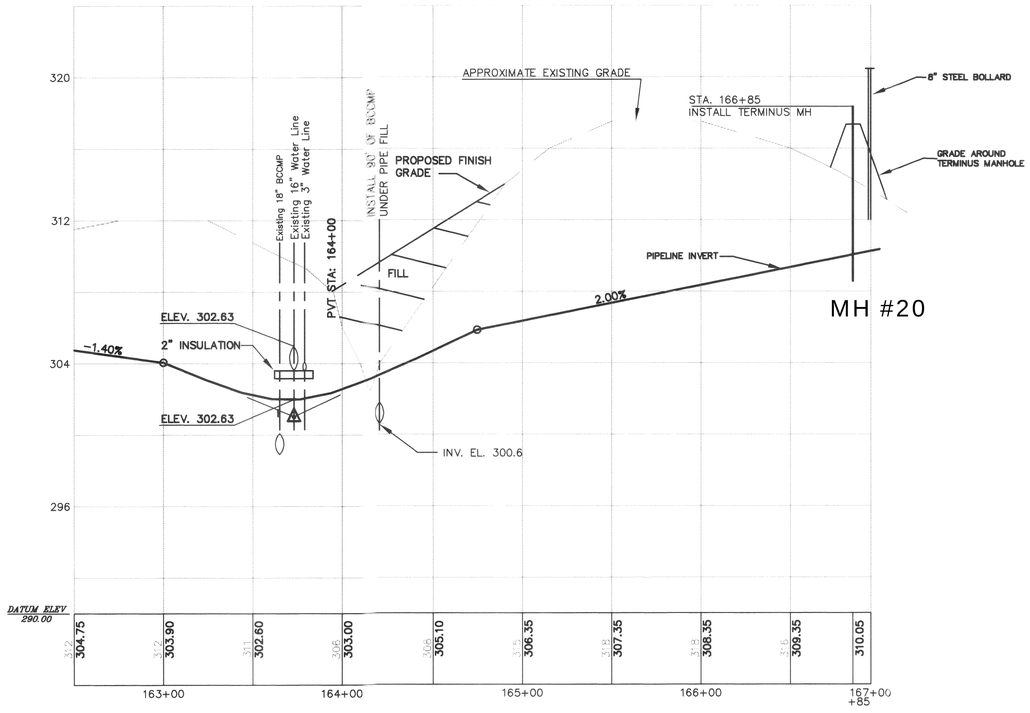
D:\94-2271.ACAD\94227R12 Thu Mar 28 15:34:14 1996





MANHOLE AND STRUCTURE SCHEDULE

STATION	TYPE	SIZE	DESCRIPTION
0+95	CIRCULAR	8' DIA.	GATE AND CHECK VALVE
2+41	CIRCULAR	6' DIA.	ANGLE
8+31	CIRCULAR	6' DIA.	AIR RELEASE
17+46	CIRCULAR	8' DIA.	AIR RELEASE / TEST
34+96	CIRCULAR	8' DIA.	ANGLE / TEST
38+94	CIRCULAR	4' DIA.	ANGLE
41+00	CIRCULAR	4' DIA.	ANGLE
51+50	CIRCULAR	8' DIA.	TEST
63+40	CIRCULAR	8' DIA.	TEST
63+75, 53' LT.	RECTANGULAR	6' X 12'	FLOW TRANSITION STRUCTURE
64+05	CIRCULAR	8' DIA.	TEST
78+35	CIRCULAR	4' DIA.	ANGLE
85+30	CIRCULAR	8' DIA.	TEST
91+50	CIRCULAR	4' DIA.	AIR RELEASE
108+00	CIRCULAR	8' DIA.	TEST
127+67	CIRCULAR	6' DIA.	AIR RELEASE
136+00	CIRCULAR	8' DIA.	TEST
120+00	CIRCULAR	4' DIA.	JUNCTION
146+60	CIRCULAR	8' DIA.	AIR RELEASE / TEST
158+76	CIRCULAR	6' DIA.	AIR RELEASE
166+85	CIRCULAR	8' DIA.	VALVE



STATE OF MAINE
PETER B TUBBS
2878
REGISTERED
PROFESSIONAL ENGINEER
4-3-96

DRAWING NO.	REFERENCE DRAWING TITLE
YB-20978	RECYCLE FIBER PLANT AND UNDERGROUND UTILITIES, SHTS. 1-6

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C		3/96	RECORD DRAWING	MSB	PBT		
C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
B		4/95	ISSUED FOR BIDS	RMC	PBT		
P		4/95	PRELIMINARY CONSTRUCTION ISSUE	RMC	PBT		
P			SUBMITTED W/ PERMIT APPLICATION	JRK	PBT		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	JRK	9/94
CHK	PBT	10/94
CHK		
CORR		
APPVD		

ISSUE CODE: P - Prelim; B - Bids; M - MH T.O.; C - Const.
SCALE: 1"=40'H; 1"=4'V

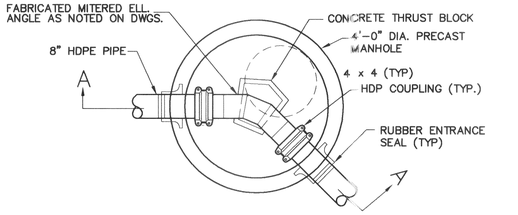
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
STA. 162+50 TO STA. 167+00
10" GRAVITY SECTION
PLAN & PROFILE

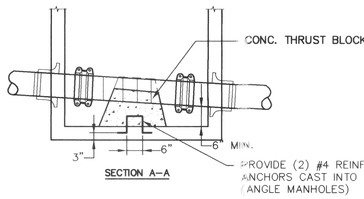
JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB-22974
SHEET 1 OF 1

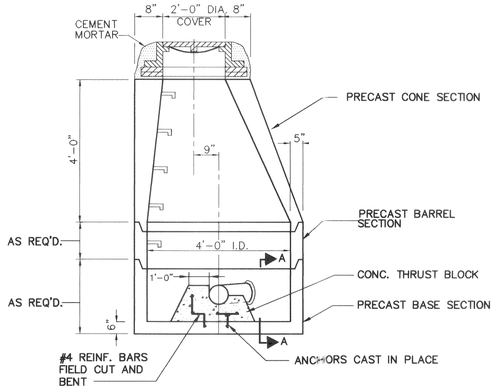
D:\94-227\ACAD\94227R12 Thu Apr 4 09:33:41 1996



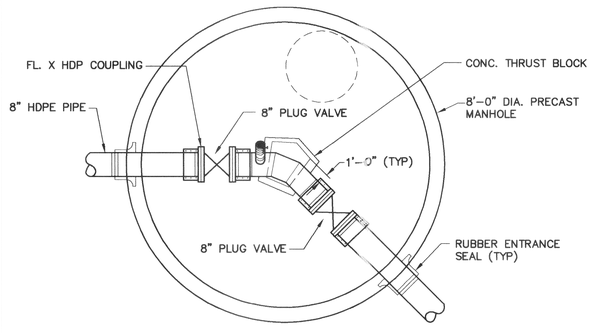
PLAN



SECTION A–A

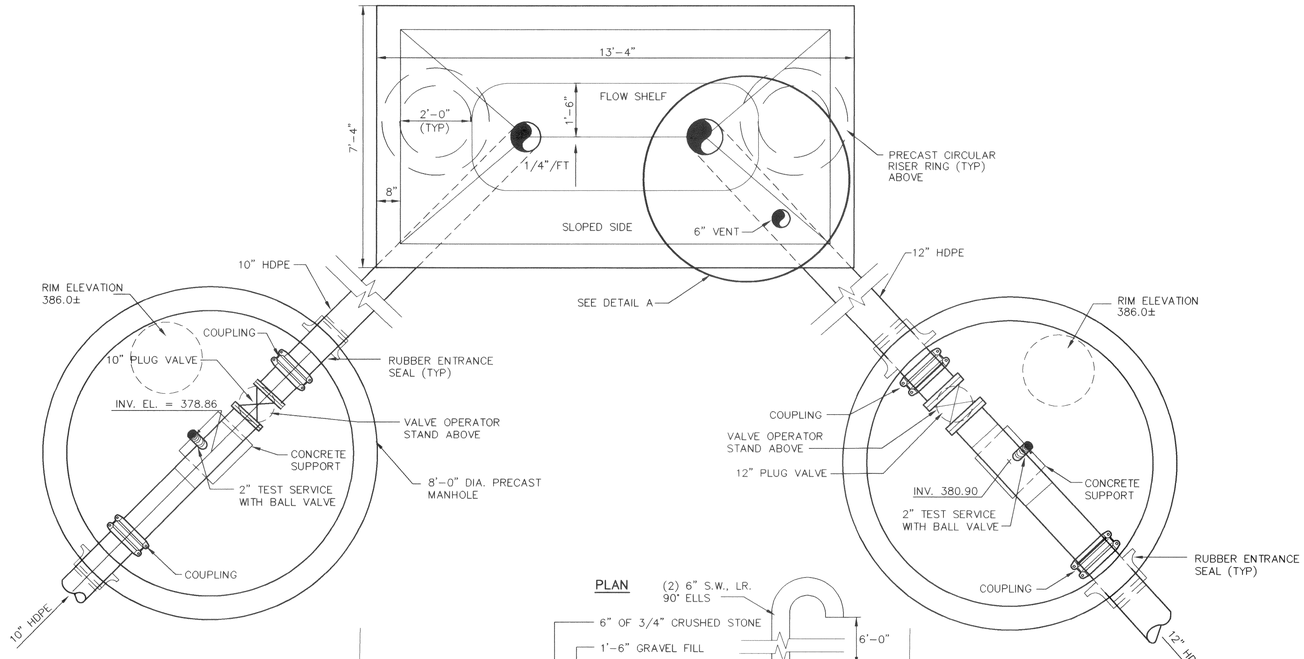


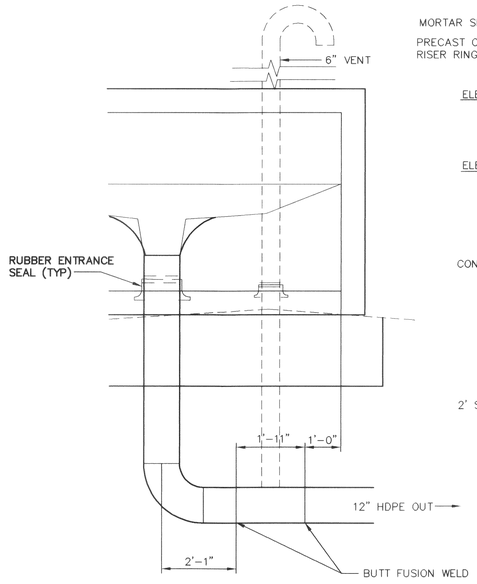
ELEVATION
TYPICAL JUNCTION / ANGLE MANHOLE



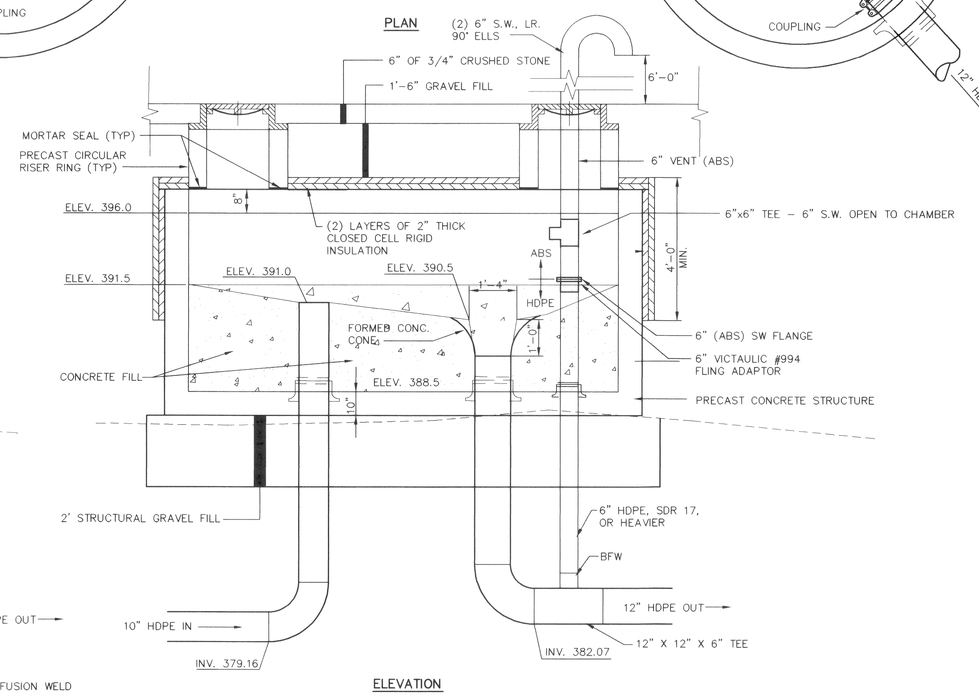
PLAN

ANGLE / TEST CHAMBER
STATION 34+96





DETAIL A
N.T.S.



ELEVATION
FLOW TRANSITION STRUCTURE
N.T.S.

STATE OF MAINE
PETER B TUBBS 2978
REGISTERED PROFESSIONAL ENGINEER
4-3-96

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C		3/96	RECORD DRAWING	MSB	PBT		
		C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
		B		4/95	ISSUED FOR BIDS	MSB	PBT		
		P		4/95	PRELIMINARY CONSTRUCTION ISSUE	MSB	PBT		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	MSB	4/95
CHK	PBT	4/95
CHK		
CORR		
APPVD		

ISSUE CODE: P – Prelim. | B – Bids | M – Mtl T.O. | C – Const.

SCALE AS NOTED

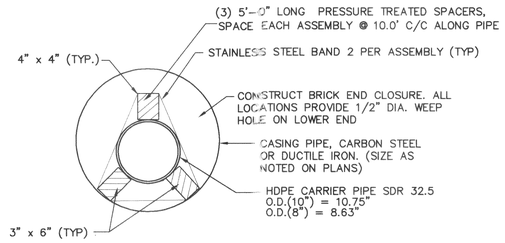
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
MANHOLES AND STRUCTURES
MISCELLANEOUS DETAILS

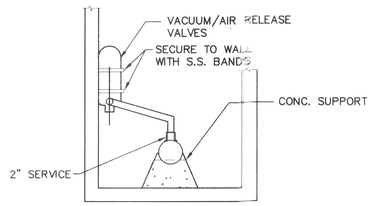
JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

YB–22975
SHEET 1 OF 2

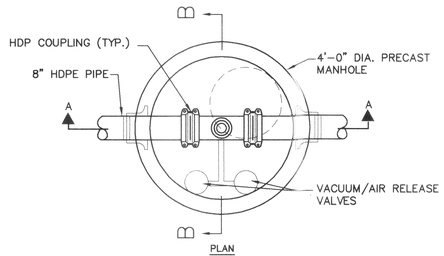
D:\94-227\ACAD\DETAIL-2 Thu Mar 28 07:33:46 1996



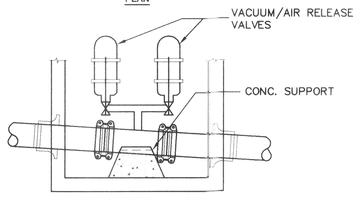
RAILROAD AND ROUTE 157 CROSSINGS
PIPE ENCASEMENT
N.T.S.



SECTION B-B

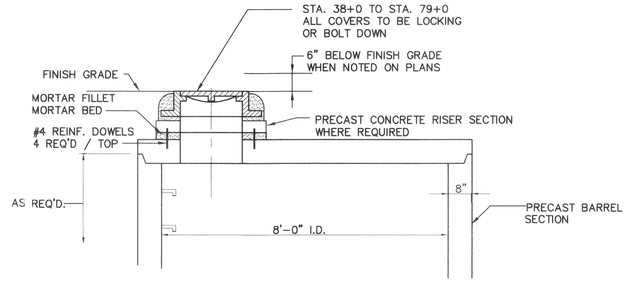


PLAN

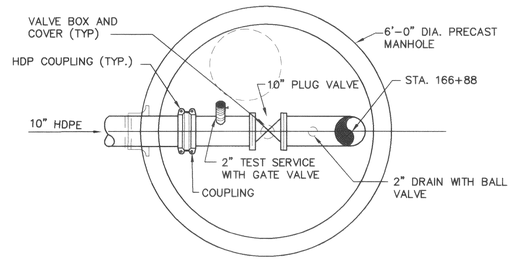


SECTION A-A

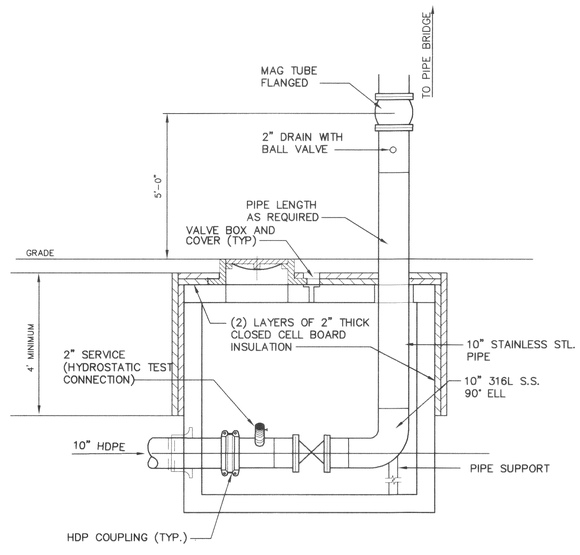
AIR RELEASE MANHOLE
N.T.S.



TYPICAL TOP INSTALLATION
FLAT TOP MANHOLES AND STRUCTURES
N.T.S.



PLAN



ELEVATION

TERMINUS MANHOLE
N.T.S.

STATE OF MAINE
PETER B TUBBS
2878
REGISTERED PROFESSIONAL ENGINEER
4-3-96

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C		3/96	RECORD DRAWING	MSB	PBT		
		C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
		B		4/95	ISSUED FOR BIDS	MSB	PBT		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	MSB	4/95
CHK	PBT	4/95
CHK		
CORR		
APPVD		
ISSUE CODE		
P - Prelim	B - Bids	
M - Mtl T.O.	C - Const.	
SCALE AS NOTED		

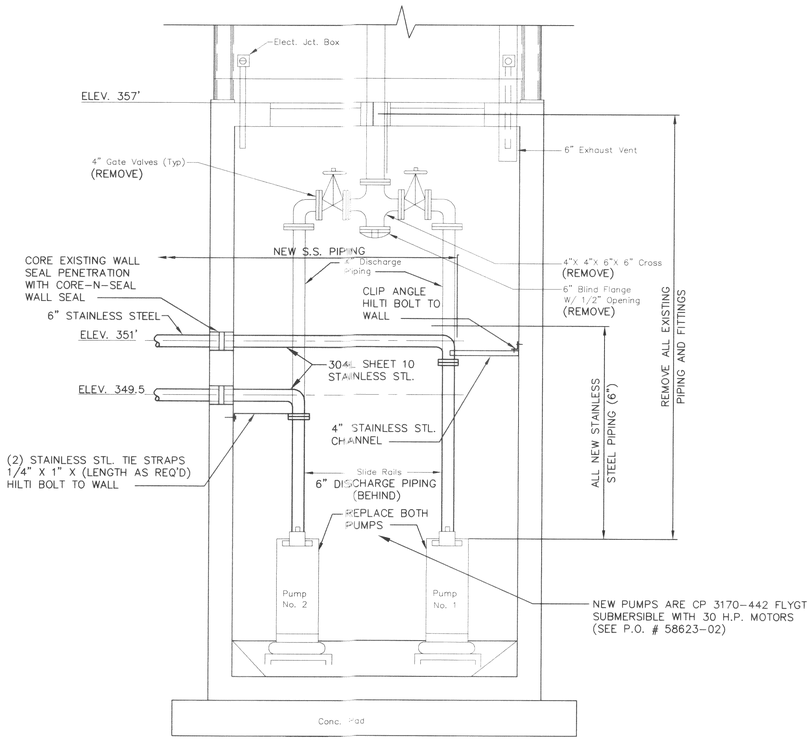
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
MANHOLES AND STRUCTURES
MISCELLANEOUS DETAILS

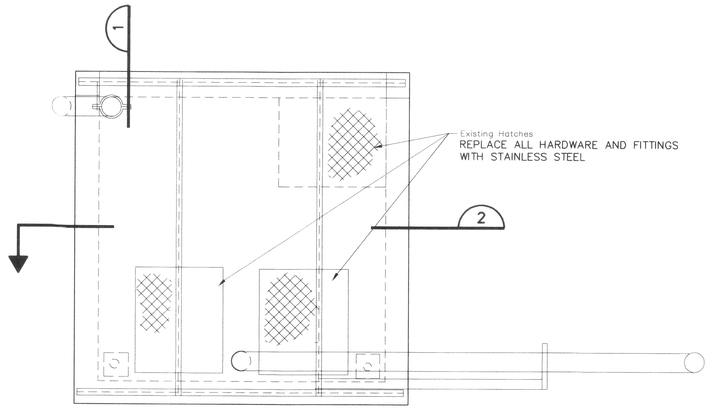
JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

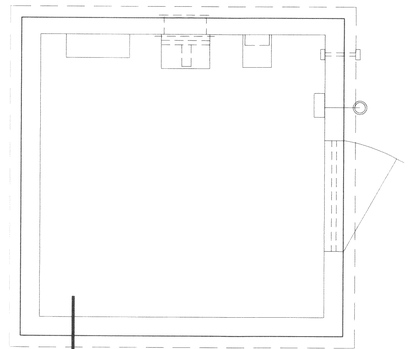
YB-22975
SHEET 2 OF 2

U:\94-227\ACAD\DETAIL24 Thu Apr 4 09:19:14 1996

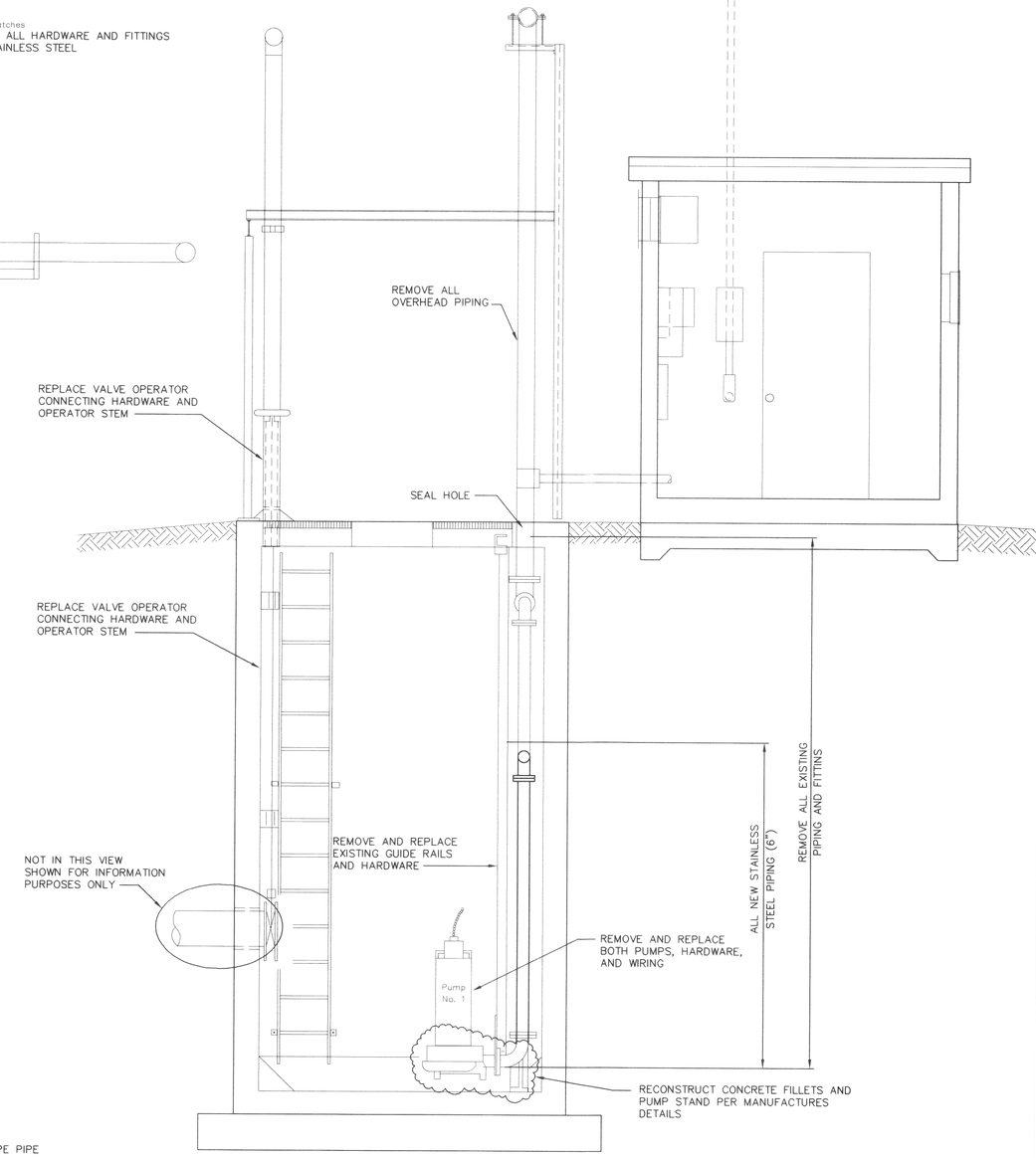


SECTION 2
N.T.S.

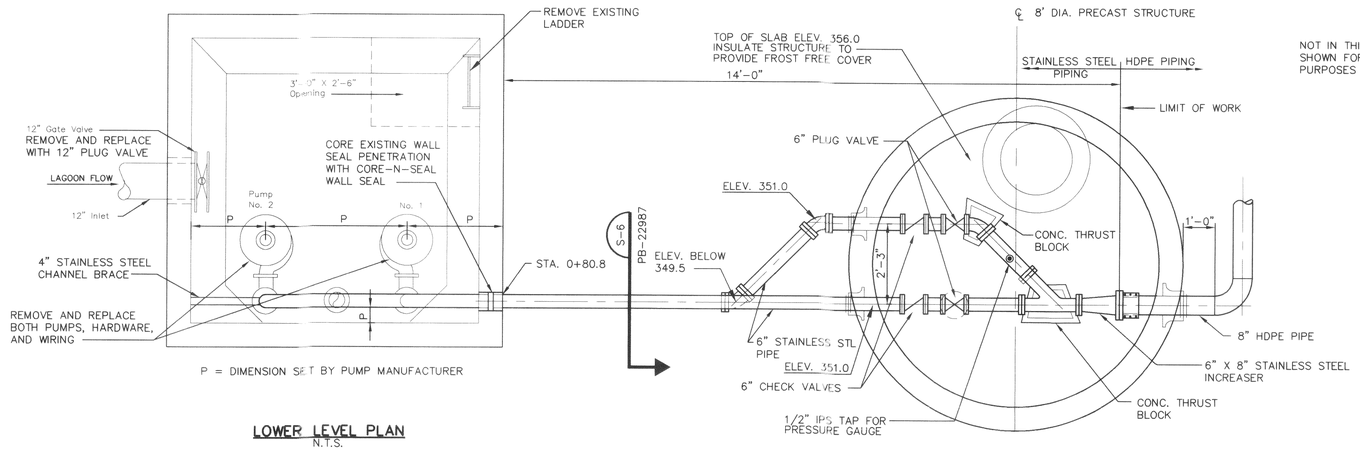




PLAN
CONTROL ROOM AND WET WELL



SECTION 1
N.T.S.



P = DIMENSION SET BY PUMP MANUFACTURER

LOWER LEVEL PLAN
N.T.S.

STATE OF MAINE
PETER B TUBBS 2678
REGISTERED PROFESSIONAL ENGINEER
1-3-96

DRAWING NO.	REFERENCE DRAWING TITLE
SB - 14888	BOYDCO - LEACHATE PUMP STATION PLANS AND SECTIONS

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C		3/96	RECORD DRAWING	MSB	PBT		
C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
B		6/95	ISSUED FOR BIDS	MSB	PBT		
P		4/95	PRELIMINARY CONSTRUCTION ISSUE	MSB	PBT		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	MSB	4/95
CHK	PBT	4/95
CHK		
CORR		
APPVD		

ISSUE CODE
P - Prelim | B - Bids
M - Mtl T.O. | C - Const.
SCALE AS NOTED

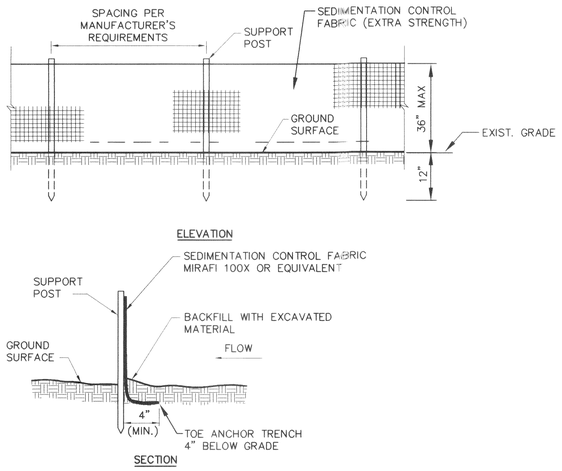
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
EXISTING PUMP STATION MODIFICATIONS
PLANS AND SECTIONS

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

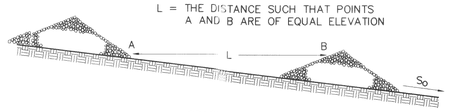
YB-22976

D:\94-227\ACAD\DETAIL-1 Thu Apr 4 09:16:56 1996



SILTATION FENCE (KEYED IN)

N.T.S.

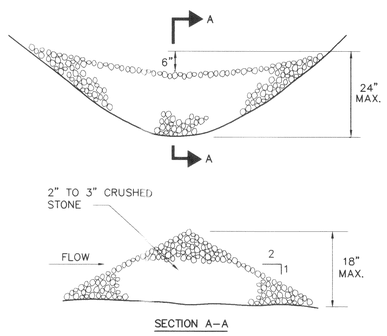


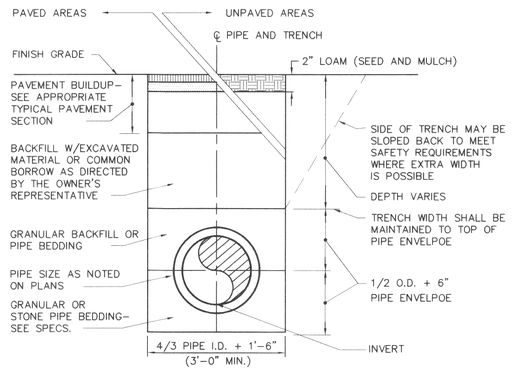
SPACING BETWEEN CHECK DAMS

So (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

STONE CHECK DAMS

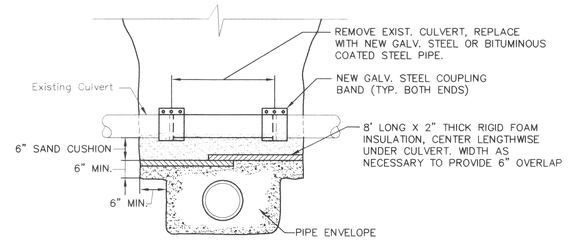
N.T.S.





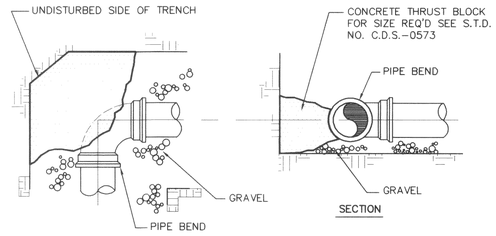
TYPICAL TRENCH DETAIL

N.T.S.



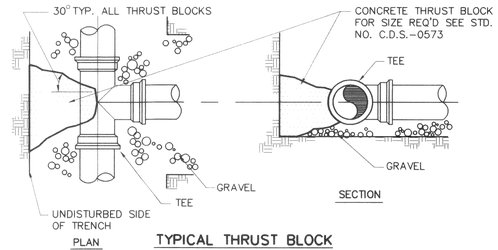
CULVERT RESTORATION

N.T.S.



TYPICAL THRUST BLOCK PLACEMENT ON BENDS

N.T.S.



TYPICAL THRUST BLOCK PLACEMENT ON TEES

N.T.S.

SIZE REQUIREMENTS FOR CONCRETE THRUST BLOCKS

		BEARING ON UNDISTURBED SOIL (SQUARE FT.)			
FITTINGS		90° BENDS	45° BENDS	TEES & PLUGS	HYDRANTS
PIPE SIZE	4"	2.0	1.0	1.0	N/A
	6"	3.0	2.0	2.0	6.0
	8"	5.0	3.0	4.0	N/A
	10"	7.0	4.0	5.0	N/A
	12"	10.0	6.0	7.0	N/A
	14"	13.0	7.0	10.0	N/A
	16"	17.0	9.0	12.0	N/A

TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL

A. GENERAL

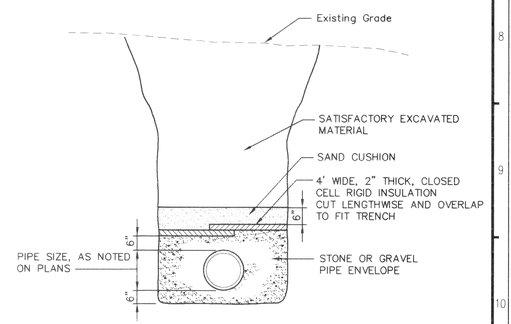
1. All soil erosion and sediment control will be done in accordance with the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices, Cumberland County Soil and Water Conservation District, Department of Environmental Protection, March 1991, and as currently revised.
2. Drainage or pumping will not be discharged into any stream, brook or drainage course or any wetland. Discharge points shall be established and protected to collect sediments before discharge onto upland areas.
3. Disturbed areas will be permanently stabilized within 15 days of final grading. Disturbed areas not to be worked upon within 14 days of disturbance, shall be temporarily stabilized within 7 days of the disturbance.
4. Removal of trees, bushes and other vegetation as well as disturbance of topsoil will be kept to a minimum in all areas while allowing proper site operations.
5. Stockpiles shall be located in a manner such that natural drainage in not obstructed and no off–site sedimentation will result. Silt fence will be installed around the perimeter of all stockpiles. Topsoil stockpiles surrounded with siltation fencing or temporarily mulched

B. TEMPORARY MEASURES

1. Silt Fence
   (a) Silt fence will be installed prior to and down–gradient of all construction activity where soil disturbance may result in erosion.
   (b) Silt fences will be removed when they have served their useful purpose, but not before the upgradient areas have been permanently stabilized.
   (c) Silt fences will be inspected immediately after each rainfall and at least daily during prolonged rainfall. Repairs will be made as necessary, Any required repairs will be made immediately.
   (d) Sediment deposits shall be removed after each storm event if significant buildup has occurred.
2. Stone Check Dams
   (a) Stone check dams should be constructed of 2 to 3 inch stone. The stone should be placed according to the configuration shown to ensure that the center of the dam is lower than the edges.
   (b) Sediments will be removed from behind the check dams when it has accumulated to one half of the original height of the dam.
   (d) Check dams will be removed at the completion of the work. The area beneath the check dams will be seeded and mulched immediately after they are removed.
   (e) Regular inspections shall be made to ensure the integrity of the dam. Check dams will be checked for sediment accumulation after each significant rainfall. Repairs will be made as necessary.

C. INSPECTIONS

Inspections will be undertaken by qualified personnel to ensure that temporary and permanent erosion and sedimentation controls are properly installed and correctly functioning, and that additional erosion control measures are installed as needed. Such inspections will occur bi–weekly and after each significant rainfall event (1 inch or more within a 24 hour period) during construction until permanent erosion control measures have been installed and and the site is stabilized.



TYPICAL SECTION TRENCH INSULATION

N.T.S.

STATE OF MAINE
PETER B TUBBS 2678
REGISTERED PROFESSIONAL ENGINEER
4/4/96

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C		3/96	RECORD DRAWING	MSB	PBT		
		C		6/95	ISSUED FOR CONSTRUCTION	BAK	PBT		
		B		4/95	ISSUED FOR BIDS	MSB	PBT		
		P		4/25	PRELIMINARY CONSTRUCTION ISSUE	MSB	PBT		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	MSB	4/95
CHK	PBT	4/95
CHK		
CORR		
APPVD		

ISSUE CODE: P – Prelim; B – Bids; M – Mtl T.O.; C – Const.

SCALE: AS NOTED

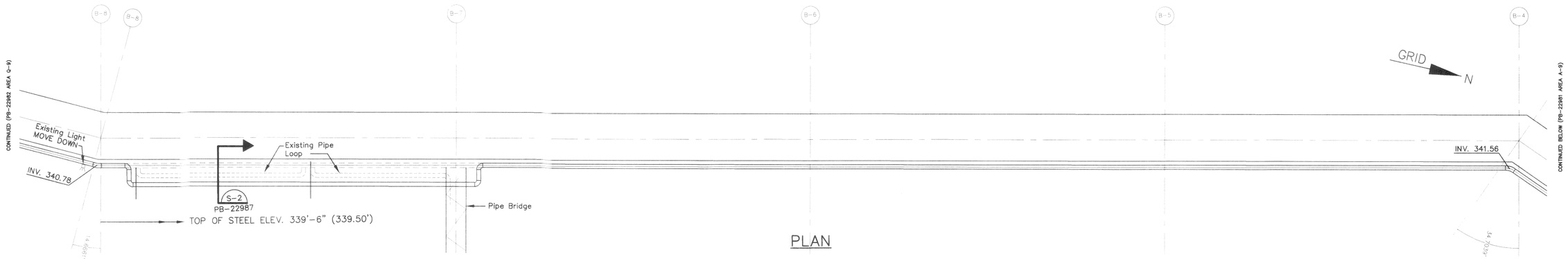
BOWATER
Great Northern Paper

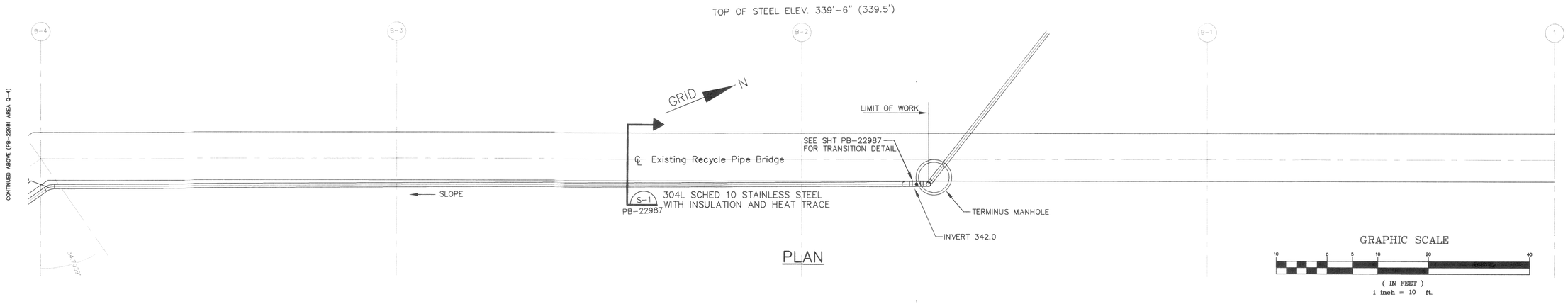
EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
EROSION CONTROL AND MISCELLANEOUS DETAILS

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2–092–4783

YB–22977
SHEET 1 OF 1

D:\94-227\ACAD\DETAIL-3 Thu Apr 4 09:10:41 1996





STATE OF MAINE
DAVID WILLARD YOUNG
2410
REGISTERED
PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE
PF-01632-C	SIMONS ENGINEERING/RECYCLE FIBER PLANT
PF-01631-D	SIMONS ENGINEERING/RECYCLE FIBER PLANT

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C		8/17/95	ISSUED FOR CONSTRUCTION	BDB	DWY		
P		8/8/95	FOR CLIENT REVIEW	BDB	DWY		
P		5/26/95	FOR CLIENT REVIEW	MSB	DWY		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	DWY 5/95
CHK	
CHK	
CORR	
APPVD	
ISSUE CODE	
P - Prelim	B - Bids
M - Mtl T.O.	C - Const.
SCALE	1" = 10'

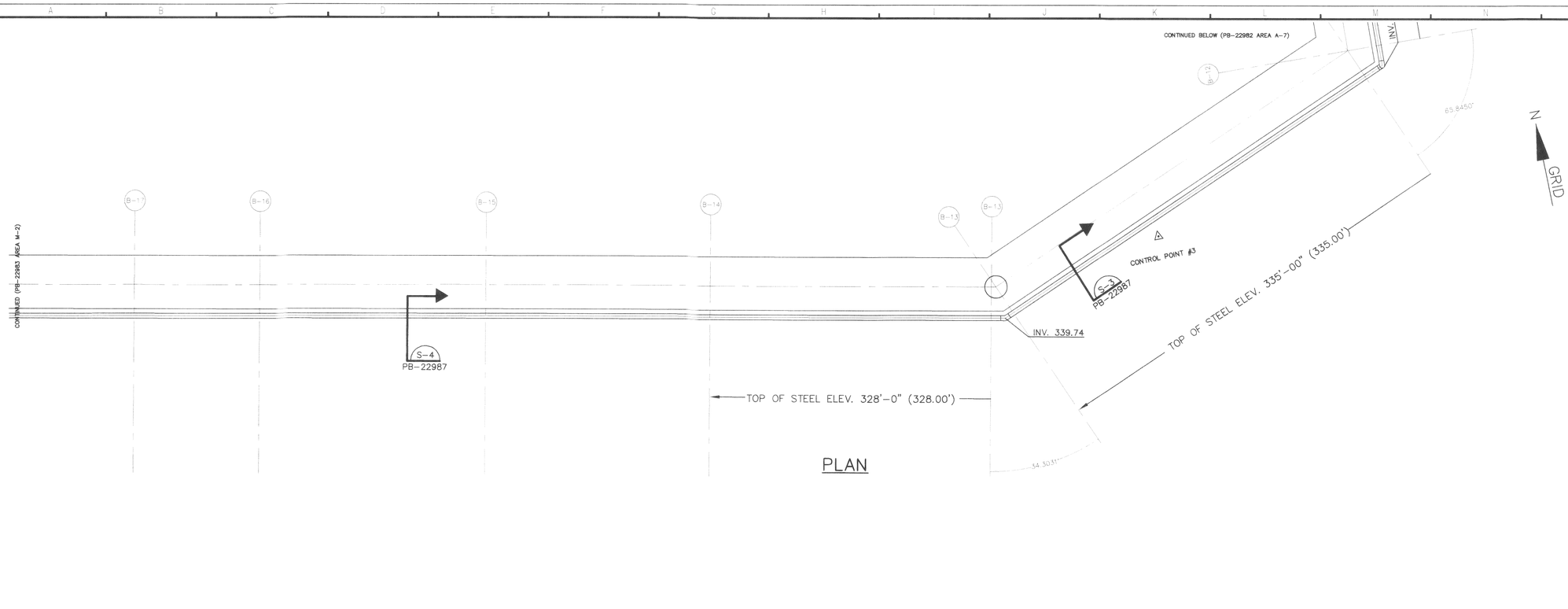
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
PIPE BRIDGE
10" GRAVITY SEWER

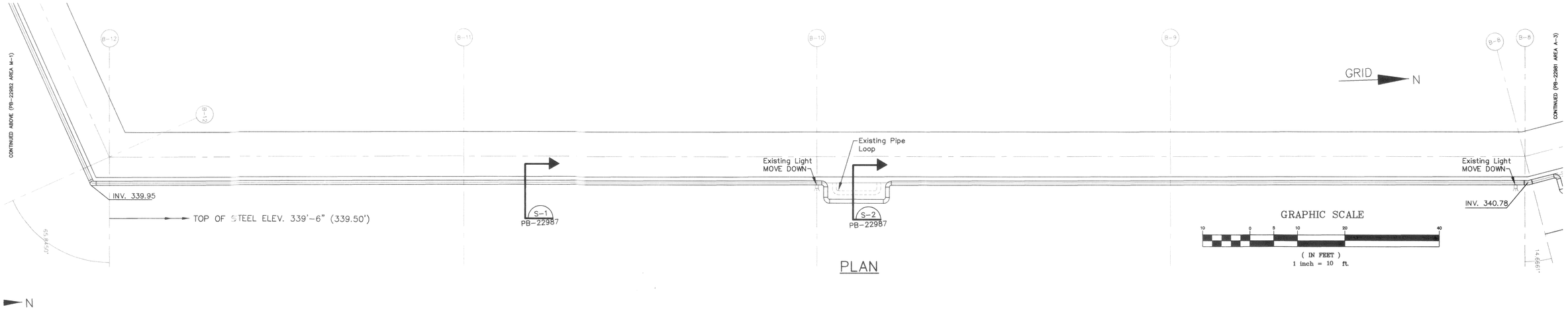
JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

PB-22981
SHEET 1 OF 8

L:\94-22\02\ACAD\22102 Thu Aug 17 11:49:16 1995



PLAN



PLAN

STATE OF MAINE
DAVID
WILLARD
YOUNG
2410
REGISTERED
PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C		8/17/95	ISSUED FOR CONSTRUCTION	BDB	DWY		
PF-01633-C	SIMONS ENGINEERING/RECYCLE FIBER PLANT	P		8/8/95	FOR CLIENT REVIEW	MSB	DWY		
PF-01634-B	SIMONS ENGINEERING/RECYCLE FIBER PLANT	P		5/26/95	FOR CLIENT REVIEW	MSB	DWY		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	DWY 5/95
CHK	
CHK	
CORR	
APPVD	
ISSUE CODE	
P – Prelim	B – Blds
M – Mtl T.O.	C – Const.
SCALE	1" = 10'

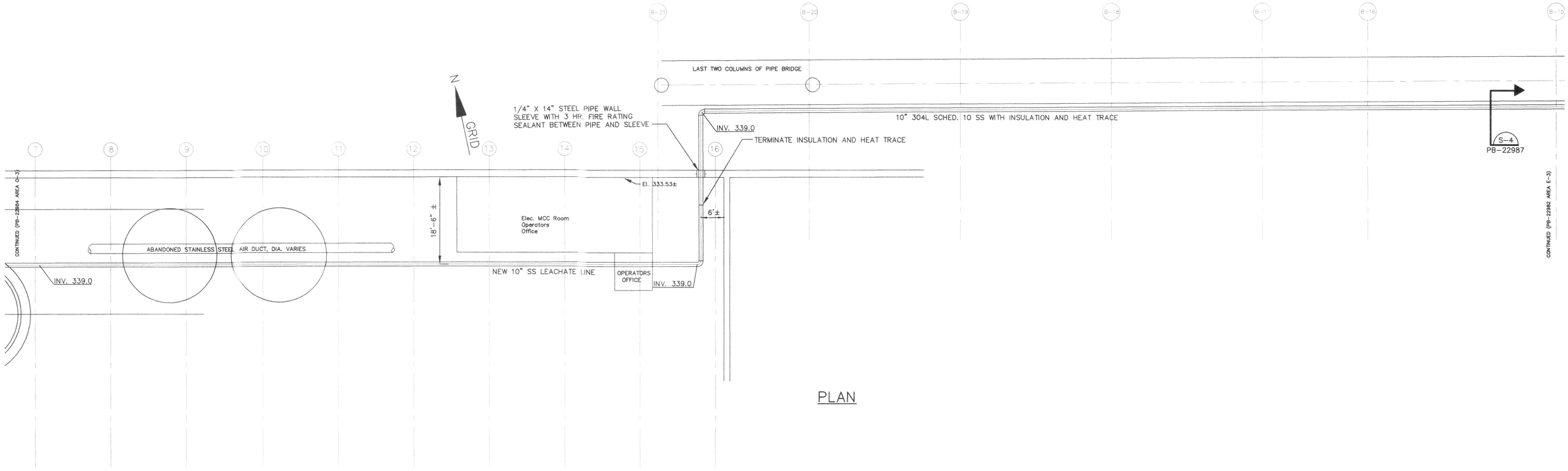
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
PIPE BRIDGE
10" GRAVITY SEWER

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

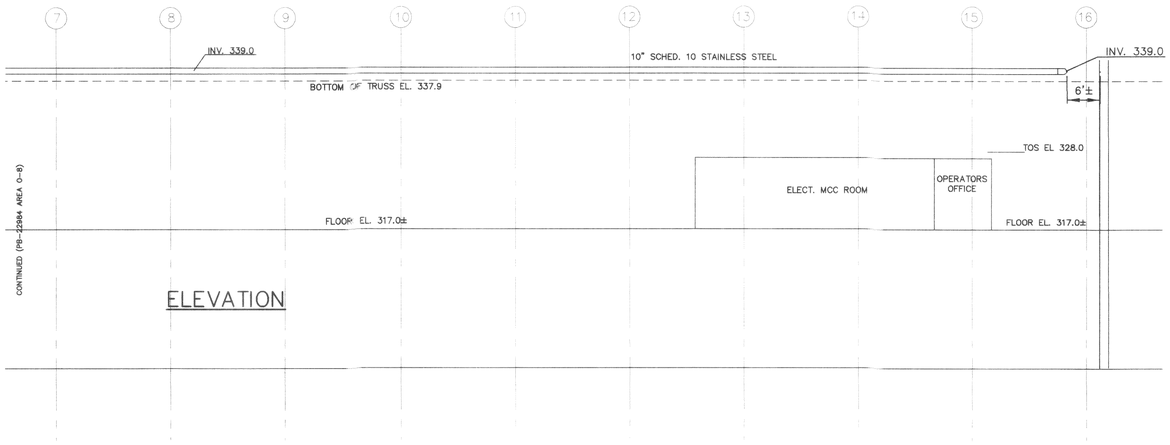
PB-22982
SHEET 2 OF 8

L:\94-22\02\ACAD\c2\02 Thu Aug 17 11:57:46 1995



PLAN

Wet Lap Machine Room



ELEVATION

STATE OF MAINE
DAVID WILLARD YOUNG
2410
REGISTERED
PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
			C	8/17/95	ISSUED FOR CONSTRUCTION	BDB	DWY		
				8/8/95	ISSUED FOR CLIENT REVIEW				
PF-01634-B	SIMONS ENGINEERING/RECYCLE FIBER PLANT			5/26/95	ISSUED FOR CLIENT REVIEW	MSB	DWY		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

C 8/17/95 ISSUED FOR CONSTRUCTION BDB DWY

DRN	DWY	5/95
CHK		
CHK		
CORR		
APPVD		
P – Prelim	B – Bids	
M – Mtl T.O.	C – Const.	
SCALE	1" = 10'	

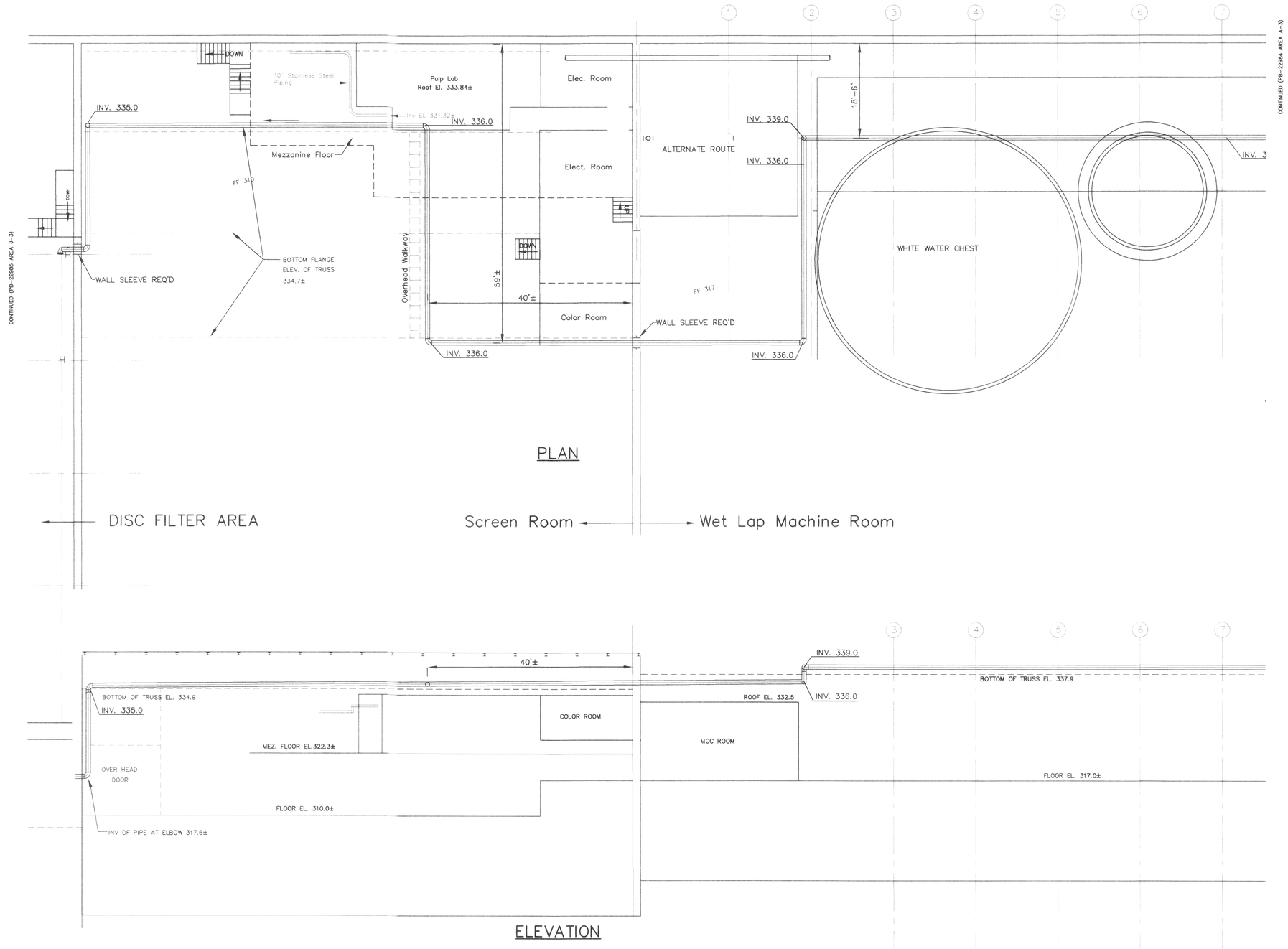
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
PIPE BRIDGE AND WET LAP ROOM
10" GRAVITY SEWER

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

PB-22983
SHEET 3 OF 8

E:\94-22\02\ACAD\22102 Thu Aug 17 12:05:47 1995



STATE OF MAINE
DAVID WILLARD YOUNG
2410
REGISTERED
PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C		8/17/95	ISSUED FOR CONSTRUCTION	BDB	DWY		
				8/8/95	ISSUED FOR CLIENT REVIEW	MSB	DWY		
				5/26/95	ISSUED FOR CLIENT REVIEW	MSB	DWY		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	DWY	5/95
CHK		
CHK		
CORR		
APPVD		
ISSUE CODE		
P – Prelim	B – Bids	
M – Mtl T.O.	C – Const.	
SCALE	1" = 10'	

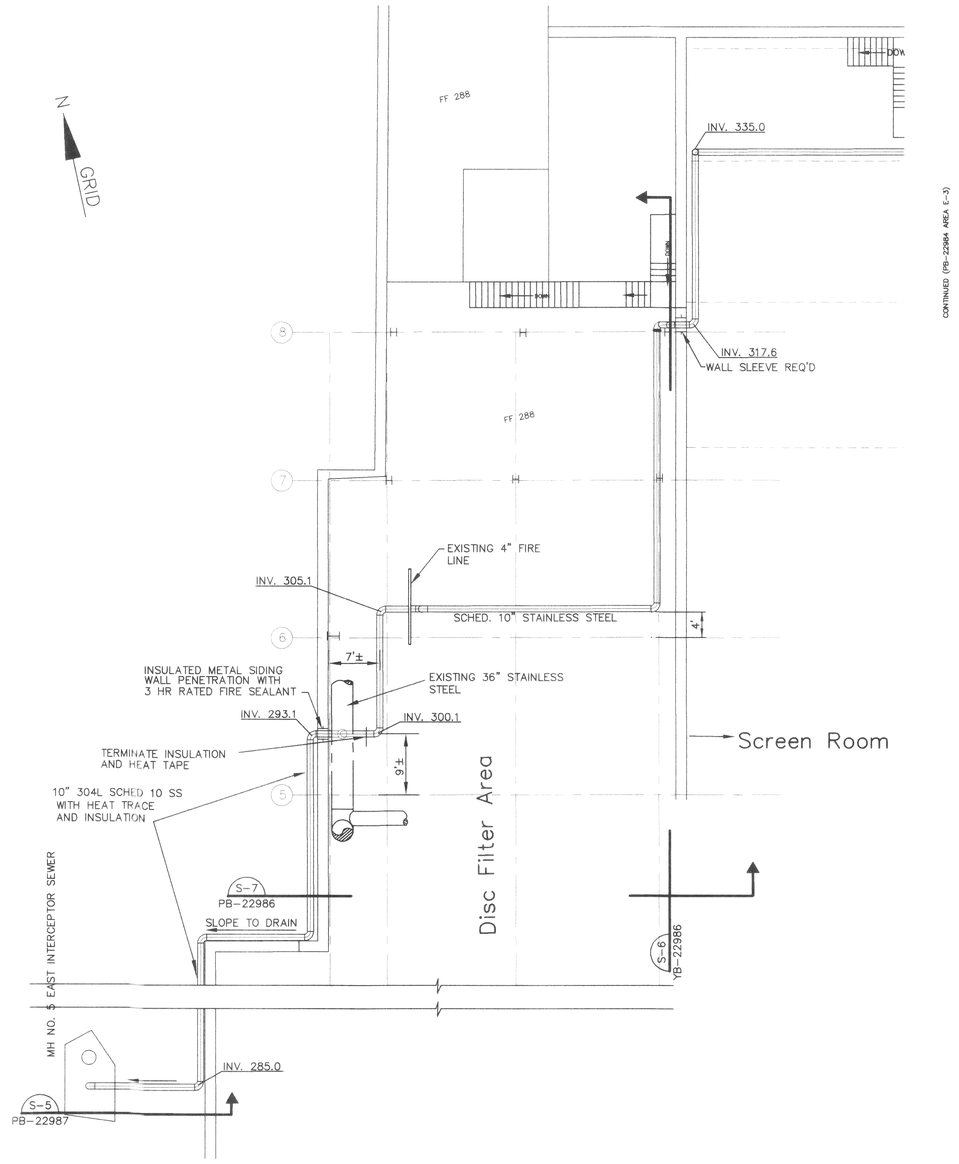
BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
WET LAP AND SCREEN ROOM AREA
10" GRAVITY SEWER

JOB NO. 22845
ENG. REQ. NO.
FILE NO. 2-092-4783

PB-22984
SHEET 4 OF 8

L:\94-22\02\ACAD\22102 Mon Aug 21 11:48:23 1995



PLAN

DRAWING NO.	REFERENCE DRAWING TITLE
AF-375-E	SIMONS ENGINEERING/DISC FILTER BLDG.
YF-719-F	SIMONS ENGINEERING/GROUND WOOD IMPROVEMENTS STEEL ✪ EL 310
YF-725-B	SIMONS ENGINEERING/EAST INTERCEPTOR SEWER
YF-696-B	SIMONS ENGINEERING/EAST INTERCEPTOR SEWER

CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
C		8/17/95	ISSUED FOR CONSTRUCTION	BDB	DWY		
P		8/8/95	ISSUED FOR CLIENT REVIEW	MSB	DWY		
P		5/26/95	ISSUED FOR CLIENT REVIEW	MSB	DWY		

STATE OF MAINE
DAVID WILLARD YOUNG 2410
REGISTERED PROFESSIONAL ENGINEER

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN DWY	5/95
CHK	
CHK	
CORR	
APPVD	
ISSUE CODE	
P – Prelim	B – Bids
M – Mtl T.O.	C – Const.
SCALE	1" = 10'

BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
DISC FILTER AREA
10" GRAVITY SEWER

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

PB-22985
SHEET 5 OF 8

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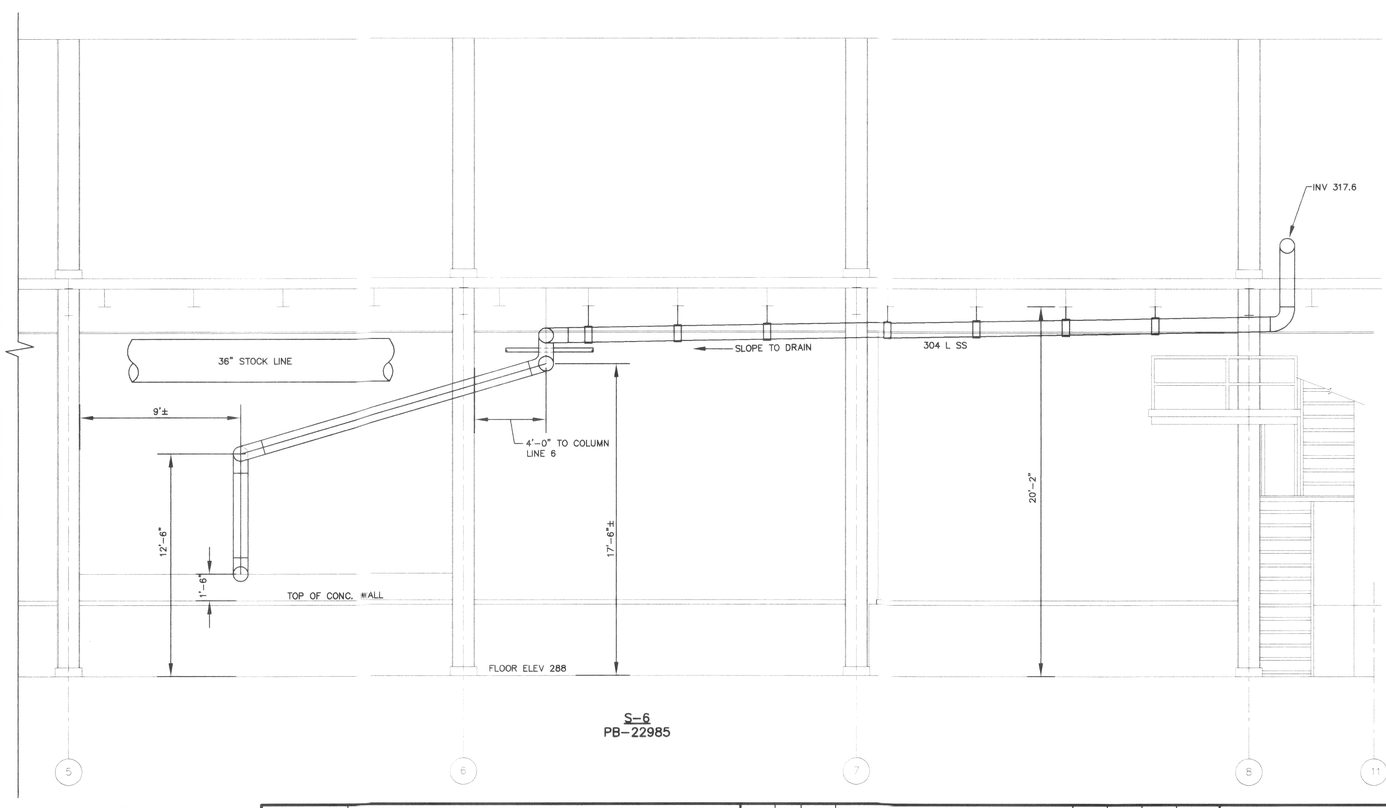
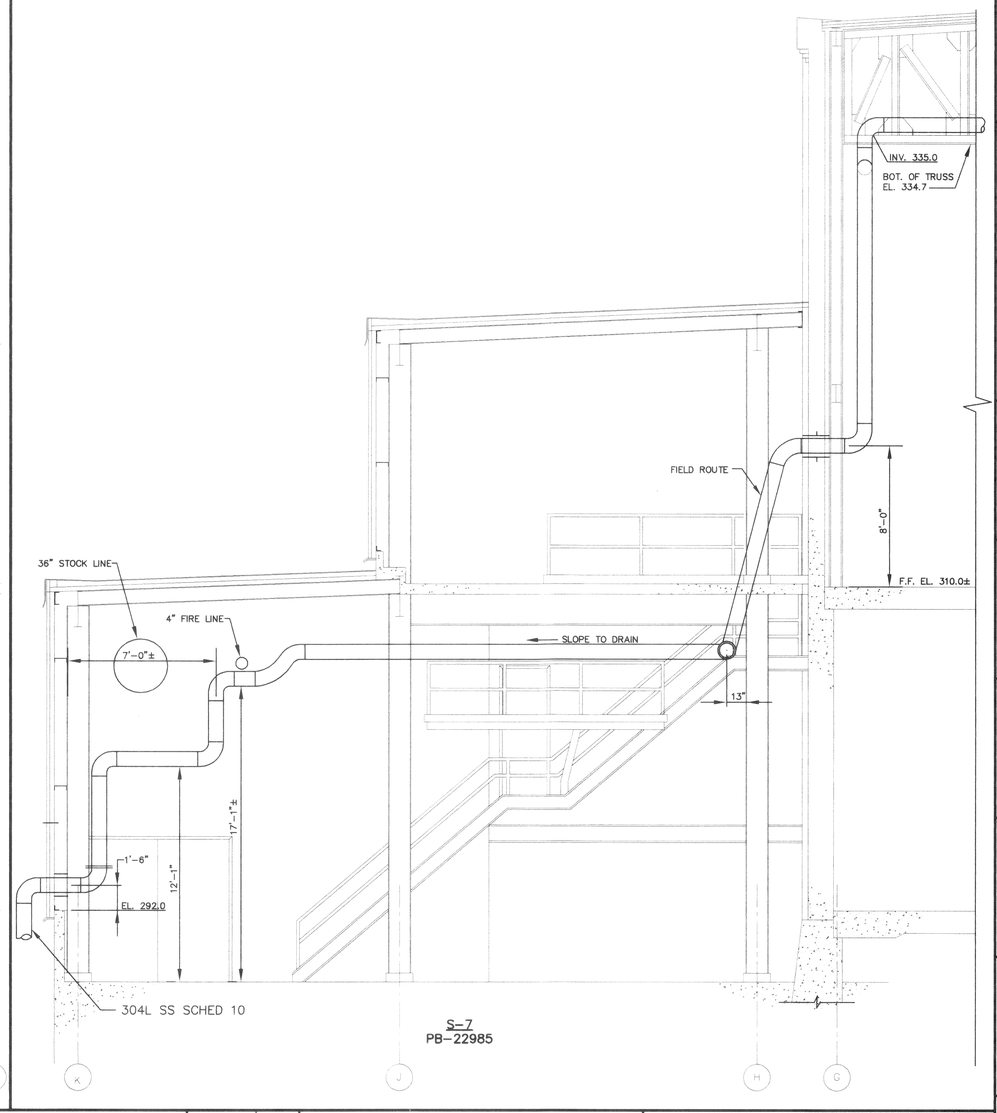


S-6
PB-22985



S-7
PB-22985

STATE OF MAINE
DAVID MILLARD YOUNG
2410
REGISTERED
PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C		8/17/95	ISSUED FOR CONSTRUCTION	BDB	DWY		
SF-719-F	SIMMONS ENGINEERING GROUND WOOD IMPROVEMENTS -STEEL @ EL 310	P		8/8/95	FOR CLIENT REVIEW	MSB	DWY		
AF-737-B	SIMMONS ENGINEERING GROUND WOOD IMPROVEMENTS - DISC FILTER BLDG.	P		5/26/95	FOR CLIENT REVIEW	MSB	DWY		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	
CHK	
CHK	
CORR	
APPVD	
ISSUE CODE	
P - Prelim	B - Bids
M - Mtl T.O.	C - Const.
SCALE	1/4"/FT

BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DISC FILTER AREA

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

PB-22986
SHEET 6 OF 8

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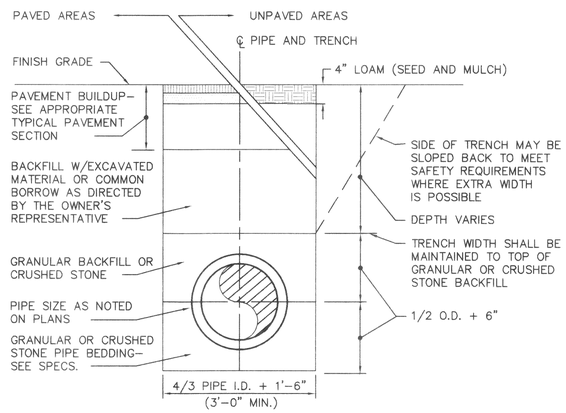
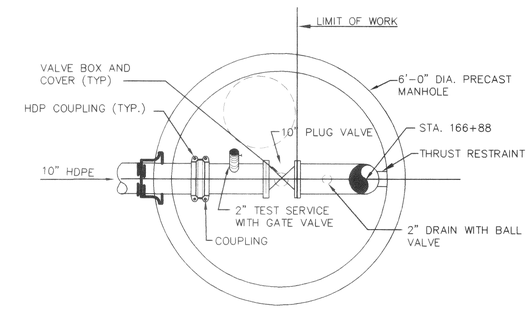


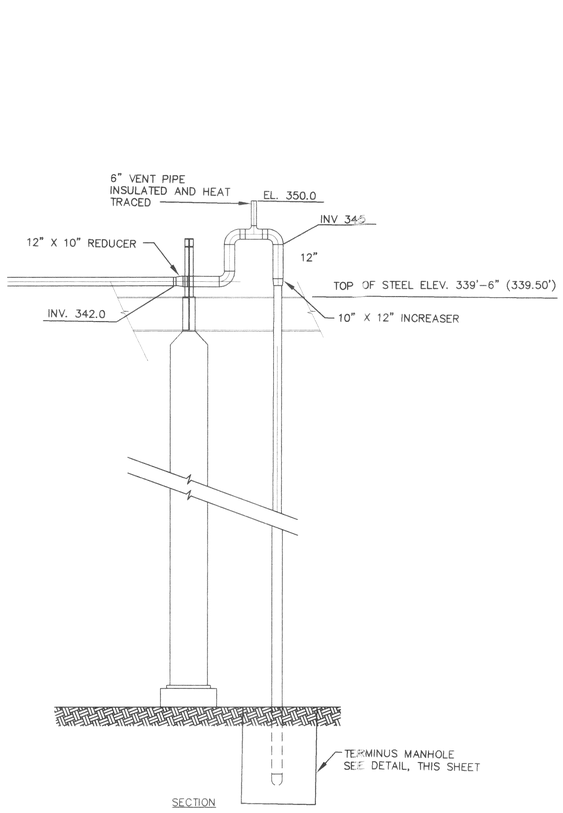
TYPICAL TRENCH DETAIL

N.T.S.

S–6

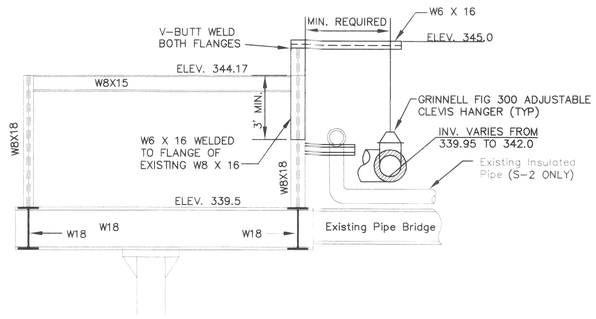


PLAN

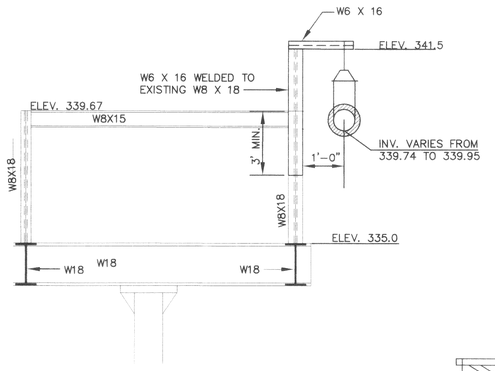


TRANSITION DETAIL

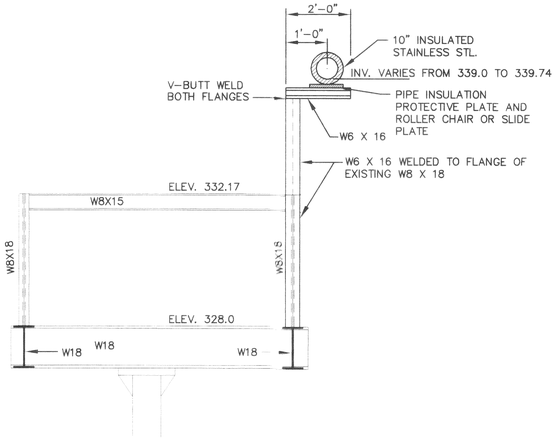
N.T.S.



S–1 AND S–2



S–3



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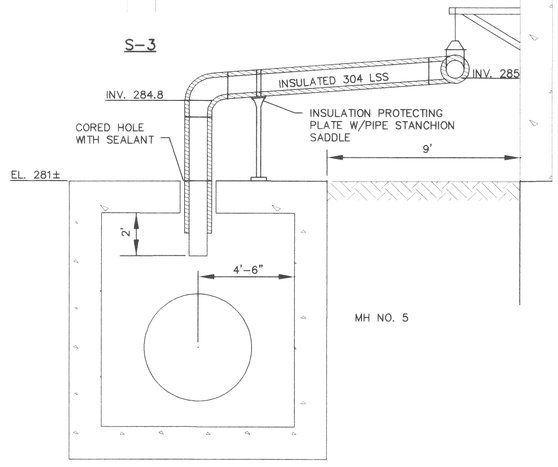

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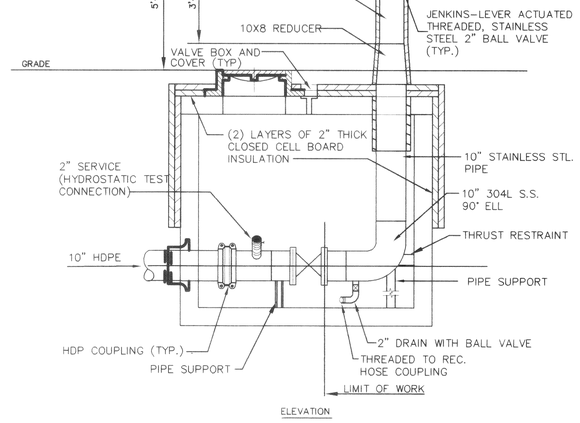


ELEVATION

TERMINUS MANHOLE

N.T.S.

STATE OF MAINE
DAVID WILLARD YOUNG
2410
REGISTERED
PROFESSIONAL ENGINEER

DRAWING NO.	REFERENCE DRAWING TITLE	CODE	NO.	DATE	REVISION	BY	CKD	APPVD	JOB No.
		C		8/17/95	ISSUED FOR CONSTRUCTION	BDB	DWY		
		P		8/8/95	FOR CLIENT REVIEW	MSB	DWY		
		P		5/28/95	FOR CLIENT REVIEW	MSB	DWY		

SQUAW BAY CORP
CONSULTING ENGINEERS
P.O. BOX 86A CUMBERLAND CENTER, MAINE 04021

DRN	DWY	5/95
CHK		
CHK		
CORR		
APPVD		
ISSUE CODE		
P – Prelim	B – Bids	
M – Mtl T.O.	C – Const.	
SCALE	N.T.S.	

BOWATER
Great Northern Paper

EAST OPERATION
LEACHATE PIPELINE PROJECT
DOLBY LANDFILL TO THE EAST OPERATION
SECTIONS AND DETAILS
10" GRAVITY SEWER

JOB NO. 22846
ENG. REQ. NO.
FILE NO. 2-092-4783

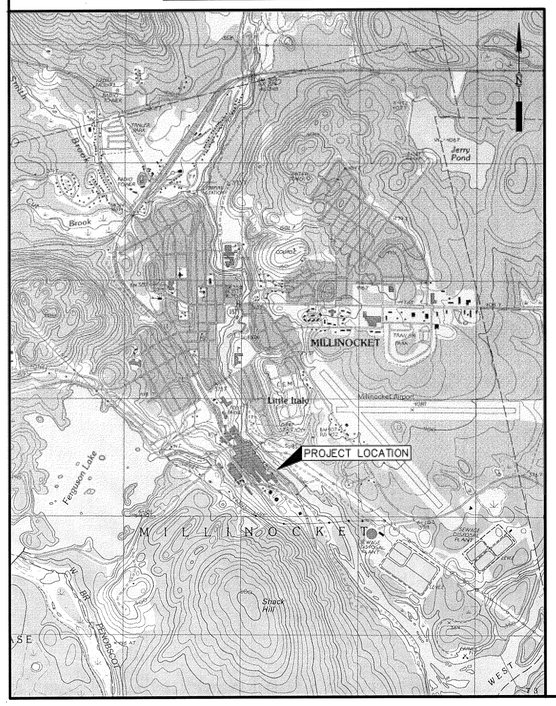
PB–22987
SHEET 7 OF 8

L:\94-22\NZ\ACAD\22102 Mon Aug 21 14:47:56 1995

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT LEACHATE PIPELINE RELOCATION GNP MILL FACILITY EAST MILLINOCKET, MAINE

TITLE	DWG NO
COVER SHEET	
SYMBOLS & ABBREVIATIONS	C-100
SITE OVERVIEW PLAN	C-101
LEACHATE PIPELINE PLAN AND PROFILE	C-200
LEACHATE PIPELINE PLAN AND PROFILE	C-201
LEACHATE PIPELINE PLAN AND PROFILE	C-202
SECTIONS AND DETAILS	C-300
SECTIONS AND DETAILS	C-301
SECTIONS AND DETAILS	C-302
SECTIONS AND DETAILS	C-303
SECTIONS AND DETAILS	C-304
SECTIONS AND DETAILS	C-305
FLOW METER BUILDING ELECTRICAL PLAN	6312-14001-E03

LOCATION MAP



SME
Sevee & Maher Engineers, Inc.

ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

STATE OF MAINE
GUY M. COTEAR
No. 5144
LICENSED
PROFESSIONAL ENGINEER

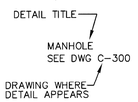
RECORD DRAWINGS

SYMBOLS

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
		NORTH ARROW (TRUE)			DRAINAGE COURSE (WITH DIRECTION)	G	UG	UNDERGROUND GAS MAIN
DATE		NORTH ARROW (MAGNETIC)			EDGE OF WATER	T	UT	UNDERGROUND TELEPHONE LINE
N		NORTH ARROW (PLAN NORTH)			WATER ELEVATION (GROUND OR SURFACE)	E	UE	UNDERGROUND ELECTRICAL LINE
25	25	CONTOUR LINES			FENCE LINE (WOOD)	OE	OE	OVERHEAD ELECTRICAL LINE
	INV 25.56	SPOT ELEVATION (INVERT ELEVATION)			FENCE LINE (WIRE)	OT	OT	OVERHEAD TELEPHONE LINE
		EXISTING GROUND			STONE WALL	12" SS	12" SS	SANITARY SEWER
		SURVEY BASELINE WITH TRIANGULATION OR INTERSECTION PT.			RETAINING WALL	8" FM	8" FM	FORCE MAIN
		PROPERTY LINE OR R.O.W.			GUARD RAIL	8" W	8" W	WATER MAIN
N35°-10'-10"W 251.17'	N35°-10'-10"W 251.17'	PROPERTY LINE W/ BEARING AND DISTANCE			BUILDING AND STRUCTURES	12" SD	12" SD	STORM DRAIN
	0+00 1+00	CONSTRUCTION BASELINE		2 1' OR 2:1	SLOPE RATIO (HORIZONTAL TO VERTICAL)	8" UD	8" UD	UNDERDRAIN
		BOUNDARY LINE (State, County, Municipality)	TOP OF SLOPE 2:1	TOP OF SLOPE 2:1	SLOPES (WITH SLOPE RATIO)	6" PD	6" PD	PERIMETER DRAIN
		SURVEY MONUMENT			EDGE OF ROAD	6" LT	6" LT	LEACHATE TRANSPORT
		SURVEY CONTROL		C F	CUT OR FILL LINE	6" LC	6" LC	LEACHATE COLLECTION
		PROPERTY PIN, DRILL HOLE, PK, OR STAKE			BITUMINOUS PAVEMENT	LD	6" LD	LEAK DETECTION
		WOODS OR BRUSH LINE			CONCRETE	GC	6" G	GAS COLLECTION
		INDIVIDUAL TREE	B-12 MW-12 P-12	B-12 MW-12 P-12	TEST BORING, MONITORING WELL, OR PIEZOMETER AND NUMBER			REDUCER
		MAPPED WETLAND	TP-12	TP-12	TEST PIT AND NUMBER			MECHANICAL CAP OR PLUG
		GAS VENT	SW-12	SW-12	SURFACE WATER SAMPLE LOCATION			COUPLING
		GAS VENT (CAPPED)			GAS EXTRACTION WELL			BEND
		CLEAN OUT STRUCTURE			MANHOLE			TEE
		CULVERT			CATCH BASIN			PIPE TO BE ABANDONED
		RAILROAD			WATER OR GAS VALVE			RISER PIPE & INLET GRATE
		SLOPE INCLINOMETER			HYDRANT			STORM GRATE
		VIBRATING WIRE SETTLEMENT CELL			AIR RELEASE VALVE			DRAINAGE INLET STRUCTURE
		VERTICAL/HORIZONTAL DISPLACEMENT MONUMENT			SURGE RELEASE VALVE			UNDERDRAIN SUMP
		VERTICAL DISPLACEMENT MONUMENT			UTILITY POLE		SF	SILTATION FENCE
		LIQUID SETTLEMENT GAGE			LIGHT POLE		CLL	CLEARING OR CONSTRUCTION LIMIT LINE

ACCMP	ASPHALT COATED CMP	D	DEGREE OF CURVE	HDPE	HIGH DENSITY POLYETHYLENE	PERF	PERFORATED
ACP	ASBESTOS CEMENT PIPE	DBL	DOUBLE	HORIZ	HORIZONTAL	PP	POWER POLE
AC	ACRE	DEG OR °	DEGREE	HP	HORSEPOWER	PSI	POUNDS PER SQUARE INCH
AGG	AGGREGATE	DEPT	DEPARTMENT	HYD	HYDRANT	PVC	POLYVINYL CHLORIDE
ALUM	ALUMINUM	DI	DUCTILE IRON			PVMT	PAVEMENT
APPD	APPROVED	DIA OR ø	DIAMETER	ID	INSIDE DIAMETER		
APPROX	APPROXIMATE	DIM	DIMENSION	IN OR "	INCHES	QTY	QUANTITY
ARMH	AIR RELEASE MANHOLE	DIST	DISTANCE	INV	INVERT		
ASB	ASBESTOS	DN	DOWN	INV EL	INVERT ELEVATION	RCP	REINFORCED CONCRETE PIPE
ASP	ASPHALT	DR	DRAIN			ROW	RIGHT OF WAY
AUTO	AUTOMATIC	DWG	DRAWING	LB	POUND	RAD	RADIUS
AUX	AUXILIARY			LC	LEACHATE COLLECTION	REQD	REQUIRED
AVE	AVENUE	EA	EACH	LD	LEAK DETECTION	RT	RIGHT
AZ	AZIMUTH	EG	EXISTING GROUND OR GRADE	LF	LINEAR FEET	RTE	ROUTE
		ELEC	ELECTRIC	LOC	LOCATION		
BCCMP	BITUMINOUS COATED CMP	EL	ELEVATION	LT	LEACHATE TRANSPORT	S	SLOPE
BM	BENCH MARK	ELB	ELBOW			SCH	SCHEDULE
BIT	BITUMINOUS	EOP	EDGE OF PAVEMENT	MH	MANHOLE	SF	SQUARE FEET
BLDG	BUILDING	EQUIP	EQUIPMENT	MJ	MECHANICAL JOINT	SHT	SHEET
BOT	BOTTOM	EST	ESTIMATED	MATL	MATERIAL	SMH	SANITARY MANHOLE
BRG	BEARING	EXC	EXCAVATE	MAX	MAXIMUM	ST	STREET
BV	BALL VALVE	EXIST	EXISTING	MFR	MANUFACTURE	STA	STATION
				MIN	MINIMUM	SY	SQUARE YARD
CB	CATCH BASIN	FG	FINISH GRADE	MISC	MISCELLANEOUS		
CEN	CENTER	FBRGL	FIBERGLASS	MON	MONUMENT	TAN	TANGENT
CEM LIN	CEMENT LINED	FDN	FOUNDATION			TDH	TOTAL DYNAMIC HEAD
CMP	CORRUGATED METAL PIPE	FLEX	FLEXIBLE	NITC	NOT IN THIS CONTRACT	TEMP	TEMPORARY
CO	CLEAN OUT	FLG	FLANGE	NTS	NOT TO SCALE	TYP	TYPICAL
CF	CUBIC FEET	FLR	FLOOR	N/F	NOW OR FORMERLY	UD	UNDERDRAIN
CFS	CUBIC FEET PER SECOND	FPS	FEET PER SECOND	NO OR #	NUMBER	V	VOLTS
CI	CAST IRON	FT OR '	FEET			VA TEE	VALVE ANCHORING TEE
CL	CLASS	FTG	FOOTING	OC	ON CENTER	VERT	VERTICAL
CONC	CONCRETE			OD	OUTSIDE DIAMETER		
CONST	CONSTRUCTION	GA	GAUGE				
CONTR	CONTRACTOR	GAL	GALLON	PC	POINT OF CURVE	WG	WATER GATE
CS	CURB STOP	GALV	GALVANIZED	PD	PERIMETER DRAIN	W/	WITH
CTR	CENTER	GPD	GALLONS PER DAY	PI	POINT OF INTERSECTION	W/O	WITHOUT
CU	COPPER	GPM	GALLONS PER MINUTE	PIV	POST INDICATOR VALVE		
CY	CUBIC YARD			PT	POINT OF TANGENT	YD	YARD

VIEW MARKERS & IDENTIFICATION



REV.	BY	DATE	STATUS
	BDP	12/15	RECORD DRAWING
	BDP	7/15	ISSUED FOR CONSTRUCTION
	BDP	6/15	ISSUED FOR BID

STATE OF MAINE — JOHN H. JOTE JR. — No. 5144 — LICENSED PROFESSIONAL ENGINEER

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
EAST MILLINOCKET, MAINE

SYMBOLS AND ABBREVIATIONS

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

DESIGN BY:	BDP
DRAWN BY:	SJM
DATE:	5/2015
CHECKED BY:	BDP
LMN:	NONE
CTB:	SME-STD

JOB NO. 14134.09 DWG FILE SYMSHT — C-100

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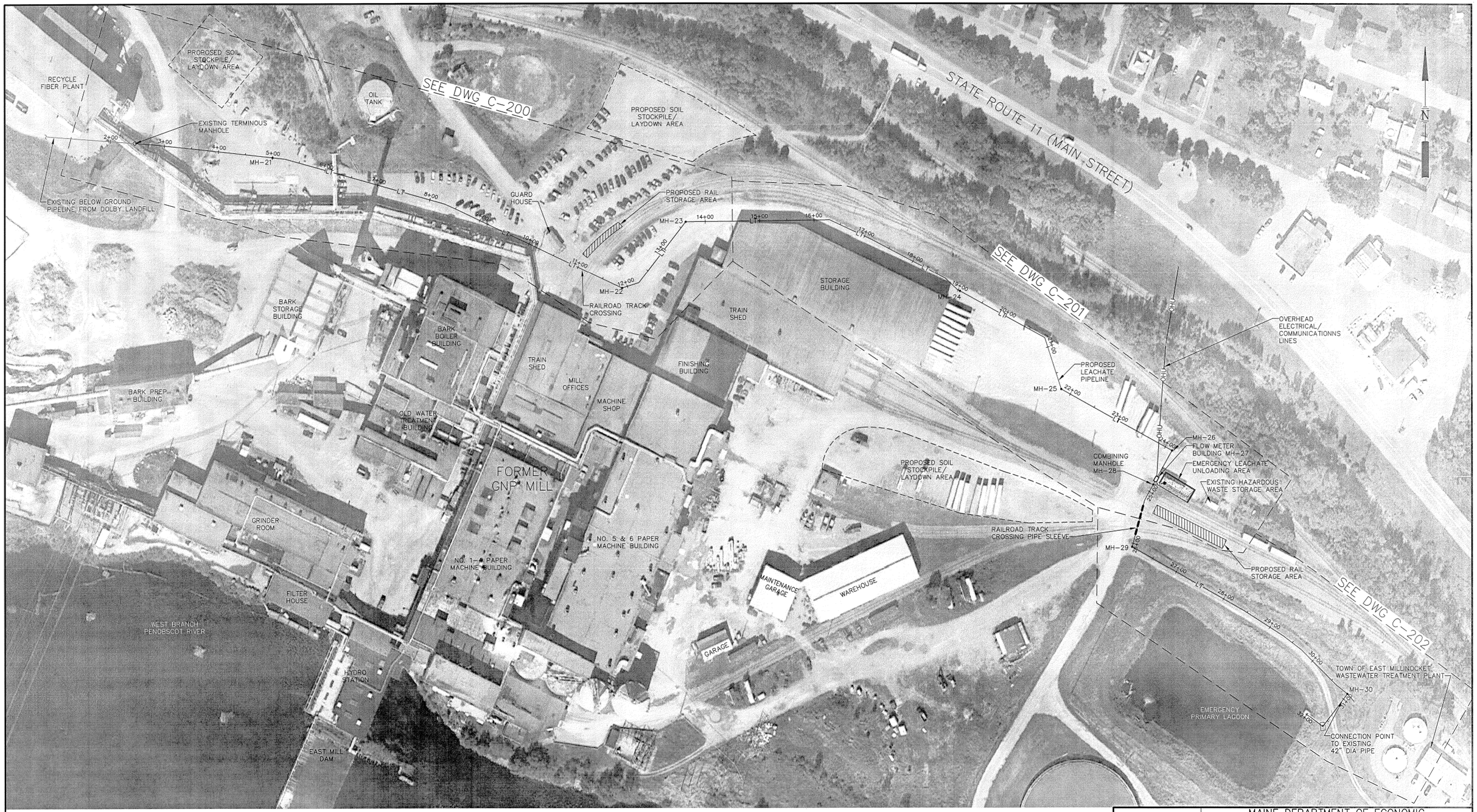

NOTES

1. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL BE IN COMPLIANCE WITH MEDEP BEST MANAGEMENT PRACTICES AND EXISTING FEDERAL, STATE, AND LOCAL PERMITS AND PERMITTING REQUIREMENTS FOR THE SITE.
2. AERIAL PHOTO FROM GOOGLE EARTH PRO, DATED SEPTEMBER 17, 2013. IMAGE ALIGNMENT ADJUSTED TO MATCH EXISTING GROUND SURVEY BY SEVEE & MAHER ENGINEERS, INC.

40 0 80 160

REV.	BY	DATE	STATUS
	BDP	12/15	RECORD DRAWING
	BDP	8/15	REVISED PER CHANGE ORDER 1
	BDP	7/15	ISSUED FOR CONSTRUCTION
	BDP	6/15	ISSUED FOR BID

STATE OF MAINE
KEITH H. COTE, JR. No. 5144
LICENSED PROFESSIONAL ENGINEER

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
EAST MILLINOCKET, MAINE

SITE OVERVIEW PLAN

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

DESIGN BY:	BDP
DRAWN BY:	SJM
DATE:	5/2015
CHECKED BY:	BDP
LMN:	SITE-OVER
CTB:	SME-STD

JOB NO. 14134.09 DWG FILE BASE

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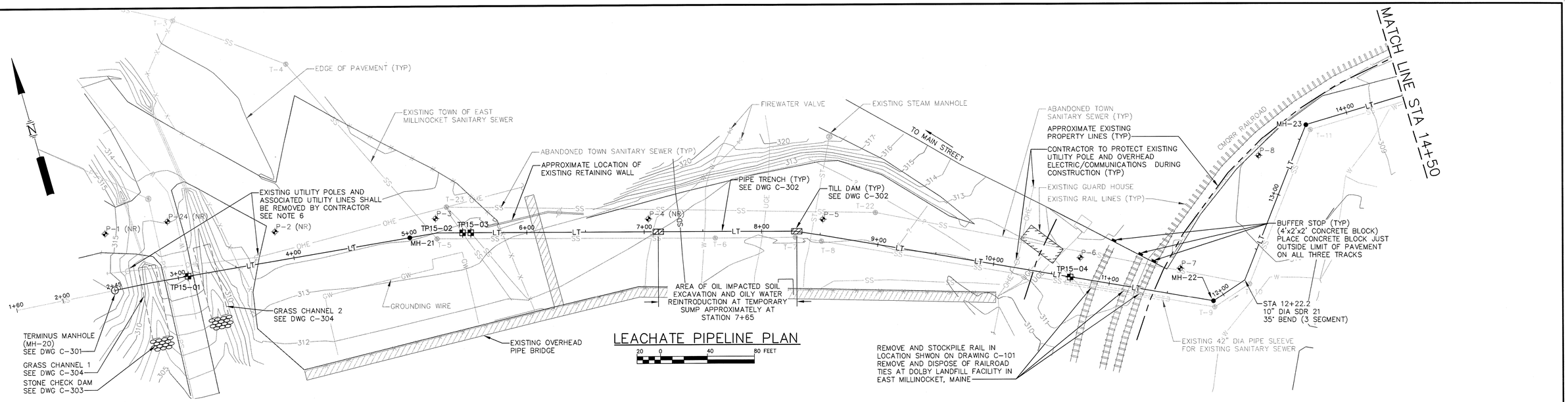
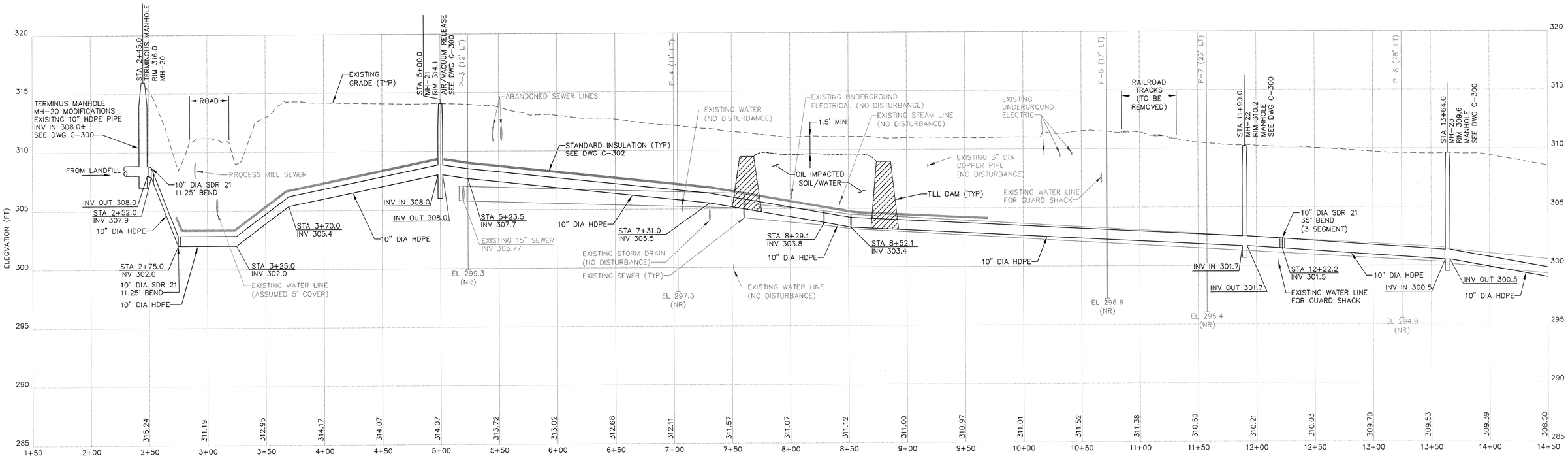


LEACHATE PIPELINE PLAN

20 0 40 80 FEET



LEACHATE PIPELINE PROFILE

20 0 40 80 FEET (HORZ)
2 0 4 8 FEET (VERT)

NOTES

1. BASE MAP PREPARED BY SEVEE & MAHER ENGINEERS, INC, CUMBERLAND, MAINE. HORIZONTAL DATUM MAINE STATE COORDINATE SYSTEM EAST ZONE, SPC 1801. VERTICAL DATUM IS NAVD 88, GEOID 12.
2. BORING LOCATIONS AND TOWN OF EAST MILLINOCKET SANITARY SEWER PIPE INVERTS FIELD SURVEYED BY SEVEE & MAHER ENGINEERS, INC. OF CUMBERLAND MAINE. BORING DESIGNATION NR=NO REFUSAL. LOCATIONS OF ALL OTHERS IS APPROXIMATE AND ARE BASED ON HISTORICAL PLANS AND ON UTILITY SURVEY BY DIGSMART.
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4. CONTRACTOR SHALL TEST PIT TO A DEPTH OF 15-FEET BELOW GROUND SURFACE OR TO UNKNOWN UTILITY AT ALL TEST PIT LOCATIONS SHOWN.
5. UTILITIES AND STRUCTURES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER AT NO ADDITIONAL COST TO THE OWNER.
6. THE PROPERTY OWNER HAS EXPRESSED NO OBJECTION TO REMOVAL OF POWER LINES AND POLES. CONTRACTOR SHALL CONFIRM ALL LINES TO BE REMOVED ARE DEENERGIZED PRIOR TO REMOVAL.

REV.	BY	DATE	STATUS
	BDP	12/15	RECORD DRAWING
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	BDP	7/15	ISSUED FOR CONSTRUCTION
	BDP	7/15	REVISED PER ADDENDUM 1
	BDP	6/15	ISSUED FOR BID

STATE OF MAINE
JOHN H. COTE, JR.
No. 5146
LICENSED PROFESSIONAL ENGINEER

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
EAST MILLINOCKET, MAINE

LEACHATE PIPELINE PLAN AND PROFILE

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CTB:	SME-STD

JOB NO. 14134.09 DWG FILE BASE

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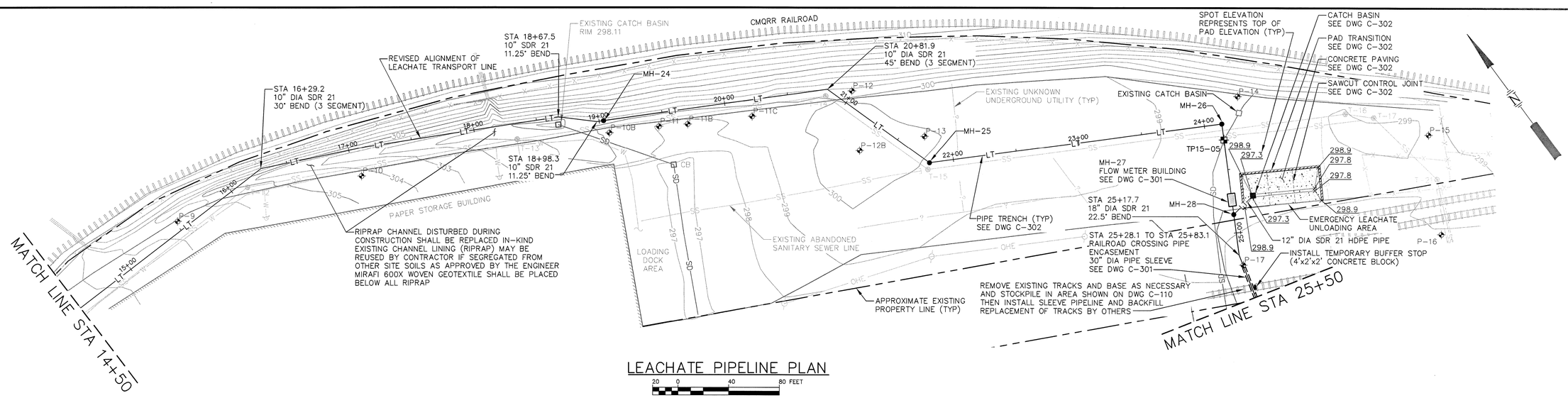
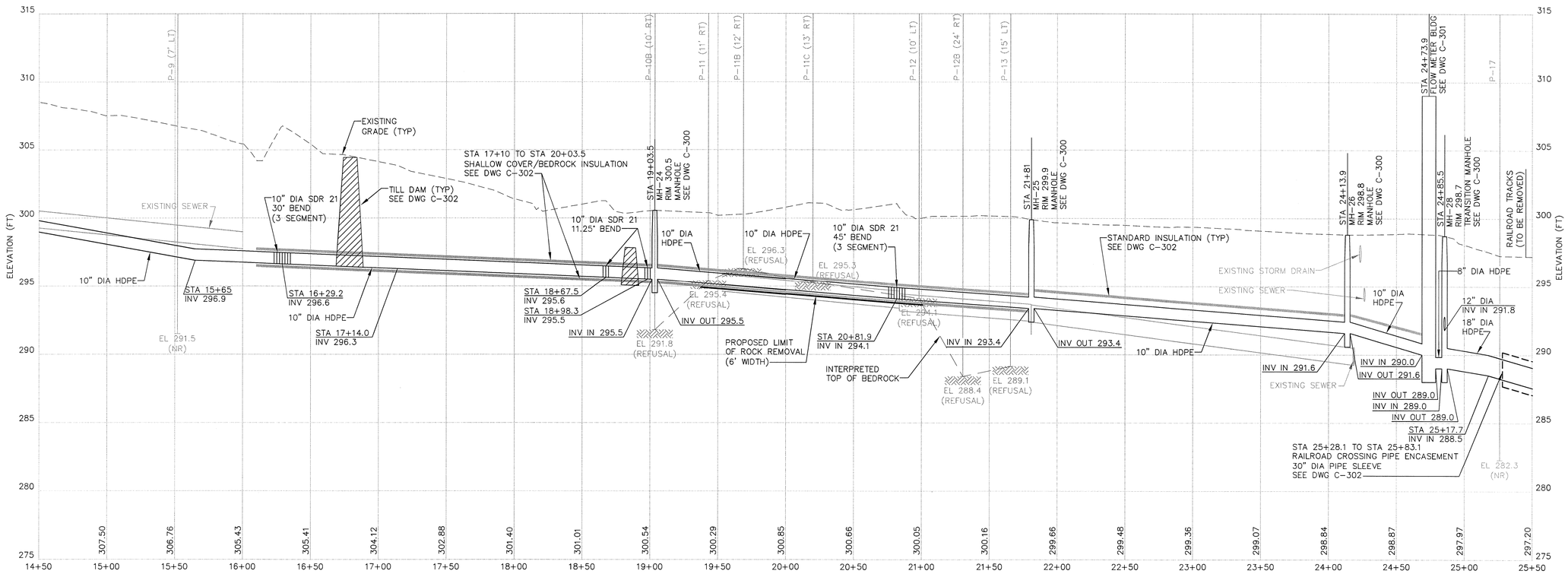


LEACHATE PIPELINE PLAN

20 0 40 80 FEET



LEACHATE PIPELINE PROFILE

20 0 40 80 FEET (HORZ)
2 0 4 8 FEET (VERT)

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	BDP	8/15	REVISED PER CHANGE ORDER 1
	BDP	7/15	ISSUED FOR CONSTRUCTION
	BDP	6/15	ISSUED FOR BID

STATE OF MAINE — TIMOTHY H. CROWLEY, JR. — No. 5144 — LICENSED PROFESSIONAL ENGINEER

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
EAST MILLINOCKET, MAINE

LEACHATE PIPELINE PLAN AND PROFILE

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DATE:	5/2015
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LMN:	LT-PLAN-PROF
CTB:	SME-STD

JOB NO. 14134.09 DWG FILE BASE

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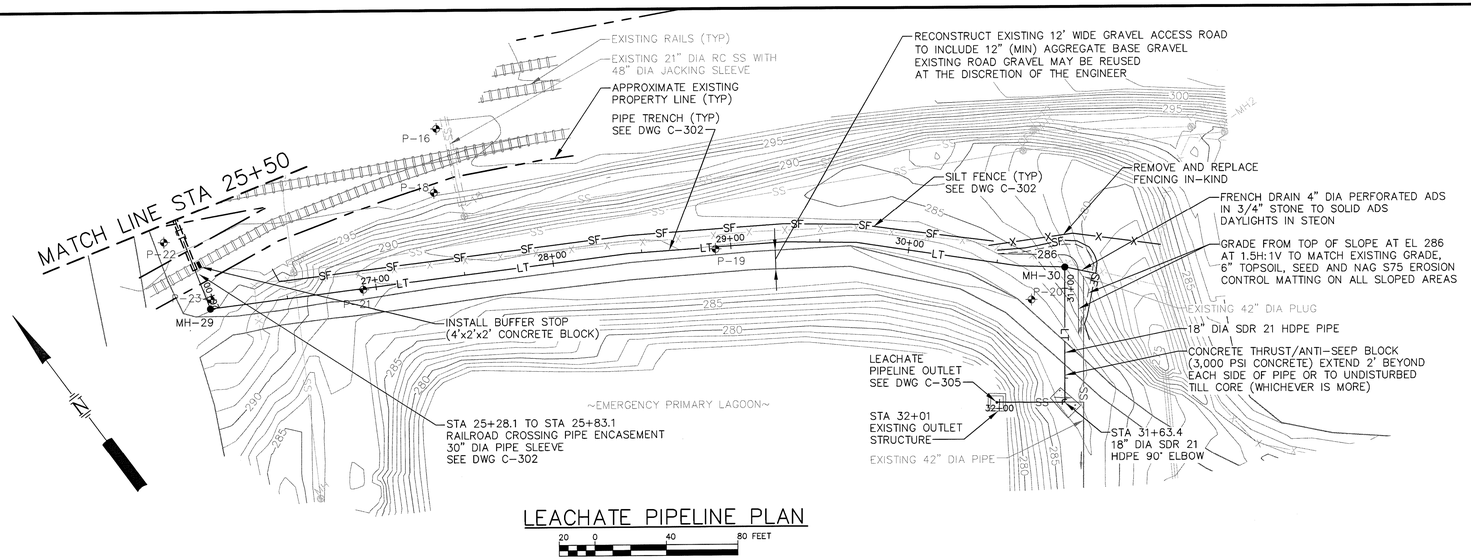
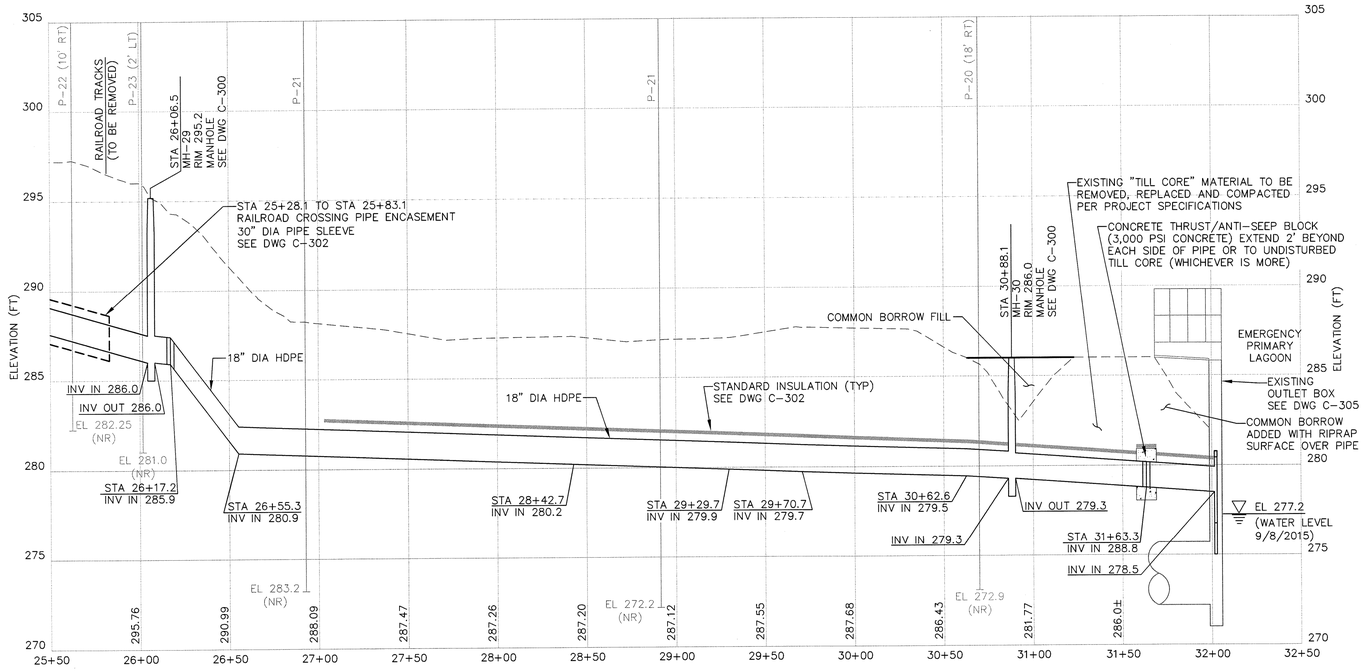


LEACHATE PIPELINE PLAN

20 0 40 80 FEET



LEACHATE PIPELINE PROFILE

20 0 40 80 FEET (HORZ)
2 0 4 8 FEET (VERT)

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	BDP	8/15	REVISED PER CHANGE ORDER 1
	BDP	7/15	ISSUED FOR CONSTRUCTION
	BDP	6/15	ISSUED FOR BID

STATE OF MAINE — CODY M. COTE, JR. — No. 5144 — LICENSED PROFESSIONAL ENGINEER

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
EAST MILLINOCKET, MAINE

LEACHATE PIPELINE PLAN AND PROFILE

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DRAWN BY:	SJM
DATE:	5/2015
CHECKED BY:	BDP
LMN:	LT-PLAN-PROF
CTB:	SME-STD

JOB NO. 14134.09 DWG FILE BASE

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MANHOLE AND CATCH BASIN NOTES:

THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE ENGINEER FOR APPROVAL. SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:

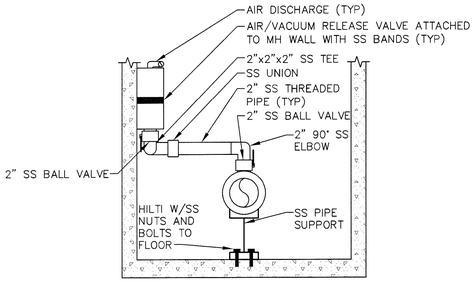
PRODUCT DATA: SUBMIT PRODUCT DATA FOR ALL MATERIALS USED ON THE JOB FOR REVIEW FOR LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION GIVEN AND DESIGN CONCEPT EXPRESSED IN CONTRACT DOCUMENTS.

SHOP DRAWINGS: SUBMIT FOR REVIEW SHOP DRAWINGS OF ALL PRECAST UNITS. MANUFACTURER'S INFORMATION SHALL BE SUBMITTED FOR JOINT SEALANTS AND WATERPROOFING. MANUFACTURE SHALL PROVIDE ANTI-FLOTATION DESIGN SHOP DRAWINGS AND CALCULATIONS, INCLUDING ANY EXTENDED BASE SLABS AS NECESSARY, FOR PROPOSED MANHOLES. MANUFACTURER SHALL ASSUME GROUNDWATER LEVELS EQUAL TOP OF GROUND ELEVATIONS AND PROVIDE FOR A 1.2 FACTOR OF SAFETY AGAINST FLOTATION.

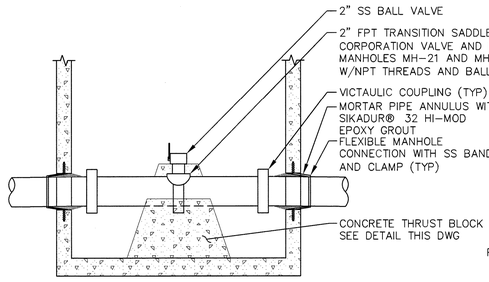
LOAD RATING: ALL MANHOLES AND CATCH BASINS SHALL BE H-20 LOAD RATED.

MANHOLE SCHEDULE

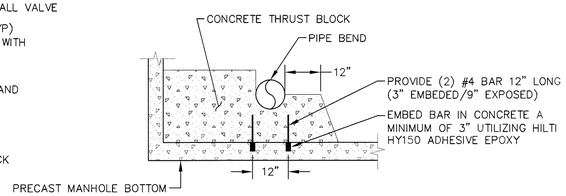
MANHOLE	PIPE ANGLE (DEGREES)	STATION	INSIDE DIA (FEET)	RIM EL (FEET)	INVERT IN		INVERT OUT		BOTTOM EL
					PIPE DIA (INCHES)	PIPE INV EL (FEET)	PIPE DIA (INCHES)	PIPE INV EL (FEET)	
MH-20	NONE	2+45	8	316.0	10 (EXIST)	308.0 (EXIST)	10	308.0	307.0+/-
MH-21	NONE	5+00	6	314.1	10	308.0	10	308.0	307.0
MH-22	45 (3-SEGMENT)	11+90	6	310.2	10	301.7	10	301.7	300.7
MH-23	52 (3-SEGMENT)	13+64	6	309.6	10	300.5	10	300.5	299.5
MH-24	NA	19+03.5	6	300.5	10	295.5	10	295.5	294.5
MH-25	45 (3-SEGMENT)	21+81	6	299.9	10	293.4	10	293.4	292.4
MH-26	90 (5-SEGMENT)	24+13.9	6	298.8	10	291.6	10	291.6	290.6
FLOW METER BLDG	SEE DETAIL ON DWG C-301	24+73.9	NA (6' x 10')	NA	10	290.0	8	289.0	288.0
MH-28	NA	24+85.5	6	298.7	8	289.0	18	289.0	288.0
					12	291.8			
MH-29	75 (5-SEGMENT)	26+06.5	8	295.2	18	286.0	18	286.0	285.0
MH-30	90 (5-SEGMENT)	30+88.1	8	286.0	18	279.3	18	279.3	278.3
ECB	NA	NA	6	NA	NA	NA	12	287.5	NA



SECTION B-B'



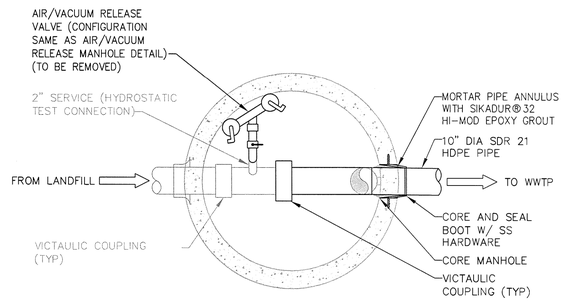
SECTION C-C'



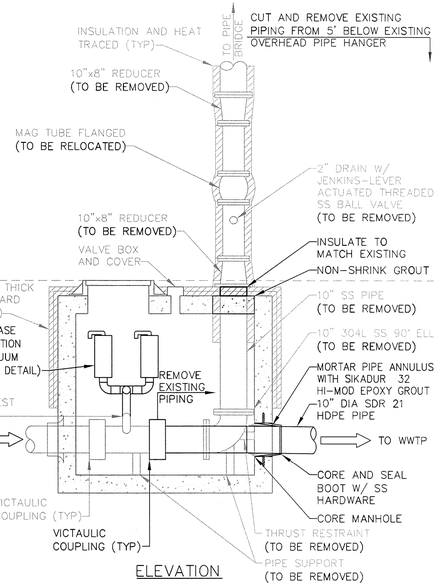
SECTION D-D'

MANHOLE THRUST BLOCK

NTS



PLAN

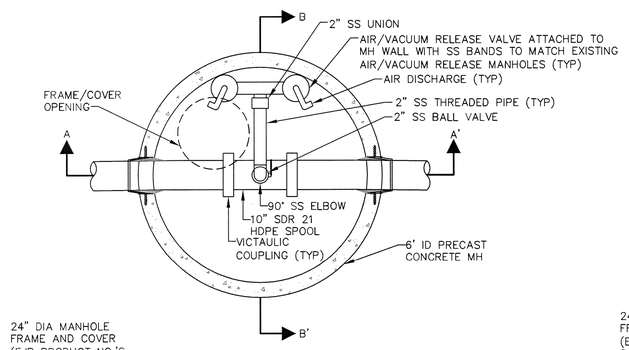


ELEVATION

NOTES:
1. CONFIRM PIPE DIMENSIONS PRIOR TO CONSTRUCTION
2. TERMINUS MANHOLE PIPING SHALL BE DEWATERED PRIOR TO TIE-IN. ALL LEACHATE FROM THE SYSTEM SHALL BE DISPOSED OF IN GNP MILL SEWER MANHOLE AT LOCATION DETERMINED BY ENGINEER. ANTICIPATED LEACHATE VOLUME FROM DEWATERING IS 20,000 GALLONS.

TERMINUS MANHOLE (MH 20)

NTS



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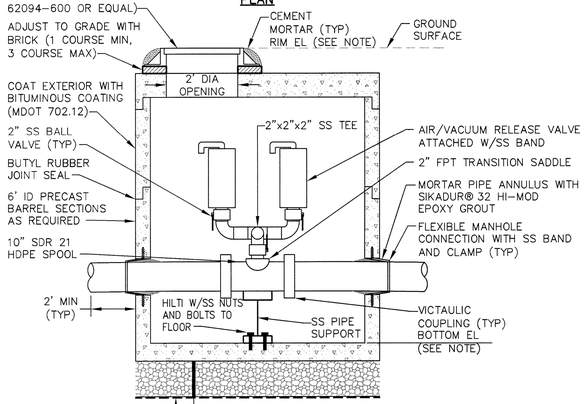
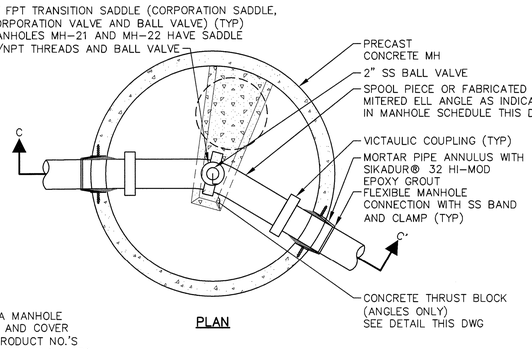


NOTE:
SEE MANHOLE SCHEDULE THIS DWG.

SECTION A-A'

AIR/VACUUM RELEASE MANHOLE

NTS



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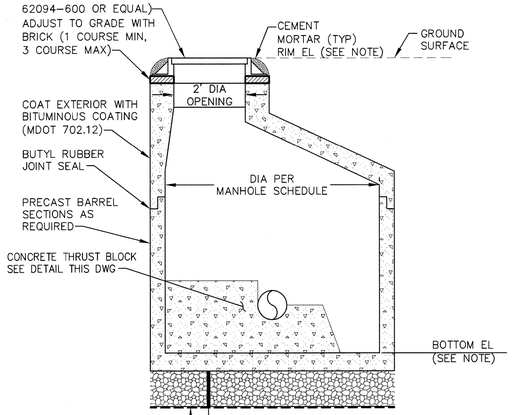
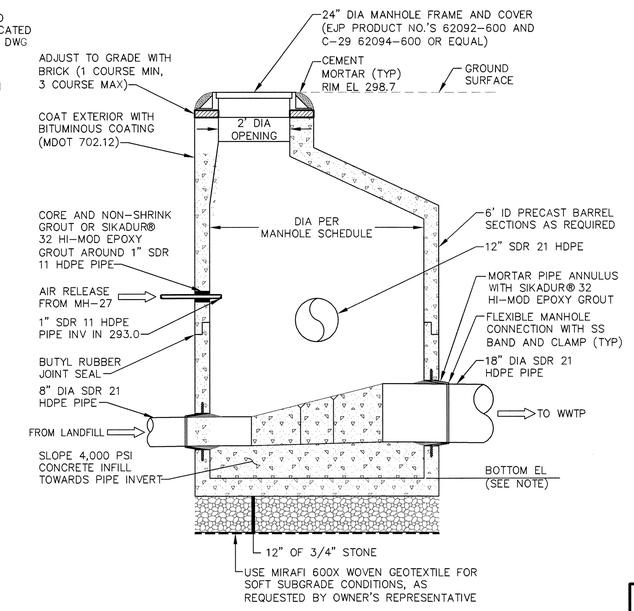


NOTE:
SEE MANHOLE SCHEDULE THIS DWG.

ELEVATION

MANHOLE

NTS



NOTE:
SEE MANHOLE SCHEDULE THIS DWG.

ELEVATION

MANHOLE 28

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REV.	BY	DATE	STATUS
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STATE OF MAINE — JOHN H. LOVE, JR. — No. 5144 — LICENSED PROFESSIONAL ENGINEER

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
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SECTIONS AND DETAILS

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CTB:	SME-STD

JOB NO. 14134.09 DWG FILE DETAILS C-300

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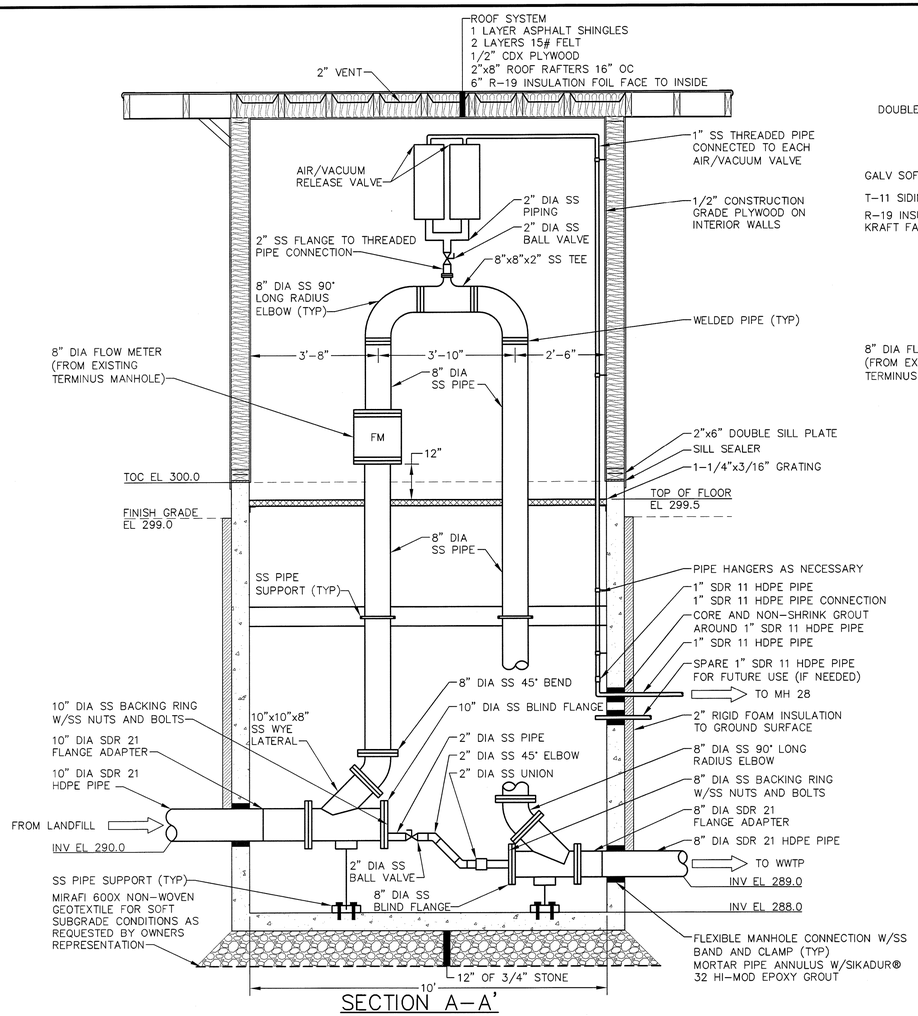

SECTION A–A'
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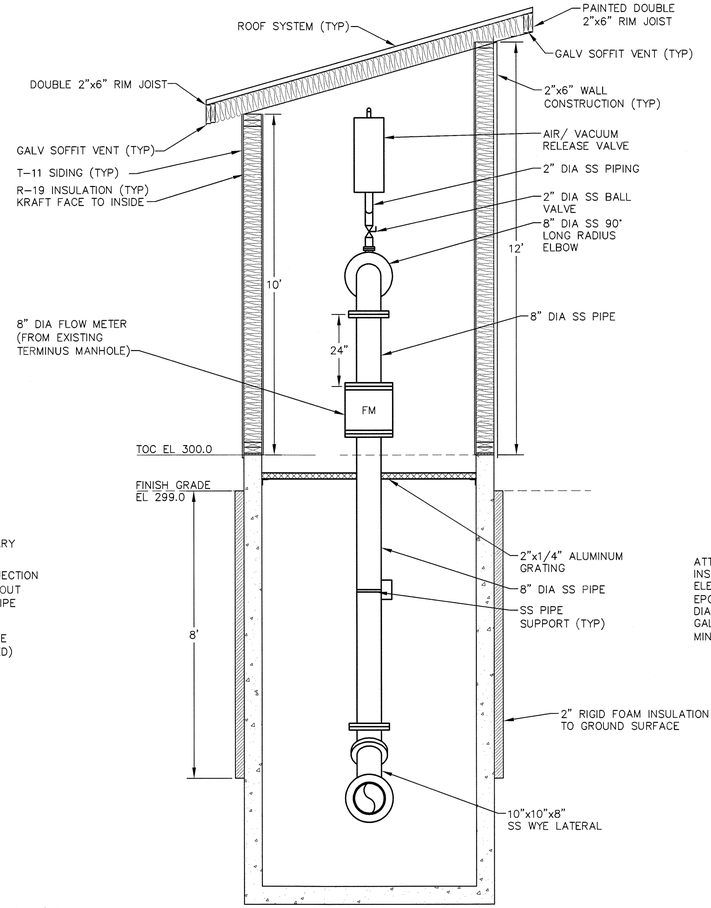

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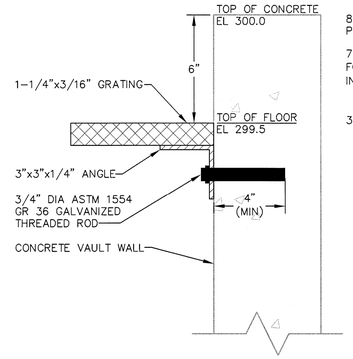

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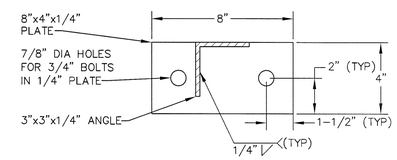

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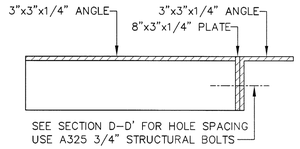

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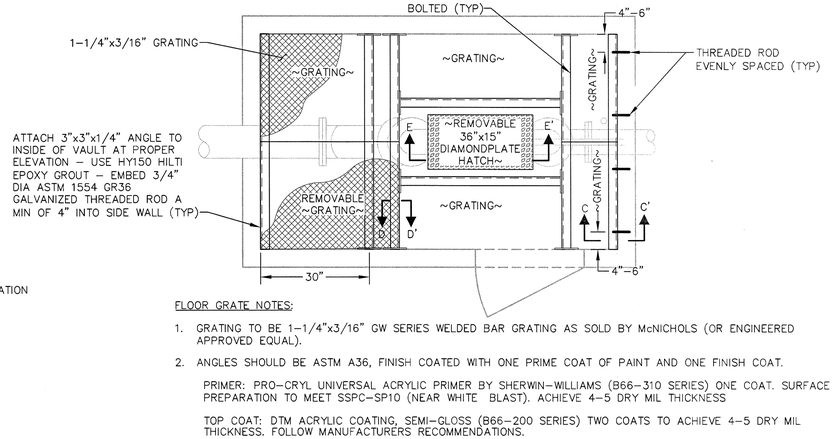


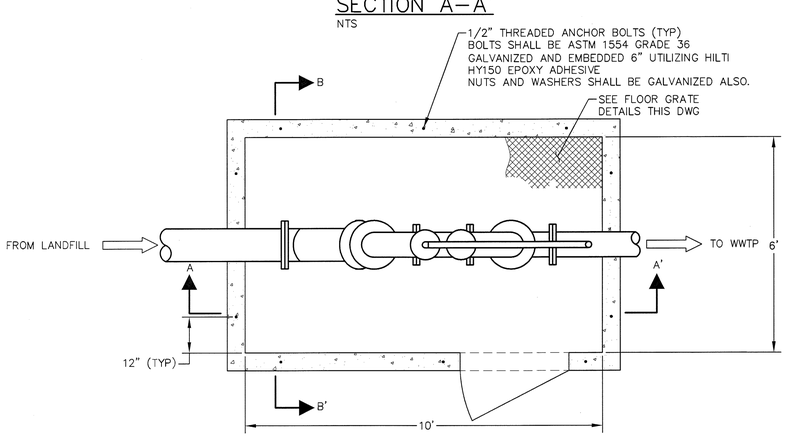
FLOOR GRATE NOTES:

1. GRATING TO BE 1–1/4"x3/16" GW SERIES WELDED BAR GRATING AS SOLD BY McNICHOLS (OR ENGINEERED APPROVED EQUAL).
2. ANGLES SHOULD BE ASTM A36, FINISH COATED WITH ONE PRIME COAT OF PAINT AND ONE FINISH COAT.

   PRIMER: PRO–CRYL UNIVERSAL ACRYLIC PRIMER BY SHERWIN–WILLIAMS (B66–310 SERIES) ONE COAT. SURFACE PREPARATION TO MEET SSPC–SP10 (NEAR WHITE BLAST). ACHIEVE 4–5 DRY MIL THICKNESS

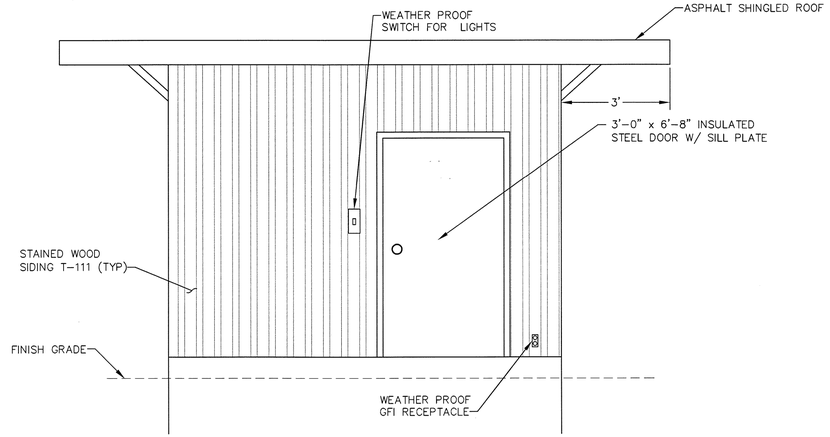
   TOP COAT: DTM ACRYLIC COATING, SEMI–GLOSS (B66–200 SERIES) TWO COATS TO ACHIEVE 4–5 DRY MIL THICKNESS. FOLLOW MANUFACTURERS RECOMMENDATIONS.
3. ALL WELDING TO BE E–70XX.
4. ALL LOOSE STRUCTURAL BOLTS TO BE ASTM A325 WITH STANDARD WASHERS AND NUTS.
5. ANCHOR BOLTS TO BE EMBEDDED IN CONCRETE TO BE ASTM 1554 GRADE 36 GALVANIZED THREADED ROD, EMBEDDED A MINIMUM OF 4" UTILIZING HILTI HY150 EPOXY ADHESIVE. NUTS AND WASHERS SHALL BE GALVANIZED ALSO.
6. USE OF ALL PAINT AND EPOXY PRODUCTS ARE TO BE PER THE MANUFACTURERS DIRECTIONS.

FLOOR GRATE DETAIL
NTS



FLOW METER BUILDING NOTE:
ALL 8" AND 16" DIA SS PIPING AND FITTINGS SHALL BE SCHD 10 304L SS

FLOW METER BUILDING (MH27)
NTS



FRONT ELEVATION
NTS

FLOW METER BUILDING NOTES:

1. ALL FLANGE FITTINGS SHALL HAVE SS NUTS AND BOLTS (TYP).
2. ALL PIPING SHALL BE PAINTED PER SPECIFICATIONS (SEE FLOOR GRATE NOTES).
3. THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE ENGINEER FOR APPROVAL. SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:

   PRODUCT DATA: SUBMIT PRODUCT DATA FOR ALL MATERIALS USED ON THE JOB FOR REVIEW FOR LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION GIVEN AND DESIGN CONCEPT EXPRESSED IN CONTRACT DOCUMENTS.

   SHOP DRAWINGS: SUBMIT FOR REVIEW SHOP DRAWINGS OF ALL PRECAST UNITS. MANUFACTURER'S INFORMATION SHALL BE SUBMITTED FOR JOINT SEALANTS AND WATERPROOFING. MANUFACTURE SHALL PROVIDE ANTI–FLOTATION DESIGN SHOP DRAWINGS AND CALCULATIONS, INCLUDING ANY EXTENDED BASE SLABS AS NECESSARY, FOR PROPOSED MANHOLES. MANUFACTURER SHALL ASSUME GROUNDWATER LEVELS EQUAL TOP OF GROUND ELEVATIONS AND PROVIDE FOR A 1.2 FACTOR OF SAFETY AGAINST FLOTATION.

   SHOP DRAWINGS FOR ALUMINUM GRATING AND STRUCTURAL SUPPORTS SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER (AT CONTRACTORS EXPENSE). SHOP DRAWINGS MUST BE SUBMITTED PRIOR TO FABRICATION OF SUPPORT FRAMES AND GRATING. CONTRACTOR IS RESPONSIBLE FOR GRATING DIMENSIONS.

REV.	BY	DATE	STATUS
	BDP	12/15	RECORD DRAWING
	BDP	8/15	REVISED PER CHANGE ORDER 1
	BDP	7/15	ISSUED FOR CONSTRUCTION
	BDP	6/15	ISSUED FOR BID

STATE OF MAINE — GLEN H. KOYE, JR. — No. 5144 — LICENSED PROFESSIONAL ENGINEER

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
EAST MILLINOCKET, MAINE

SECTIONS AND DETAILS

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

DESIGN BY:	BDP
DRAWN BY:	JRL
DATE:	5/28/2015
CHECKED BY:	BDP
LMN:	LMN
CTB:	SME–STD

JOB NO. 14134.09 DWG FILE DETAILS

C–301

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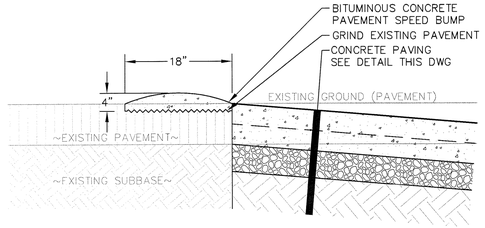
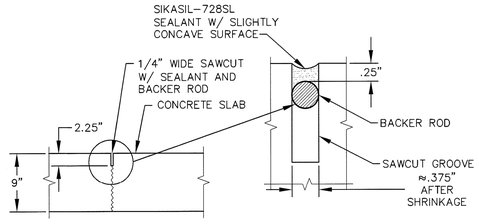
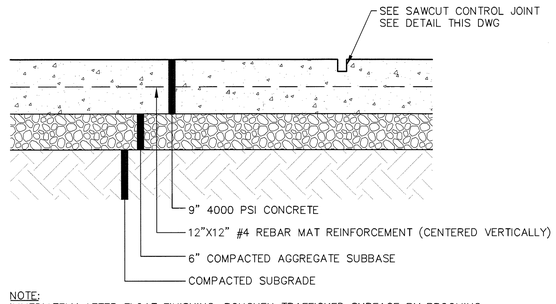


PAD TRANSITION
NTS



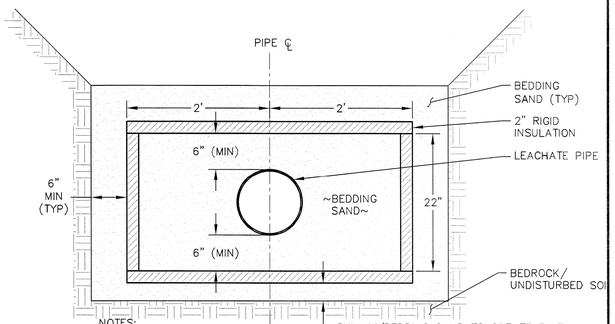
NOTE:
SAW CUT CONTROL JOINTS SHALL BE SPACED NO FURTHER THAN 20 FEET APART.

SAWCUT CONTROL JOINT
NTS



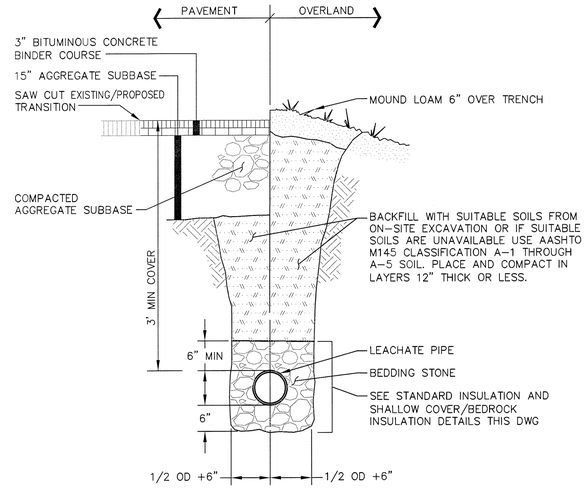
NOTE:
IMMEDIATELY AFTER FLOAT FINISHING, ROUGHEN TRAFFICKED SURFACE BY BROOMING WITH FIBER-BRISTLE BROOM PERPENDICULAR TO MAIN TRAFFIC DIRECTION.

CONCRETE PAVING
NTS

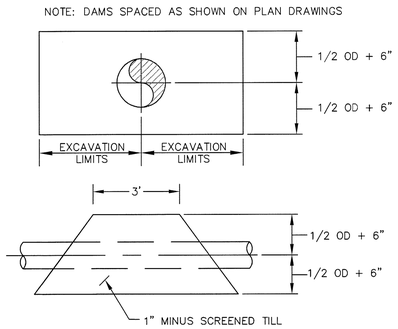


NOTES:
1. PAY WIDTH IN BEDROCK IS 5'
2. INSULATION SHALL BE 2" STYROFOAM BRAND SM EXTRUDED POLYSTYRENE FOAM INSULATION BY DOW BUILDING SOLUTIONS, INC. OR ENGINEER APPROVED EQUAL.

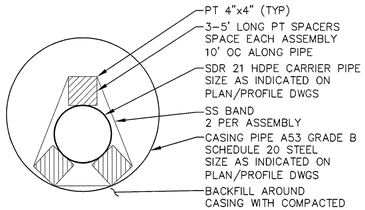
SHALLOW COVER/BEDROCK INSULATION
NTS



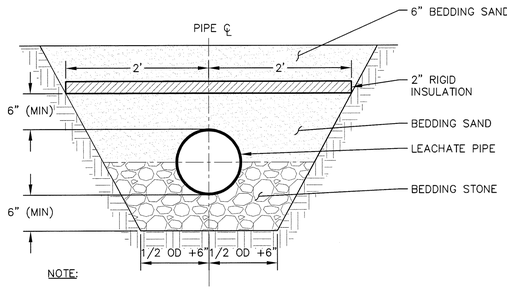
PIPE TRENCH
NTS



TILL DAM
NTS

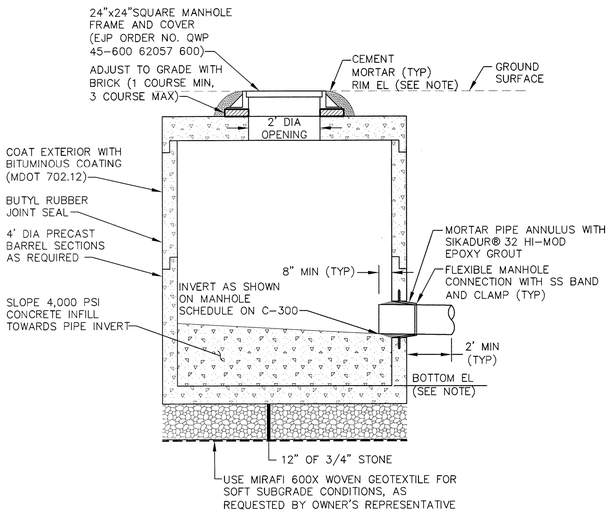


RAILROAD CROSSING PIPE ENCASEMENT
NTS



NOTE:
1. INSULATION SHALL BE 2" STYROFOAM BRAND SM EXTRUDED POLYSTYRENE FOAM INSULATION BY DOW BUILDING SOLUTIONS, INC. OR ENGINEER APPROVED EQUAL.

STANDARD INSULATION
NTS



NOTE:
SEE MANHOLE SCHEDULE DWG C-300.

EMERGENCY CATCH BASIN (ECB)
NTS

REV.	BY	DATE	STATUS
	BDP	12/15	RECORD DRAWING
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STATE OF MAINE — JOHN R. ROME JR. — No. 5144 — LICENSED PROFESSIONAL ENGINEER

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
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CHECKED BY: BDP
LMN: LMN
CTB: SME-STD

JOB NO. 14134.09 DWG FILE DETAILS C-302

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A. GENERAL

1. All soil erosion and sediment control will be done in accordance with: (1) the Maine Erosion and Sediment Control Handbook: Best Management Practices, Maine Department of Environmental Protection (MEDEP), March 2003. (2) The project Erosion and Sediment Control Plan.

2. The Maine Department of Economic & Community Development (MEDECD) or their agent will be responsible for the repair/replacement/maintenance of all erosion control measures until all disturbed areas are stabilized.

3. Disturbed areas will be permanently stabilized within 7 days of final grading. Disturbed areas not to be worked upon within 14 days of disturbance will be temporarily stabilized within 7 days of the disturbance.

4. In all areas, removal of trees, bushes and other vegetation, as well as disturbance of topsoil will be kept to a minimum while allowing proper site operations.

5. Any suitable topsoil will be stripped and stockpiled for reuse as directed by the owner. Topsoil will be stockpiled in a manner such that natural drainage is not obstructed and no off-site sediment damage will result. In any event, stockpiles will not be located within 100 feet of wetlands and will be at least 50 feet upgradient of the stockpile's perimeter silt fence. The sideslopes of the topsoil stockpile will not exceed 2:1. Silt fence will be installed around the perimeter of all topsoil stockpiles. Topsoil stockpiles will be surrounded with siltation fencing and will be temporarily seeded with Aroostook rye, annual or perennial ryegrass within 7 days of formation, or temporarily mulched.

B. TEMPORARY MEASURES

1. SILT FENCE

a. Silt fence will be installed prior to all construction activity, where soil disturbance may result in erosion. Silt fence will be erected at locations shown on the plans and/or downgradient of all construction activity.

b. Silt fences will be removed when they have served their useful purpose, but not before the upgradient areas have been permanently stabilized.

c. Silt fences will be inspected immediately after each rainfall of 0.5 inches or more and at least daily during prolonged rainfall. They will be inspected if there are any signs of erosion or sedimentation below them. Any required repairs will be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, they will be replaced with a temporary crushed stone check dam.

d. Sediment deposits will be removed after each storm event if significant build-up has occurred or if deposits exceed half the height of the barrier.

2. STONE CHECK DAMS

Stone check dams will be installed in grass-lined swales and ditches during construction.

3. BARK MULCH SEDIMENT BARRIER

a. Where approved, bark mulch sediment barriers may be used as a substitute for silt fence. See the details in this drawing set for specifications.

b. Rock Filter Berms: To provide more filtering capacity or to act as a velocity check dam, a berm's center can be composed of clean crushed rock ranging in size from the french drain stone to riprap.

4. TEMPORARY SEEDING

Stabilize disturbed areas that will not be brought to final grade for a year or less and reduce problems associated with mud and dust production from exposed soil surface during construction with temporary vegetation.

5. TEMPORARY MULCHING

Use temporary mulch in the following locations and/or circumstances:
- Temporary mulch will be applied within 7 days of exposing spill or prior to any storm event.
- Apply temporary mulch within 14 days of disturbance or prior to any storm event in all other areas.
- Areas, which have been temporarily or permanently seeded, will be mulched immediately following seeding.
- Areas which cannot be seeded within the growing season will be mulched for over-winter protection and the area will be seeded at the beginning of the growing season.
- Mulch anchoring will be used on slopes greater than 5 percent in late fall (past October 15), and over-winter (October 15 - April 15).

The following materials may be used for temporary mulch:

a. Hay or Straw material shall be air-dried, free of seeds and coarse material. Apply 2 bales/1,000 sf or 1.5 to 2 tons/acre to cover 90% of ground surface.

b. Erosion Control Mix: It can be used as a stand-alone reinforcement:
- on slopes 2 horizontal to 1 vertical or less;
- on frozen ground or forested areas; and
- at the edge of gravel parking areas and areas under construction.

c. Erosion control mix alone is not suitable:
- on slopes with groundwater seepage;
- at low points with concentrated flows and in gullies;
- at the bottom of steep perimeter slopes exceeding 100 feet in length;
- below culvert outlet aprons; and around catch basins and closed storm systems.

d. Chemical Mulches and Soil Binders: Wide ranges of synthetic spray-on materials are marketed to protect the soil surface. These are emulsions that are mixed with water and applied to the soil. They may be used alone, but most often are used to hold wood fiber, hydro-mulches or straw to the soil surface.

e. Erosion Control Blankets and Mats: Mats are manufactured combinations of mulch and netting designed to retain soil moisture and modify soil temperature. During the growing season (April 15 to September 15) use mats indicated on drawings or North American Green (NAG) S75 (or mulch and netting) on:
- the base of grassed waterways;
- steep slopes (15 percent or greater); and
- any disturbed soil within 100 feet of lakes, streams, or wetlands.

During the late fall and winter (September 15 to April 15) use heavy grade mats indicated on drawings for NAG SC250 on all areas noted above plus use lighter grade mats NAG S75 (or mulch and netting) on:
- sideslopes of grassed waterways; and
- moderate slopes (between 8 and 15 percent).

6. TEMPORARY DUST CONTROL

To prevent the blowing and movement of dust from exposed soil surfaces, and reduce the presence of dust, use water or calcium chloride to control dusting by preserving the moisture level in the road surface materials.

7. CONSTRUCTION DE-WATERING

a. Water from construction de-watering operations shall be cleaned of sediment before reaching wetlands, catch basins, water bodies, streams or site boundaries. Utilize temporary sediment basins, erosion control soil filter berms backed by staked hay bales, ADirt Bag 55" sediment filter bag, or other approved Best Management Practices (BMP's). De-watering liquids shall not be discharged to Town of East Millinocket Sanitary Sewer System.

C. PERMANENT MEASURES

1. Topsoil, Seed, and Mulch: All areas disturbed during construction, but not subject to other restoration (paving ,riprap, etc.) will be loamed, limed, fertilized, seeded, and mulched.

a. Seeded Preparation: Use stockpiled materials spread to the depths shown on the plans, if available. Approved topsoil substitutes may be used. Grade the site as needed.

b. Seeding will be completed by August 15 of each year. Late season seeding may be done between August 15 and September 15. Areas not seeded or which do not obtain satisfactory growth by September 15, will be seeded with Winter Rye and mulched. After October 1, or the first killing frost, disturbed areas will be seeded at double the specified application rates, mulched, and anchored.

PERMANENT SEEDING SPECIFICATIONS

Mixture:	(lbs/acre)
Kentucky Bluegrass	55
White Clover	5
Creeping Red Fescue	55
Perennial Ryegrass	15

c. Mulch in accordance with specifications for temporary mulching.

d. If permanent vegetated stabilization cannot be established due to the season of the year, all exposed and disturbed areas not to undergo further disturbance are to have dormant seeding applied and be temporarily mulched to protect the site.

2. Ditches and Channels: All ditches on-site will be lined with North American Green S75 erosion control mesh (or an approved equal) upon installation of loam and seed.

D. WINTER CONSTRUCTION AND STABILIZATION

1. Winter excavation and earthwork will be completed so as to minimize exposed areas while satisfactorily completing the project. Limit exposed areas to those areas in which work is to occur during the following 15 days and that can be mulched in one day prior to any snow event. All areas will be considered denuded until the subbase gravel is installed in roadway areas or the areas of future loam and seed have been loamed, seeded, and mulched.

Install any added measures necessary to control erosion/sedimentation. The particular measure used will be dependent upon site conditions, the size of the area to be protected, and weather conditions.

To minimize areas without erosion control protection, continuation of earthwork operations on additional areas will not begin until the exposed soil surface on the area being worked has been stabilized.

2. Natural Resource Protection: During winter construction, a double-row of sediment barriers (i.e., silt fence backed with hay bales or erosion control mix) will be placed between any natural resource and the disturbed area. Projects crossing the natural resource will be protected a minimum distance of 100 feet on either side from the resource.

3. Sediment Barriers: During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.

4. Mulching: All areas will be considered to be denuded until seeded and mulched. Hay and straw mulch will be applied at a rate of twice the normal accepted rate.

Mulch will not be spread on top of snow.

After each day of final grading, the area will be properly stabilized with anchored hay or straw or erosion control matting.

Between the dates of November 1 and April 15, all mulch will be anchored by either mulch netting, emulsion chemical, tracking or wood cellulose fiber.

5. Soil Stockpiling: Stockpiles of soil or subsoil will be mulched for over-winter protection with hay or straw at twice the normal rate or with a 4-inch layer of erosion control mix. This will be done within 24 hours of stocking and re-established prior to any rainfall or snowfall. Any soil stockpiles shall not be placed (even covered with mulch) within 100 feet from any natural resources.

6. Seeding: Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas will receive 4 inches of loam and seed at an application rate of two times the rate for permanent seeding. All areas seeded during the winter will be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75 percent catch) will be revegetated by replacing loam, seed, and mulch.

If dormant seeding is not used for the site, all disturbed areas will be revegetated in the spring.

7. Maintenance: Maintenance measures will be applied as needed during the entire construction season. After each rainfall, snow storm, or period of thawing and runoff, the site contractor will perform a visual inspection of all installed erosion control measures and perform repairs as needed to ensure their continuous function.

Following the temporary and/or final seeding and mulching, the contractor will, in the spring, inspect and repair any damages and/or bare spots. An established vegetative cover means a minimum of 85 to 90 percent of areas vegetated with vigorous growth.

E. OVER-WINTER CONSTRUCTION EROSION CONTROL MEASURES

1. Stabilization of Disturbed Soil: By September 15, all disturbed soils on areas having a slope less than 15 percent will be seeded and mulched. If the contractor fails to stabilize these soils by this date, then the contractor shall stabilize the soil for late fall and winter, by using either temporary seeding or mulching.

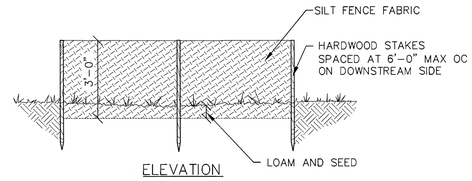
2. Stabilization of Disturbed Slopes: All slopes to be vegetated will be completed by September 15. The owner will consider any area having a grade greater than 15 percent (6.5H:1V) to be a slope. Slopes not vegetated by October 15 will receive one of the following actions to stabilize the slope for late fall and winter:

a. Stabilize the soil with temporary vegetation and erosion control mesh.
b. Stabilize the slope with erosion control mix.
c. Stabilize the slope with stone riprap.

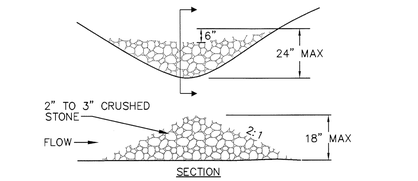
3. Stabilization of Ditches and Channels: All stone-lined ditches and channels to be used to convey runoff through the winter will be constructed and stabilized by October 15. Grass-lined ditches and channels will be complete by September 15. Grass-lined ditches not stabilized by September 15 shall be lined with either sod or riprap.

F. MAINTENANCE PLAN

1. Routine Maintenance: Inspection will be by a qualified person during wet weather to ensure that the facility performs as intended. Inspection priorities will include checking erosion controls for accumulation of sediments.



SILT FENCE
NTS

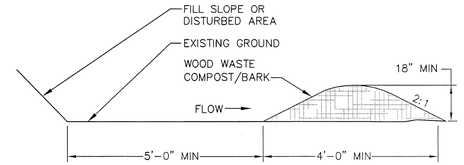


SPACING BETWEEN CHECK DAMS

S_o (FT/FT)	L (FT)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

NOTE:
USE AT ALL NEWLY CONSTRUCTED GRASS LINED DITCHES AS A TEMPORARY EROSION CONTROL MEASURE AND WHERE OTHERWISE NOTED ON PLANS.

STONE CHECK DAM
NTS



NOTE:
BARK MULCH SEDIMENT BARRIERS MAY BE USED AS AN ALTERNATE TO SILT FENCE WHEN APPROVED BY THE ENGINEER.

BARK MULCH SEDIMENT BARRIER
NTS

REV.	BY	DATE	STATUS
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STATE OF MAINE — GUY H. COTE, JR. — No. 5144 — LICENSED PROFESSIONAL ENGINEER

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
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SECTIONS AND DETAILS

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C-303

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NORTH AMERICAN GREEN
EROSION CONTROL *Products* *Guaranteed* SOLUTIONS

14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
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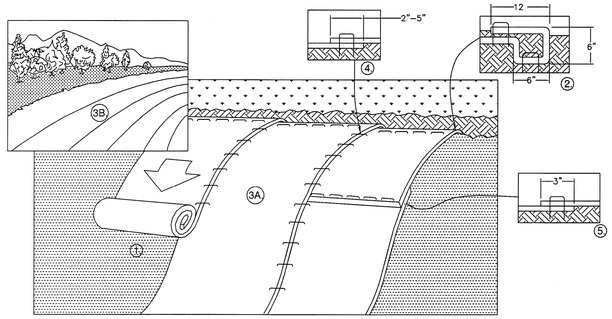
www.nagreen.com



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6"DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RCP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP's WIDTH.

NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

SLOPE INSTALLATION
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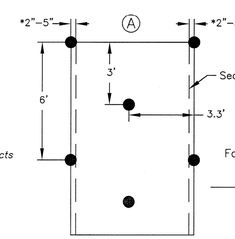
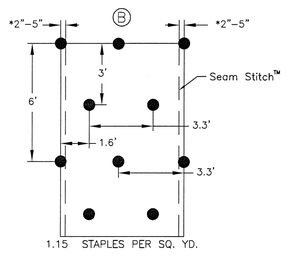
800-772-2040
www.nagreen.com



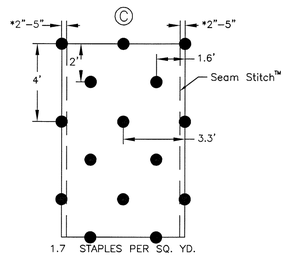
0.7 STAPLES PER SQ. YD.

For blankets with the North American Green DOT System™ place staples through each of the dots.



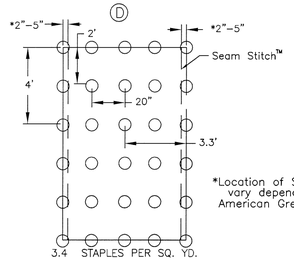
1.15 STAPLES PER SQ. YD.

For blankets with the North American Green DOT System™ place staples through each of the dots.



1.7 STAPLES PER SQ. YD.

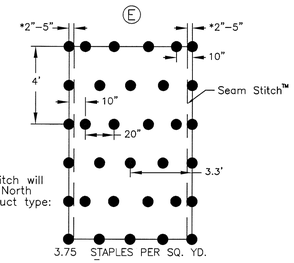
For blankets with the North American Green DOT System™ place staples through each of the dots.



3.4 STAPLES PER SQ. YD.

For blankets with the North American Green DOT System™ place staples through each of the dots.

*Location of Seam Stitch will vary depending on North American Green product type:



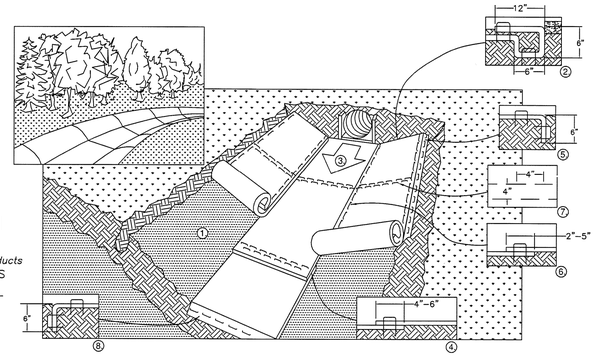
3.75 STAPLES PER SQ. YD.

For blankets with the North American Green DOT System™ place staples through each of the dots.

DOT SYSTEM™ STAPLE PATTERN GUIDE
NTS

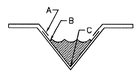
NORTH AMERICAN GREEN
EROSION CONTROL *Products* *Guaranteed* SOLUTIONS

14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
800-772-2040
www.nagreen.com



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP's IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMAPCT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES SPACED APPROXIMATELY 12" ACROSS THE WIDTH OF THE RECP's.
3. ROLL CENTER RECP's IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4" - 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECP's.
5. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" - 5" (DEPENDING ON RECP's TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP's MUST BE ANCHORED WITH A ROW OF STAPLES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

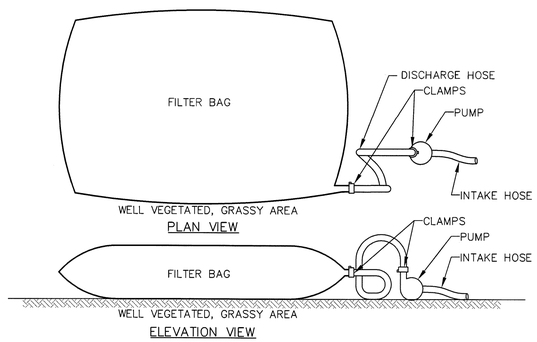
NOTE:
* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.



CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

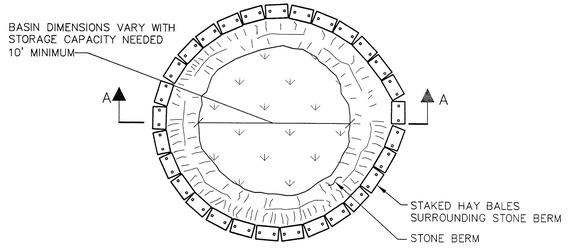
NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

CHANNEL INSTALLATION
NTS

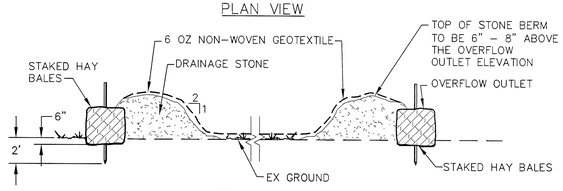


NOTES:
1. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
3. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
4. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
5. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.

PUMPED WATER FILTER BAG
NTS

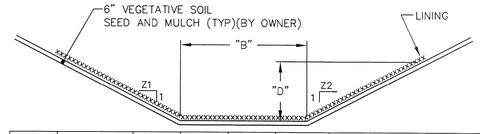


PLAN VIEW



SECTION A-A

DEWATERING FILTER
NTS



GRASS CHANNEL	TYPE	B (FT)	D (FT)	Z1	Z2	LINING
1	ROAD DITCH	2	2	2	2	NAG SC250 W/STAPLE D
2	ROAD DITCH	2	2	2	2	NAG SC250 W/STAPLE D

*SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, AND VEGETATIVE STABILIZATION SPECIFICATIONS FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION.

GRASS CHANNEL
NTS

REV.	BY	DATE	STATUS
	BDP	12/15	RECORD DRAWING
	BDP	7/15	ISSUED FOR CONSTRUCTION
	BDP	6/15	ISSUED FOR BID

STATE OF MAINE
GUY H. COTE, JR.
No. 5144
REGISTERED PROFESSIONAL ENGINEER

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
EAST MILLINOCKET, MAINE

SECTIONS AND DETAILS

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

DESIGN BY: BDP
DRAWN BY: JRL
DATE: 5/28/2015
CHECKED BY: BDP
LMN: LMN
CTB: SME-STD

JOB NO. 14134.09 DWG FILE DETAILS

C-304

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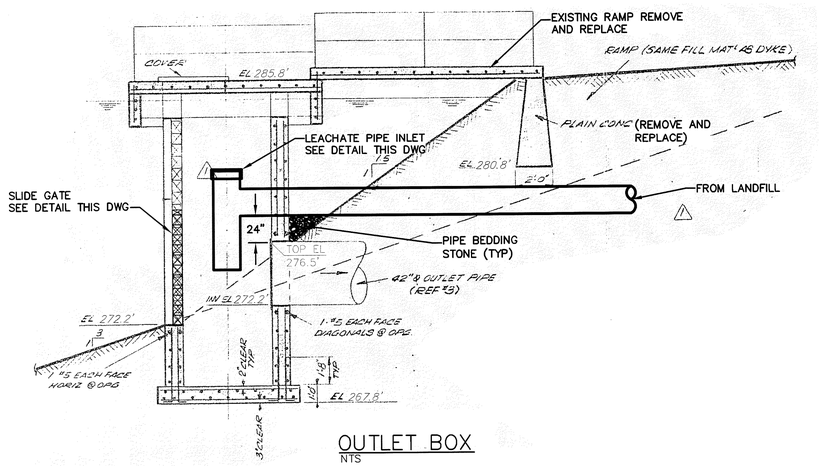
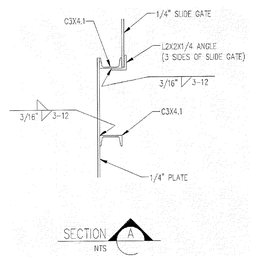
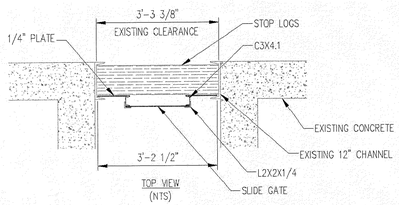


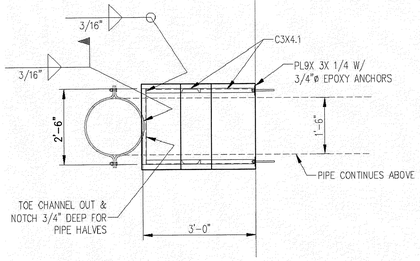
OUTLET BOX
NTS



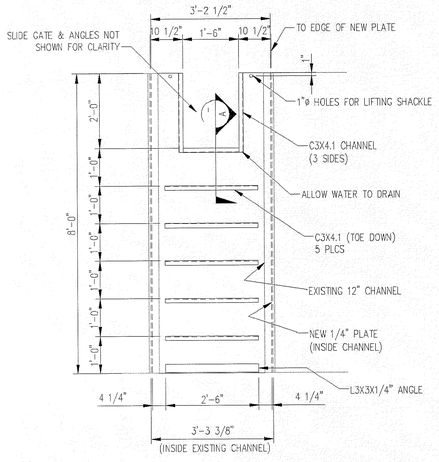
SECTION A
NTS



TOP VIEW
(NTS)

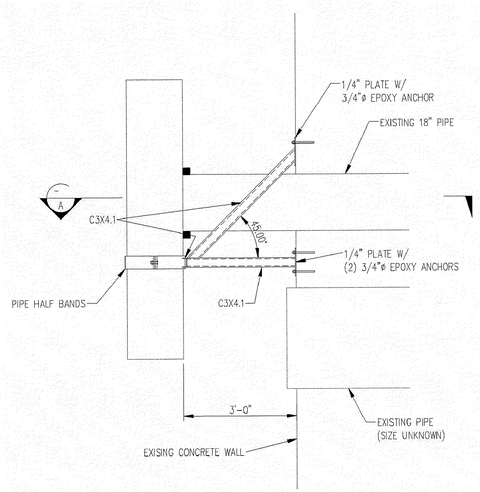


SECTION A
NTS

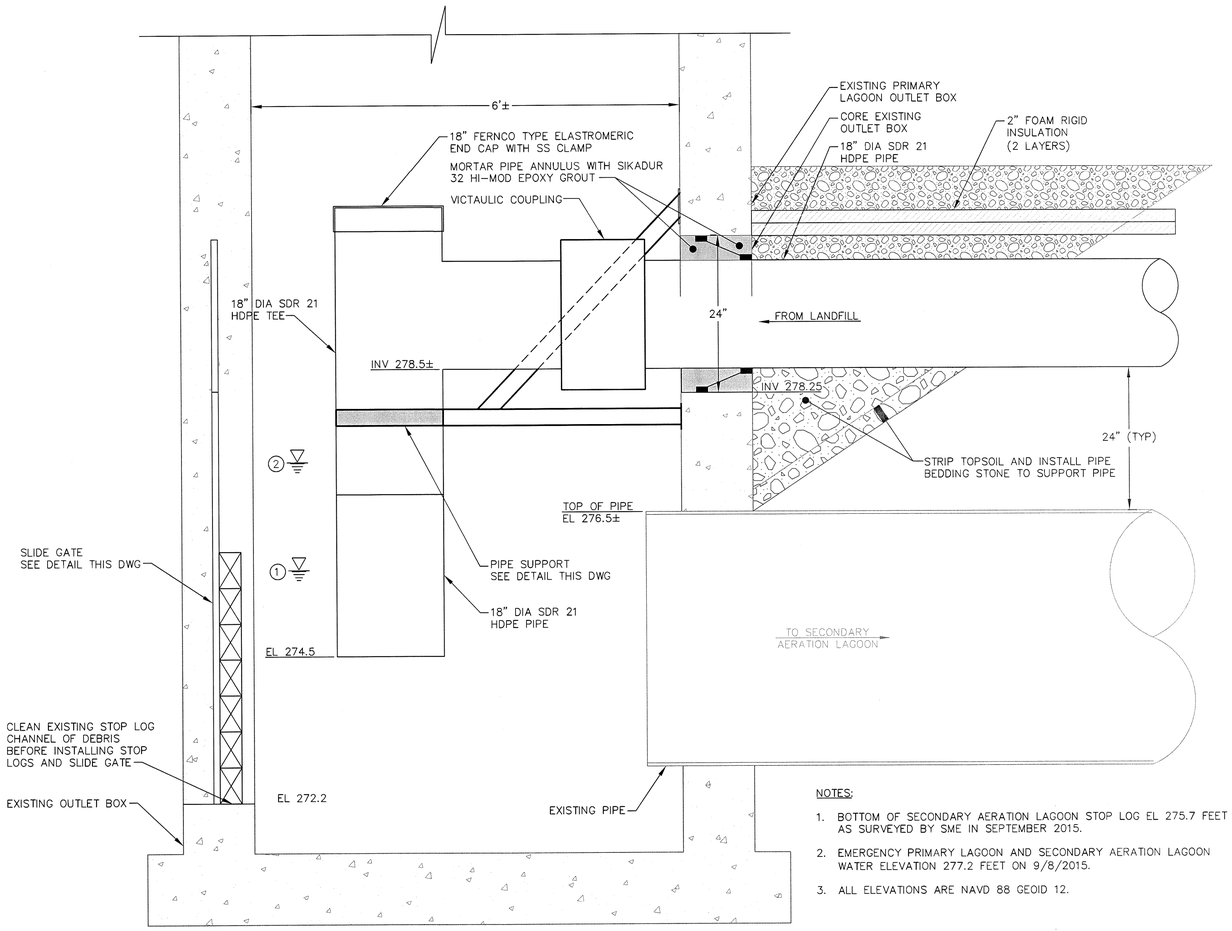


FRONT VIEW
POND SIDE (NTS)

SLIDE GATE
NTS



PIPE SUPPORT
NTS



LEACAHTE PIPE INLET
NTS

NOTES:

1. BOTTOM OF SECONDARY AERATION LAGOON STOP LOG EL 275.7 FEET AS SURVEYED BY SME IN SEPTEMBER 2015.
2. EMERGENCY PRIMARY LAGOON AND SECONDARY AERATION LAGOON WATER ELEVATION 277.2 FEET ON 9/8/2015.
3. ALL ELEVATIONS ARE NAVD 88 GEOID 12.

REV.	BY	DATE	STATUS
	BDP	12/15	RECORD DRAWING
	BDP	9/15	ISSUED PER CHANGE ORDER 3

STATE OF MAINE — LEWIS EDDY, JR. — No. 5144 — LICENSED PROFESSIONAL ENGINEER

MAINE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
EAST MILLINOCKET, MAINE

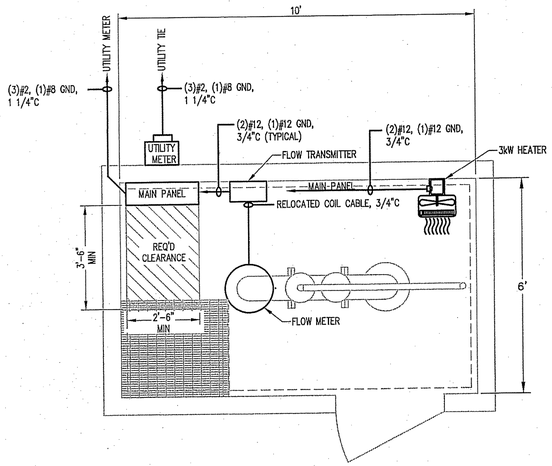
SECTIONS AND DETAILS

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • www.smemaine.com

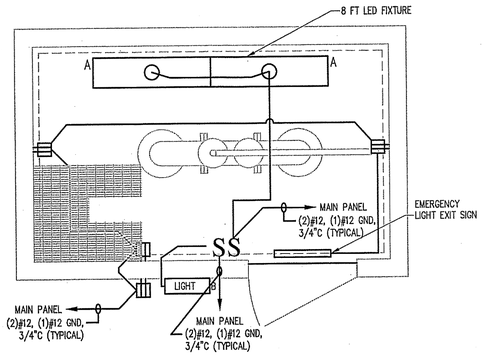
DESIGN BY:	BDP
DRAWN BY:	JRL
DATE:	5/28/2015
CHECKED BY:	BDP
LMN:	LMN
CTB:	SME-STD

JOB NO. 14134.09 DWG FILE DETAILS C-305

\\severnclfs\pw\MEDEP\NewRoad\PipelineRelocDwgs\Plans\DETAILS.dwg, 12/29/2015 11:14:05 PM, djh



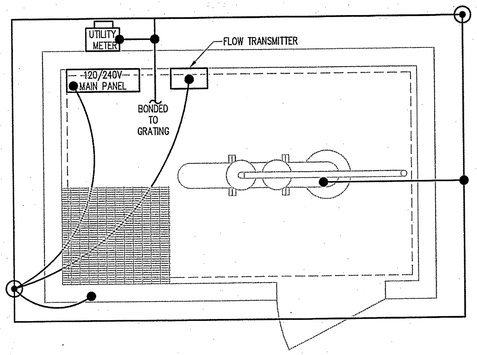
POWER PLAN – UPPER
FLOW METER BUILDING (MH27)
SCALE: NTS



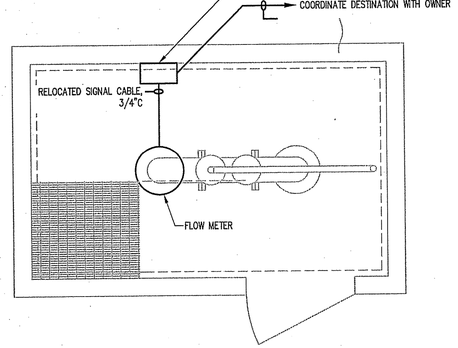
LIGHTING PLAN
FLOW METER BUILDING (MH27)
SCALE: NTS

CIRCUIT DIRECTORY			
1	LEFT OF PANEL - RECEPTICLES TOWNSIDE	2	INSIDE & OUTSIDE LIGHTS
3		4	RIGHT OF PANEL RECEPTICLES
			EXIT-EMERGENCY LIGHT
5		6	ELECTRIC SPACE HEATER
7		8	ELECTRIC SPACE HEATER
9		10	FLOW METER
11		12	
13		14	

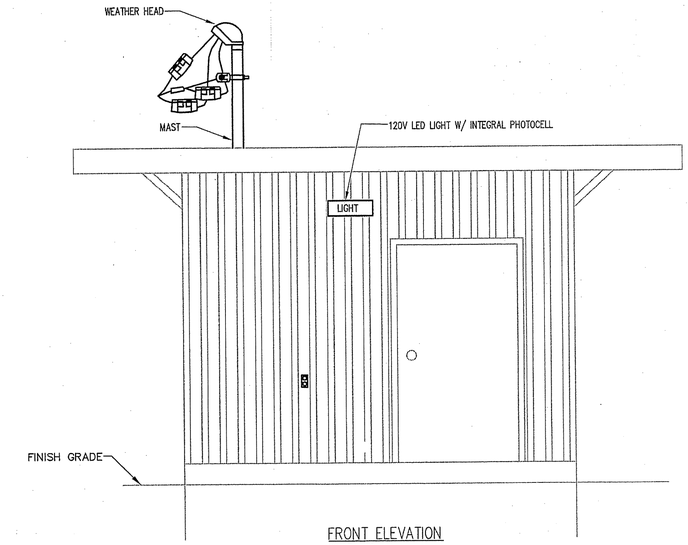
PANEL SCHEDULE
MAIN PANEL



GROUNDING PLAN
FLOW METER BUILDING (MH27)
SCALE: NTS



I&C PLAN
FLOW METER BUILDING (MH27)
SCALE: NTS



FRONT ELEVATION
SCALE: NTS

NOTES:

1. TYPE "A" FIXTURES SHOWN SHALL BE MODEL NUMBER LUN4-248T8HO-EU-PEBA AS MANUFACTURED BY COLUMBIA LIGHTING, OR APPROVED EQUAL. PROVIDE BACKUP BATTERY PACK FOR EGRESS LIGHTING REQUIREMENTS.
2. TYPE "B" FIXTURE SHOWN SHALL BE MODEL NUMBER LMC-18LU-SW-E-2-PC(1) WITH PHOTOCELL AND POLYCARBONATE SHIELD AS MANUFACTURED BY HUBBELL OUTDOOR LIGHTING, OR APPROVED EQUAL.
3. PROVIDE ELECTRICAL SERVICE AND UTILITY METER PER ALL ELECTRICAL UTILITY (EMERA) REQUIREMENTS. COORDINATE WITH EMERA FOR ALL ELECTRICAL SERVICE WORK.
4. MAINTAIN MINIMUM REQUIRED CLEARANCE IN FRONT OF MAIN PANEL AS INDICATED.
5. GFCI RECEPTACLES SHOWN SHALL BE PROVIDED WITH WEATHERPROOF IN-USE RATED COVERS.
6. ELECTRICAL EQUIPMENT SHALL BE SURFACE MOUNTED.
7. MAIN PANEL SHALL HAVE 100A RATED MAIN CIRCUIT BREAKER AND 100A RATED BUSES. IT SHALL HAVE 16 CIRCUITS MINIMUM AND BE RATED NEMA 12.
8. BOND BUILDING REBAR, UTILITY METER, TRANSMITTER, PIPE AND PANEL TO SINGLE GROUND ROD ADJACENT TO BUILDING.
9. RELOCATE EXISTING FLOW TRANSMITTER FROM PRESENT LOCATION. LOCATE TRANSMITTER ADJACENT TO FLOW METER SUCH THAT EXISTING CABLE CAN BE RE-PURPOSED. COORDINATE FLOW TRANSMITTER OUTPUT SIGNAL REQUIREMENTS WITH OWNER.

DISCLAIMER:

EXISTING BUILDING INFORMATION REPRODUCED FROM ORIGINAL PRINT.

MID-SOUTH ENGINEERING HAS NOT VERIFIED THE ACCURACY OF THE INFORMATION SUPPLIED FROM THIS DRAWING.

RECORD DRAWING

THIS DRAWING DEPICTS INFORMATION BASED ON OWNER'S RECORD COPY OF DRAWINGS, SPECIFICATIONS, CHANGE ORDERS, WORK CHANGE DIRECTIVES, FIELD ORDERS, AND OTHER WRITTEN INTERPRETATIONS AND CLARIFICATIONS, AS DELIVERED TO MID-SOUTH ENGINEERING AND ANNOTATED BY OWNER TO SHOW CHANGES MADE DURING CONSTRUCTION. THESE CHANGES MADE DURING CONSTRUCTION HAVE NOT BEEN VERIFIED BY MID-SOUTH ENGINEERING. THEREFORE MID SOUTH ENGINEERING CANNOT SEAL THIS DRAWING. USE OF THIS INFORMATION SHALL BE AT THE USER'S RISK.

NO.	DATE	BY	DESCRIPTION
1	12/23/15	CJB	ISSUED RECORD DRAWING
0	6/23/15	GAG	ISSUED FOR CONSTRUCTION

REVISIONS

MID-SOUTH ENGINEERING
1658 Malvern Ave.
Hot Springs, Arkansas 71901
200 Mackenan Drive
Cary, North Carolina 27511
70 Spring Street, Suite 3
Millinocket, Maine 04462
WWW.MSECO.COM

LEACHATE PIPELINE RELOCATION
GNP MILL FACILITY
ELECTRICAL PLAN

SEVEE & MAHER ENGINEERS, INC.
EAST MILLINOCKET, MAINE

SCALE				DRAWING NO.
NTS	DRN.	GAG	6/17/15	6312-14001-E03
	CKD.	DDM	6/17/15	
	APP.	DDM	6/18/15	

APPENDIX C

INSPECTION LOGS

SME
SEVEE & MAHER
ENGINEERS

DOLBY LANDFILL
LANDFILL INSPECTION CHECKLIST

Date: _____ Time:
Weather: _____ Inspected By:

ITEM	CONDITION	
DOLBY I LANDFILL	**Ok**	**Not Ok**
COVER SYSTEM		
Erosion, Channeling, Eruptions		
Poor Drainage, Ponding		
Excessive Settling, Crack Development		
Grass Die-off-Failure to Thrive		
Mowing Required		
Germination of Trees, Deep Root Vegetation		
Animal Burrowing		
COLLECTION PONDS		
West End Pond Level (low, medium, or high)		
East End Pond Level (low, medium, or high)		
Vegetative Build-up in Ponds (Cat Tails and Trees)		
ACCESS GATES		
Gates Secured and Working Properly (Facility Main Gates)		
Road Accessible by Vehicle		
DOLBY II LANDFILL		
COVER SYSTEM		
Erosion, Channeling, Eruptions		
Poor Drainage, Ponding		
Excessive Settling, Crack Development		
Grass Die-off, Failure to Thrive		
Mowing Required (Mowing Should Occur Next Year due to Woody Vegetation)		
Germination of Trees, Deep Root Vegetation		
Animal Burrowing		
PERIMETER DRAIN CATCH BASINS		
Build-up Sediment in Catch Basins		
Flow Conditions (low, medium, or high)		
Catch Basins Intact and Serviceable		
LEACHATE HOLDING POND		
Iron Staining (wooded area east of pond)		
Holding Pond Level		
DOLBY III LANDFILL		
COVER SYSTEM		
Erosion, Channeling, Eruptions		
Excessive Settling, Crack Development		
Grass Die-off-Failure to Thrive		
Mowing Required		
Germination of Trees, Deep Root Vegetation		
Poor Drainage, Ponding		

SME
SEVEE & MAHER
ENGINEERS

ITEM	CONDITION	
DOLBY III LANDFILL (Cont'd)	**Ok**	**Not Ok**
Animal Burrowing		
Access Road Condition		
Gas Vent Pipes		
Active Area Berm		
PERIMETER DRAIN AND CATCH BASINS		
Build-up of Sediment in Catch Basins		
Valves Functioning Properly (free turning)		
LEACHATE COLLECTION POND	**Ok**	**Not OK**
LINER		
Condition of Liner (rips, holes, torn seams)		
LEACHATE PUMP STATION		
Build-up Sediment in Wetwells or Leachate Pond		
Pumps Functioning Properly (amps, noises)		
Valves Functioning Properly (free turning)		
Flow Conditions (low, medium, or high)		
Properly Vented		
Electrical Panel Inspection (corrosion, etc.)		
Flow Meter Inspection		
Transducer		
LEAK DETECTION SYSTEM		
Pump functioning properly (amps, noises)		
Flow Conditions (low, medium, high)		
Flow Meter Inspection		
Control Panel Inspection		
UNDERDRAIN PUMPING SYSTEM		
Pump functioning properly		
Flow Conditions		
SITE SEDIMENTATION STRUCTURES		
NORTHWEST SEDIMENT POND (SEDIMENT POND 3)		
Check Outlet Structure for Condition		
Water Level (low, medium, or high)		
WEST SEDIMENT POND (SEDIMENT POND 2)		
Check Outlet Structure for Condition		
Water Level (low, medium, or high)		
SOUTHWEST SEDIMENT POND (SEDIMENT POND 1)		
Check Outlet Structure for Condition		
Water Level (low, medium, or high)		
SITE ROADWAYS AND DRAINAGE		
Check Catch Basins for Build-up of Sediment		
Check Culverts for Blocked Drainage and/or damage		
Check Monitoring Wells for Visual Damage		
General condition of Perimeter Roadways		
LEACHATE PIPELINE		
Check Manhole Exterior Condition		
Check Transition Station Exterior Condition		
Check Aboveground Utility Line to the Transition Station		
General condition of Leachate Pipeline Access Road		

SME
SEVEE & MAHER
ENGINEERS

First Inspection

COMMENTS:

1.

RECOMMENDED ACTIONS:

1.

SME
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ENGINEERS

DOLBY LANDFILL

CONCRETE MANHOLE INSPECTION FORM

Manhole / Catch Basin No: CB #

Landfill Location:

Date: Time:

Weather: Inspected by:

Date of last inspection:

Exterior Condition (Comments):

Cracks:

Holes:

Flaking:

Seeps:

Other:

Interior Condition (Comments):

Cracks:

Holes:

Flaking:

Seeps:

Other:

Corrective Action required (Y/N):

Date and Details of Corrective Actions (if needed):

Attachments: Photos

Manhole Inspection
Dolby Landfill, East Millinocket, Maine
Month Day, Year

CB-# Exterior

CB-# Interior

APPENDIX D

ACTION LEAKAGE RATE/RESPONSE ACTION PLAN FOR LEACHATE POND LINER

SME
SEVEE & MAHER
ENGINEERS

ACTION LEAKAGE RATE/RESPONSE ACTION PLAN
FOR LEACHATE POND LINER

Note to Reader: This plan is an update of the Action Leakage Rate/Response Action Plan prepared for the Dolby leachate pond in 2006. The update did not change the calculations used for determining the action leakage rate. At the time of this plan, in 2006, the existing leachate pond had not been constructed. The narrative for this plan recognizes that the leachate pond was subsequently constructed in 2007.

A leak detection system was included in the leachate pond construction to monitor the performance of the primary liner. The leak detection system consists of a drainage geocomposite layer below the primary 60-mil HDPE geomembrane. Beneath the leak detection system is a secondary 60-mil HDPE geomembrane overlying a geosynthetic clay liner (GCL), followed by a 12-inch-thick compacted clay layer. At the south end of the leak detection system is a 6-inch diameter SDR-17 HDPE perforated pipe buried in a 12-inch-thick layer of 3/4-inch drainage stone (i.e., a sump). Sample tubing is provided in the leak detection piping system so that the landfill operator can sample the contents of the sump. All water collected in the leak detection system drains to the leak detection sump. The leak detection sump is equipped with a 1/2-HP submersible pump, which is activated by a transducer system. The discharge line from the pump contains a flow meter for recording discharge from the leak detection layer. The pump discharges to the leachate pump station sump where it is pumped off-site. The engineering drawings for the leachate pond are appended to the Post-Closure Monitoring and Maintenance Plan for Dolby Landfill.

Estimated Liner Leakage Rates. The amount of leakage through the primary liner depends on several factors, including the following:

- The number and size of holes or imperfections in the geomembrane liner;
- The head above the primary liner;
- The uniformity of contact between the geomembrane liner and underlying geocomposite; and
- The hydraulic conductivity of the material in contact with the primary liner.

Typically, two-hole or imperfections sizes are used in defining leakage rates through a geomembrane liner system. Small holes (i.e., $3x10^{-6}$ m^2) roughly equal to the thickness of the geomembrane should be considered representative of actual field conditions and more typical of operating conditions. A larger hole (i.e., $1x10^{-4}$ m^2) should be used to size the hydraulic capacity of the leak detection layer (ref. Cell and Liner System Detailed Design (Design Examples), J.P. Giroud/Geosyntec Consultants, 1992).

For the leachate pond, Sevee & Maher Engineers, Inc. (SME) calculated leakage rates through the primary liner using the larger hole size. The frequency of imperfections in a geomembrane is associated with the degree of QA/QC associated with the manufacture and installation of the membrane. Because a detailed geomembrane QA/QC program was developed for the project (ref. "Contract Documents and Construction Specifications for Leachate Pond Redevelopment, Dolby Ill Landfill", SME, Revised May

2006), a minimal number of defects are anticipated. Giroud et al. suggests that for liner installation with good QA/QC, between one and three manufacture holes per acre and one installation defect per acre can be expected. SME calculated total leakage rates through the primary liner for one hole per acre (with a size of $1x10^{-4}$ m^2) to predict the hydraulic capacity of the leak detection system.

The second variable affecting flow through the primary geomembrane liner is hydraulic head on the liner. SME used a hydraulic head for a pond level at a normal operating depth of two feet to determine the leak detection time.

The last two variables that affect leakage rate through the primary liner are the hydraulic conductivity of the materials in contact with the liner and the contact conditions. Calculated flow estimates were based on the proposed liner design. For primary liner, which will be underlain by a drainage geocomposite and secondary liner, flow rates were estimated based on analytical models developed by Giroud and Bonaparte (1989b) for flow through composite liners. Giroud and Bonaparte defined two conditions corresponding to the contact made between the geomembrane and underlying material that affect the flow through the geomembrane liner. A good contact is defined by Bonaparte et al. as a membrane installed with few wrinkles on top of a low hydraulic conductivity soil layer. Poor contact is defined as a geomembrane installed with a certain number of wrinkles and/or placed on a low-hydraulic conductivity soil layer that has not been well compacted and does not appear smooth. SME developed estimates of leakage through the primary geomembrane liner system for a single geomembrane underlain by a high permeability material (drainage geocomposite). Based on these variables, leakage rates through the primary geomembrane liner systems were calculated for the worst case. SME also evaluated hydraulic capacities of the leak detection system to handle the calculated flows and the time of travel for these flows in the leak detection systems. For the conditions described above, the calculations demonstrate that the leak detection system has the capacity to both handle worst case design flows and detect leaks in an approximate 20-hour period. This exceeds the regulatory requirement of detecting leaks from a leachate pond liner system within 24-hours.

An action leakage rate (ALR) of 20 gallons per acre per day (gpad) was established for the leachate pond. This is the standard action leakage rate value used by the U.S.EPA and the MEDEP. The ALR represents the minimum rate of leakage that will trigger interaction between the landfill owner and the MEDEP to determine the appropriate response action for the leakage.

Monitoring Frequency

The total flows will be obtained daily from a flow meter installed on the discharge lines for the leak detection system. Leak detection water quality samples will be collected during the regular water quality sampling rounds three times per year. The water quality samples of the leak detection sump will be collected using a peristaltic pump. The data will be incorporated into the submittals to the MEDEP.

Reporting Procedures

The landfill operator will submit a yearly report presenting all of the data collected during the preceding year and any recommended changes to the monitoring program, such as adjustments of the UAL values.

Response Actions

The landfill operator will record daily flow measurements from the leak detection discharge pipe and notify the MEDEP within 5 working days of obtaining four consecutive readings suggesting primary liner seepage is in exceedance of ALR. As weather conditions allow, the landfill operator will drain the leachate pond and visually inspect the liner and repair damaged areas within 15 days and no more than 30 days after notifying the MEDEP. If the visual inspection and subsequent repairs fail to reduce the seepage rate below the ALR, the landfill operator will consult with the MEDEP regarding other remedial measures.

The landfill operator will prepare a report summarizing the results of the inspection and repairs and submit it to the MEDEP for its review. The report will contain recommendations for continuation of the sampling program.[1]

[1] The leak detection calculations were transmitted in a letter to MEDEP (Lou Pizzuti) dated May 17, 2006.

APPENDIX E

POST CLOSURE COST ESTIMATE

SME
SEVEE & MAHER
ENGINEERS

OPINION OF POST CLOSURE COST

SME
SEVEE & MAHER ENGINEERS

4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016

Project Name: Dolby Landfill Post Closure Cost Estimate
Project Location: East Millinocket, Maine
Project No.: 230304.05
By: TJM
Date: 4/2/2024
Checked By: NMT
Date: 4/2/2024

OPINION OF POST-CLOSURE COST

ITEM	DESCRIPTION	YEARS	COST/YEAR	ESTIMATED TOTAL COST
1. LANDFILL MAINTENANCE COSTS				
a.	General Site Repairs and Maintenance			
	Required repairs will include erosion repairs of the cover system, siltation removal from the stormwater conveyance system, surface repairs to the roads, and culvert maintenance every year.	1-7	$ 4,000.00	$ 20,000.00
		1-15	$ 2,000.00	$ 10,000.00
		15-30	$ 2,000.00	$ 40,000.00
b.	Mowing			
	Approximately 133 acres of the landfill facility will require mowing. Mowing will occure once every other year. Trimming trees along leachate transport pipeline every 5 years.	1-30	$ 21,300.00	$ 319,500.00
c.	Snow Removal			
	Road maintenance during the winter months will include plowing, sanding, and shoveling	1-30	$ 6,200.00	$ 186,000.00
d.	Gas Control System			
	This item provides for the replacement of one gas vent riser every 2 years. The cost will include repairs to the geomembrane and documentation of the repairs.	1-30	$ 1,400.00	$ 21,000.00
e.	Groundwater Monitoring System			
	This item provides the cost to replace two monitoring wells over the 30-year post-closure period. The cost includes drilling, installation, development, and documentation.	1-30	$ 16,900.00	$ 16,900.00
		SUBTOTAL LANDFILL MAINTENANCE =		$ 613,400.00
2. LANDFILL INSPECTIONS				
a.	Independent Engineering Firm			
	Cost associated with this item assumes "local" inspections performed three times a week during 7-year closure period then once per week thereafter. All options include three annual site visits by an independent engineering firm.	1-7	$ 66,000.00	$ 462,000.00
		1-15	$ 32,000.00	$ 736,000.00
		15-30	$ 32,000.00	$ 736,000.00
b.	Geotechnical Inspections			
	Includes biannual aerial survey of Dolby II and Dolby III for 7-year closure implementation period for evaluation of cover settlement. Includes aerial survey every fifth year for 30-year post-closure to evaluate landfill settlement.	1-7	$ 5,200.00	$ 72,800.00
		1-15	$ 2,100.00	$ 2,100.00
		15-30	$ 2,100.00	$ 6,300.00
		SUBTOTAL INSPECTION COST =		$ 2,015,200.00
3. LEACHATE MANAGEMENT				
a.	General Cost			
	General cost associated with general repairs and maintenance to the pump station structure, pumps, fittings, valves, meters, and lighting.	1-30	$ 1,600.00	$ 48,000.00
b.	Leachate Pipe Flushing and Leachate Pond Mainetenance			
	This item includes cost to perform inspection and repair/maintenance of air release valves, pipeline cleaning, pond cleaning, and pump rebuilding/maintenance every other year during the closure period and every third year during post closure period. This annual cost is expected to become lower as leachate flows from landfill diminishes and the need for pipeline and pump capacity are reduced.	1-7	$ 166,000.00	$ 498,000.00
		1-15	$ 166,000.00	$ 830,000.00
		15-30	$ 166,000.00	$ 830,000.00
		SUBTOTAL LEACHATE MANAGEMENT =		$ 2,206,000.00
4. ENGINEERING DESIGN SUPPORT				
	Cost associated with engineering design support includes oversight of subcontractors, interaction with owner and regulatory agencies, quality control, project management, and administration.	1-7	$ 87,700.00	$ 613,900.00
		1-15	$ 12,400.00	$ 186,000.00
		15-30	$ 12,400.00	$ 186,000.00
		SUBTOTAL ENGINEERING DESIGN SUPPORT =		$ 985,900.00
4. Gas Monitoring & Water Quality Monitoring, Testing, and Reporting				
	Costs associated with water quality monitoring, testing, and reporting include field sampling, laboratory analysis, reporting, equipment cost, milage , hotel, and meal cost and miscellaneous materials cost. This item also includes gas monitoring that will coincide with the water quality sampling. The water sampling will be at a rate of two times a year for the first seven years and once per year for a reduced number of wells and parameters for the next twenty three years.	1-7	$ 60,000.00	$ 420,000.00
		1-15	$ 30,000.00	$ 450,000.00
		15-30	$ 30,000.00	$ 450,000.00
		SUBTOTAL GAS AND WATER QUALITY MONITORING =		$ 870,000.00
		TOTAL POST CLOSURE MONITORING AND MAINTENANCE COST - 30 YEARS =		$ 6,690,500.00

Notes:
1. All values are in 2023 dollars. Does not include electrical costs for the leachate transport pipeline and the leachate treatment at municipally owned wastewater treatment plant in East Millinocket. All costs are estimated average annual costs.
2. New leachate pumps average cost $40,000. Pumps typically last 20 years. Replacement cost for pumps are considered unforeseen.
3. Actual costs may vary.

APPENDIX H

WASTE LOGS FOR 2023

SME
SEVEE & MAHER
ENGINEERS

2023 ASH DISPOSAL WEIGHT
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

ORIGIN: TOWN OF EAST MILLINOCKET

Date	Time of Delivery	Truck #	Empty Truck Weight (lb)	Loaded Truck Weight (lb)	Ash Weight (tons)
5/18/2023	0652	6	22,500	45,800	11.65
5/18/2023	0654	8	23,520	45,120	10.8
5/18/2023	-	6	22,500	45,800	11.65
5/18/2023	-	8	23,520	45,120	10.8
10/18/2023	0728	6	22,500	44,480	10.99
10/18/2023	0733	8	23,520	49,080	12.78
				Total Ash Weight (tons)	68.7

2023 ASH DISPOSAL WEIGHT
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

ORIGIN: TOWN OF MILLINOCKET

Date	Time of Delivery	Truck #	Empty Truck Weight (lb)	Loaded Truck Weight (lb)	Ash Weight (tons)
5/18/2023	0655	11	20,320	32,100	5.89
5/18/2023	0659	12	23,220	32,600	4.69
5/18/2023	0728	15	28,300	42,060	6.88
5/18/2023	-	11	20,320	32,100	5.89
5/18/2023	-	12	23,220	32,600	4.69
5/18/2023	-	15	28,300	42,060	6.88
10/18/2023	0727	11	20,320	32,380	6.03
10/18/2023	0730	12	23,220	34,580	5.68
10/18/2023	0816	15	21,800	43,120	10.66
10/18/2023	0829	11	20,320	27,080	3.38
				Total Ash Weight (tons)	60.7

2023 ASH DISPOSAL WEIGHT
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

ORIGIN: TOWN OF MEDWAY

Date	Time of Delivery	Truck #	Empty Truck Weight (lb)	Loaded Truck Weight (lb)	Ash Weight (tons)
10/16/2023	1319	7	28,640	48,880	10.12
10/16/2023	1322	6	18,860	33,129	7.13
10/16/2023	1445	9	20,360	33,860	6.75
10/17/2023	0821	7	28,640	52,920	12.14
10/17/2023	0918	7	28,640	53,260	12.31
10/17/2023	1010	7	28,640	51,380	11.37
10/17/2023	1018	6	18,860	34,400	7.77
10/17/2023	1028	9	20,360	36,660	8.15
10/17/2023	1104	7	28,640	51,820	11.59
10/17/2023	1112	6	18,860	33,960	7.55
10/17/2023	1128	9	20,360	35,780	7.71
10/17/2023	1157	7	28,640	48,400	9.88
10/17/2023	1207	6	18,860	36,220	8.68
10/17/2023	1215	9	20,360	36,460	8.05
10/17/2023	1347	7	28,640	52720	12.04
10/17/2023	1350	9	20,360	35,980	7.81
10/17/2023	1359	6	18,860	34,720	7.93
10/17/2023	1456	9	20,360	36,400	8.02
10/18/2023	0728	6	18,860	34,680	7.91
10/18/2023	0752	7	28,640	48,620	9.99
				Total Ash Weight (tons)	182.9

Millinocket

Truck hauling tally sheet for Dolby landfill YEAR 2023

Load Number	Truck Number	Empty weight	Load Weight	Material Weight	Tons of material	Yards	Date	Material	Driver Initials
1	11	20,320	32,100	11780	0	0.00	5-18-23	Ash	J.P.
2	12	23,220	32,600	9380	0	0.00	5-18-23	Ash	T.C.
3	15	28,300	42,060	13760	0	0.00	5-18-23	Ash	S.P.
4	11	20,320	32,100	11780	0	0.00	5-18-23	Ash	J.P
5	12	23,220	32,600	9380	0	0.00	5-18-23	Ash	T.C
6	15	28,300	42,060	13760	0	0.00	5-18-23	Ash	S.P.
7					0	0.00		Ash	
8					0	0.00		Ash	
9					0	0.00		Ash	
10					0	0.00		Ash	
11					0	0.00		Ash	
12					0	0.00		Ash	
13					0	0.00		Ash	
Total				0	0	0.00			

East Millinocket

Truck hauling tally sheet for Dolby landfill

May 18 YEAR 2023

Load Number	Truck Number	Empty weight	Load Weight	Material Weight	Tons of material	Yards	Date	Material	Driver
1	6	22,500	45,800	23,300 0	0	0.00	5-18-23	Ash	C. D.
2	8	23,520	45,120	21,600 0	0	0.00	5-18-23	Ash	J. P
3	6	22,500	45,800	23,300 0	0	0.00	5-18-23	Ash	C. D
4	8	23,520	45,120	21,600 0	0	0.00	5-18-23	Ash	J. P
5				0	0	0.00		Ash	
6				0	0	0.00		Ash	
7				0	0	0.00		Ash	
8				0	0	0.00		Ash	
9				0	0	0.00		Ash	
Total				0	0	0.00			

Emery Lee & Song Inc
936 Central St.
Millinocket Me 04462
207-746-5548

Ticket #20229

Town Of Millinocket

5/18/2023 7:[illegible] AM

Weight

Millinocket truck 15
GROSS 42,060 lb
TARE 28,300 lb RECALLED
NET 13,760 lb
6.88 Tons
Product Price <PRODPRICE>.00
Subtotal 0.00
Amount Due 0.00

X_____

Emery Lee & Song Inc
936 Central St.
Millinocket Me 04462
207-746-5548

Ticket #20224

Town Of Millinocket

5/18/2023 6:55 AM

Weight

Millinocket 11
GROSS 32,100 lb
TARE 20,320 lb RECALLED
NET 11,780 lb
5.89 Tons
Product Price <PRODPRICE>.00
Subtotal 0.00
Amount Due 0.00

X_____

Emery Lee & Song Inc
936 Central St.
Millinocket Me 04462
207-746-5548

Ticket #20226

Town Of Millinocket

5/18/2023 6:59 AM

Weight

millinocket tk12
GROSS 32,600 lb
TARE 23,220 lb RECALLED
NET 9,380 lb
4.69 Tons
Product Price <PRODPRICE>.00
Subtotal 0.00
Amount Due 0.00

X_____

Emery Lee & Song Inc
936 Central St.
Millinocket Me 04462
207-746-5548

Ticket #20222

Town Of East Millinocket

5/18/2023 6:52 AM

Weight

east mill truck 6
GROSS 45,800 lb
TARE 22,500 lb KEYED
NET 23,300 lb
11.65 Tons
Product Price <PRODPRICE>.00
Subtotal 0.00
Amount Due 0.00

X_____

Emery Lee & Song Inc
936 Central St.
Millinocket Me 04462
207-746-5548

Ticket #20223

Town Of East Millinocket

5/18/2023 6:54 AM

Weight

East Mill Truck 8
GROSS 45,120 lb
TARE 23,520 lb RECALLED
NET 21,600 lb
10.80 Tons
Product Price <PRODPRICE>.00
Subtotal 0.00
Amount Due 0.00

X_____

Emery Lee & Sons Inc
936 Central St.
Millinocket, Me 04462
207-746-5548

Ticket #22282

10/18/2023 8:29 AM

Weight

Millinocket Truck 11
GROSS 27,080 lb
TARE 20,320 lb RECALLED
NET 6,760 lb
3.38 Tons
Product Price
Subtotal 0.00
Amount Due 0.00

X

Emery Lee & Sons Inc
936 Central St.
Millinocket, Me 04462
207-746-5548

Ticket #22280
Town Of Millinocket

10/18/2023 8:16 AM

Weight

Millinocket Truck 15
GROSS 43,120 lb
TARE 21,800 lb RECALLED
NET 21,320 lb
10.66 Tons
Product Price <PRODPRICE>.00
Subtotal 0.00
Amount Due 0.00

X

Trk 7
Medway

GROSS 52920 lb
08:21AM 10/17/2023

Empty - 28,640

THE SCOTTS COMPANY
Subsidiaries No. 105383
264 Nicatou Ind. Lane
Medway, ME 04460

DATE: _____

VENDOR: Medway

TRUCKER: #6

MATERIAL: _____

GROSS

TARE GROSS 18860 lb
01:22PM 10/16/2023

NET

TONS

REMARKS: GROSS 33120 lb

RECEIVER SIGNATURE: _____

THE SCOTTS COMPANY
Subsidiaries No. 105385
264 Nicatou Ind. Lane
Medway, ME 04460

DATE: _____

VENDOR: _____

TRUCKER: #9

MATERIAL: _____

Gross 33860

THE SCOTTS COMPANY
Subsidiaries No. 105382
264 Nicatou Ind. Lane
Medway, ME 04460

DATE: 10/16/2023

VENDOR: Medway

TRUCKER: #7

MATERIAL: _____

GROSS GROSS 38640 lb

Emery Lee & Sons Inc
936 Central St.
Millinocket, Me 04462
207-746-5548

Ticket #22275
Town Of Millinocket

10/18/2023 7:27 AM

Weight

Millinocket Truck 11
GROSS 32,380 lb
TARE 20,320 lb RECALLED
NET 12,060 lb
6.03 Tons
Product Price <PRODPRICE>.00
Subtotal 0.00
Amount Due 0.00

X_____

Emery Lee & Sons Inc
936 Central St.
Millinocket, Me 04462
207-746-5548

Ticket #22277
Town Of Millinocket

10/18/2023 7:30 AM

Weight

Millinocket Truck 12
GROSS 34,580 lb
TARE 23,220 lb RECALLED
NET 11,360 lb
5.68 Tons
Product Price <PRODPRICE>.00
Subtotal 0.00
Amount Due 0.00

X_____

Emery Lee & Sons Inc
936 Central St.
Millinocket, Me 04462
207-746-5548

Ticket #22282

10/18/2023 8:29 AM

Weight

Millinocket Truck 11
GROSS 27,080 lb
TARE 20,320 lb RECALLED
NET 6,760 lb
3.38 Tons
Product Price
Subtotal 0.00
Amount Due 0.00

X

Emery Lee & Sons Inc
936 Central St.
Millinocket, Me 04462
207-746-5548

Ticket #22280
Town Of Millinocket

10/18/2023 8:16 AM

Weight

Millinocket Truck 15
GROSS 43,120 lb
TARE 21,800 lb RECALLED
NET 21,320 lb
10.66 Tons
Product Price <PRODPRICE>.00
Subtotal 0.00
Amount Due 0.00

X

Trk 7

Medway

GROSS 52920 lb

08:21AM 10/17/2023

Empty - 28,640

THE SCOTTS COMPANY
Subsidiaries No. 105383
264 Nicatou Ind. Lane
Medway, ME 04460

DATE: _____

VENDOR: Medway

TRUCKER: #6

MATERIAL: _____

GROSS

TARE GROSS 18860 lb

01:22PM 10/16/2023

NET

TONS

REMARKS: GROSS 33120 lb

RECEIVER SIGNATURE: _____

THE SCOTTS COMPANY
Subsidiaries No. 105382
264 Nicatou Ind. Lane
Medway, ME 04460

DATE: 10/16/2023

VENDOR: Medway

TRUCKER: #7

MATERIAL: _____

GROSS GROSS 28640 lb

01:19PM 10/16/2023

TARE

NET GROSS 48880 lb

01:56PM 10/16/2023

TONS

~~GROSS 48880 lb~~
~~01:56PM 10/16/2023~~

REMARKS: _____

THE SCOTTS COMPANY
Subsidiaries No. 105385
264 Nicatou Ind. Lane
Medway, ME 04460

DATE: _____

VENDOR: _____

TRUCKER: #9

MATERIAL: _____

Gross 33860

GROSS GROSS 30360 lb

02:06PM 10/16/2023

TARE

20,360 lb.

NET

TONS

REMARKS: _____

Trk 7
Medway

Medway Trls #6

GROSS 53260 lb

09:16AM 10/17/2023

Empty 18,860
GROSS 34400 lb

10:16AM 10/17/2023

Empty - 28,640

Trk 7
Medway

Trk 9
Medway

Empty 28640
GROSS 51380 lb

GROSS 36660 lb

Trk 7
Medway

empty 28640
68088 51820 lb
11:04AM 10/17/2023

Trk 9
Medway

68088 35780 lb
11:25AM 10/17/2023

Empty - 20,360

Medway Trk. #6

empty 15,860

Trk 7
Medway

Medway Trk #6

empty 18560

GROSS 34650 lb

07:29AM 10/18/2023

Trk 7

Medway

empty 28640

GROSS 48620 lb

07:32AM 10/15/2023

Trk 9

medway

GROSS 36400 lb

02:56PM 10/17/2023

Empty - 20,360

Medway Trk #6

Empty 18.860

GROSS 34720 lb

01:59PM 10/17/2023

Emery Lee & Sons Inc
936 Central St.
Millinocket, Me 04462
207-746-5548

Ticket #22278
Town Of East Millinocket

10/18/2023 7:33 AM

Weight

East Mill Truck 8
GROSS 49,080 lb
TARE 23,520 lb RECALLED
NET 25,560 lb
12.78 Tons
Product Price <PRODPRICE>.00
Subtotal 0.00
Amount Due 0.00

X_____

Emery Lee & Sons Inc
936 Central St.
Millinocket, Me 04462
207-746-5548

Ticket #22276
Town Of East Millinocket

10/18/2023 7:28 AM

Weight

East Mill Truck 6
GROSS 44,480 lb
TARE 22,500 lb KEYED
NET 21,980 lb
10.99 Tons
Product Price <PRODPRICE>.00
Subtotal 0.00
Amount Due 0.00

X_____

Trk 9
medway

Medway Trk #6

BNSF 30460 lb
12:15PM 10/17/2023

Empty - 20,360

Empty 18860
BNSF 36220 lb
12:07PM 10/17/2023

Trk 9
Medway

GROSS 35960 lb
01:53PM 10/17/2023

Empty - 20,360

Trk 7
Medway

GROSS 52720 lb
01:47PM 10/17/2023

APPENDIX I

ENVIRONMENTAL MONITORING PLAN

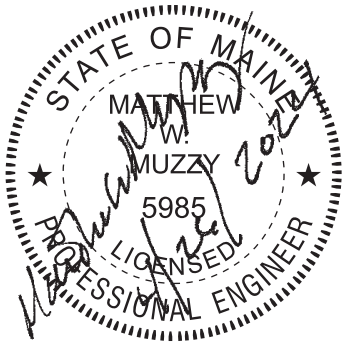
SME
SEVEE & MAHER
ENGINEERS

ENVIRONMENTAL MONITORING PLAN
DOLBY LANDFILL
EAST MILLINOCKET, MAINE

Prepared for

DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL SERVICES – BUREAU OF GENERAL SERVICES

Augusta, Maine



April 2012

Revised April 2024

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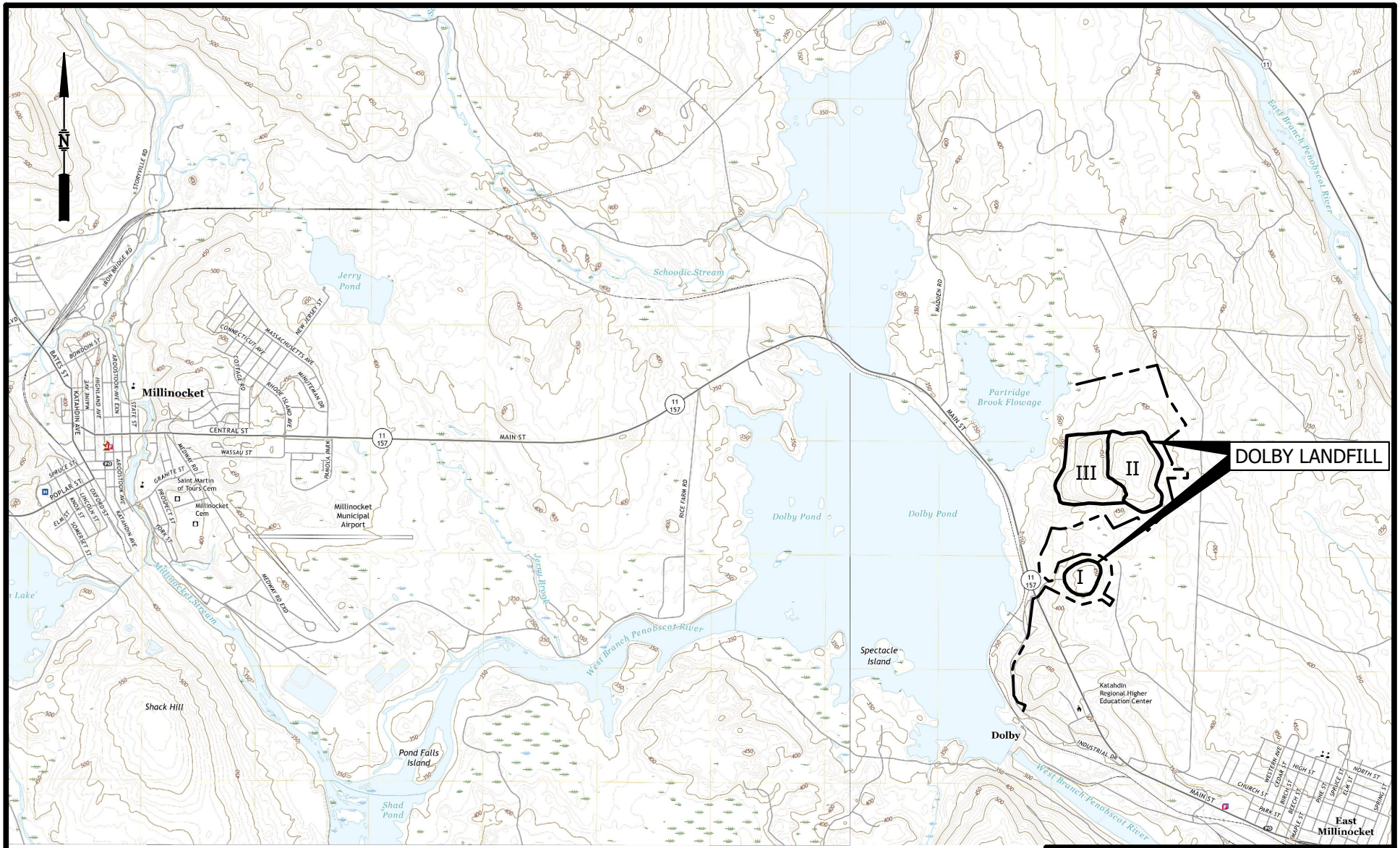
ENVIRONMENTAL MONITORING PLAN
DOLBY LANDFILL
EAST MILLINOCKET, MAINE

1.0 INTRODUCTION

The State on Maine Department of Administrative and Financial Services – Bureau of General Services (DAFS-BGS) owns and operates the Dolby Solid Waste Landfill Facility in East Millinocket, Maine (see Figure 1-1). The operating license issued by the Maine Department of Environmental Protection (MEDEP) requires monitoring of the groundwater, surface water, and leachate in the vicinity of the landfill. This Environmental Monitoring Plan (EMP) summarizes the sampling procedures and analytical techniques that are used for the groundwater, surface water, and gas detection monitoring programs at the Dolby Landfill.



BASE MAP ADAPTED FROM 7.5 MIN
USGS TOPOGRAPHIC QUADRANGLES
MILLINOCKET, ME - 2021
EAST MILLINOCKET, ME - 2021

FIGURE 1-1
SITE LOCATION MAP
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

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DWG: SITE LMN: SITELOC CTB: SME-STD REV: 3/28/2023

\\NSERVER\cfs\Kpc\Dol\ACAD\SITE.dwg, EMP FIG 1-1 (LANDSCAPE), 3/28/2023 12:31:36 PM, jrl

2.0 OBJECTIVES OF THE ENVIRONMENTAL MONITORING PROGRAM

The purpose of this EMP is to detect any potential impacts of the site groundwater, surface water, and ambient air attributable to the landfill. Previous owners of the landfill have conducted water quality monitoring programs since 1982 and have compiled a comprehensive database on the groundwater and surface water quality at the site. In July 2000, the groundwater sampling program was revised to include low-flow sampling techniques. The State of Maine became owner of the landfill in 2011.

3.0 SELECTION OF MONITORING PARAMETERS

This section describes the analytical parameters and parameter groupings used to monitor water quality at the landfill site. The analysis of water quality at the selected sampling locations is the primary method to evaluate the landfill's performance and its influence on the surrounding groundwater and surface waters. Three separate programs have been established to evaluate site water quality. These programs include: (1) site characterization; (2) detection; and (3) assessment monitoring programs. The site characterization program is intended to quantify existing water quality at the various sampling locations and follows the requirements set forth in Maine Solid Waste Management Rules (SWMR) Chapter 405.2.C(1). The detection monitoring program includes a list of parameters that will be sampled three times per year and used to evaluate changes in site water quality. The detection monitoring program is discussed in further detail in the next section. The assessment monitoring program will be used to further evaluate water quality at a particular monitoring location when evaluation of the detection monitoring results suggests significant changes in site water quality as described by the requirements set forth in SWMR Chapter 405.2.C(2)(i).

3.1 Detection Monitoring Program

A detection monitoring program has been implemented to detect trends and reflect changes in water quality in relation to the established site characterization and/or existing water quality. This plan must be carried throughout the active life of the facility and through the closure and post-closure periods. Samples will be obtained and analyzed three times per year from the monitoring points described in Section 4.0 of this report. Water quality parameters, analytical method references, and method reporting limits for the site are presented on Table 3-1.

If results of the detection monitoring program indicate possible deterioration in water quality at one or more groundwater monitoring wells or surface water monitoring sites, an evaluation of the cause(s) must be initiated within 30 days of receipt of the laboratory results. A report of the evaluation will be prepared by a qualified professional and submitted to the MEDEP for approval within ninety days of the evaluation. The evaluation will include the following:

A statistical analysis of the data from the monitoring report:

1. Evaluation of the source(s) that may have caused the groundwater deterioration; and
2. Evaluation of possible errors with the groundwater monitoring program (i.e., sampling or analysis error).

3.2 Assessment Monitoring

Assessment monitoring will be initiated within 90 days of the date the report required by SWMR Chapter 405.2.C(2)(i) is submitted. The assessment monitoring plan will be submitted to the MEDEP for approval prior to plan initiation and include the following elements:

1. Proposed changes to the water quality monitoring plan will be submitted to the MEDEP at least 15 days prior to the first sampling event;
2. The plan will include three sampling events per year on groundwater wells that had a statistically significant change in concentration of a parameter; and
3. Samples taken during the first two rounds will be analyzed for SWMR Chapter 405, Appendix A, Column 3 parameters. Requests for elimination of parameters based on the results of the first two rounds will be submitted to the MEDEP for approval.

3.3 Corrective Action Plan

Upon verification through statistical analysis and assessment monitoring that significant deterioration has occurred to one or more groundwater monitoring wells, a corrective action plan will be submitted to the MEDEP for approval within 90 days of that verification. The plan will include an evaluation of corrective action(s) and a proposal to initiate the corrective action(s). These actions will be performed to minimize the impact of the contaminants on the groundwater. The evaluation plan will be updated and resubmitted annually until successful corrective action has been demonstrated. The action plan will include the five elements outlined in SWMR Chapter 405.2.D.

TABLE 3-1

ANALYTICAL PROGRAM

Detection Monitoring Program Test Parameters:

Water Quality Parameters	Method	Reporting Limit (mg/l)	Groundwater	Surface Water	Leachate
Field Parameters					
Dissolved Oxygen (D.O.)	Field Parameter		X	X	
Field Observations	Field Parameter		X	X	X
Monitoring Well Pump Rate	Field Parameter		X		
pH	Field Parameter		X	X	X
Turbidity	Field Parameter		X	X	
Specific Conductance	Field Parameter		X	X	X
Static Water Elevations	Field Parameter		X		
Surface Water Flow Rates	Field Parameter			X [1]	
Temperature	Filed Parameter		X	X	X
Indicator Parameter					
Alkalinity	SM 2320B	1.0	X	X	X
Bicarbonate	SM 2320B	1.0	X	X	X
Chloride	EPA 9056	2.0	X	X	X
Nitrogen, Ammonia	EPA 350.1	0.2	X	X	X
Nitrogen, Nitrate	EPA 9056/300.0	2.0	X	X	X
Phosphorous, Total	EPA 6010	0.1		X	X
Sulfate	EPA 9056/300.0	1.0	X	X	X
Total Dissolved Solids (TDS)	SM 2540C	1.0	X	X	X
Total Organic Carbon (TOC)	EPA 9060	1.0	X	X	X
Total Suspended Solids (TSS)	EPA 160.2	1.0	X	X	X
Inorganic Parameters					
Arsenic (Total)	EPA 200.7/6010	0.008	X	X	X
Calcium (Total)	EPA 6010B	1.0	X	X	X
Hardness (Mg & Ca)	Calculation	NA	X	X	X
Iron (Total)	EPA 6010B	0.01	X	X	X
Magnesium (Total)	EPA 6010B	1.0	X	X	X
Manganese (Total)	EPA 6010B	0.01	X	X	X
Potassium (Total)	EPA 6010B	1.0	X	X	X
Sodium	EPA 6010B	1.0	X	X	X

TABLE 3-1

ANALYTICAL PROGRAM (cont'd)

Assessment Monitoring Program Test Parameters:

Water Quality Parameters	Method	Reporting Limit (mg/l)	Groundwater	Surface Water	Leachate
Inorganic Parameters					
Aluminum (Total)	EPA 6010B	0.020			X (2)
Antimony (Total)	EPA 6010B	0.003			X (2)
Barium (Total)	EPA 6010B	0.010			X (2)
Beryllium (Total)	EPA 6010B	0.002			X (2)
Cadmium (Total)	EPA 6010B	0.0004			X (2)
Chromium (Total)	EPA 6010B	0.005			X (2)
Cobalt (Total)	EPA 6010B	0.050			X (2)
Copper (Total)	EPA 6010B	0.003		X (1)	X (2)
Lead (Total)	EPA 6010B	0.003			X (2)
Nickel (Total)	EPA 6010B	0.003			X (2)
Selenium (Total)	EPA 6010B	0.005			X (2)
Silver (Total)	EPA 6010B	0.007			X (2)
Thallium (Total)	EPA 6010B	0.0028			X (2)
Zinc (Total)	EPA 6010B	0.010			X (2)
Organic Parameters					
Volatile Petroleum Hydrocarbons (VPH)	MADEP VPH Method	(4)	X(3)		X (2)
Extractable Petroleum Hydrocarbons (EPH)	MADEP EPH Method	(5)	X(3)		X (2)

Notes:

1 Only measured at PBFR (Partridge Brook Flowage).

2 The leachate pond (LP) is sampled for the detection monitoring parameters every monitoring event and sampled for assessment parameters once a year (as per Chapter 405 leachate sampling requirements).

3 Monitoring wells MW-301, MW-302B, and MW-302C sampled for VPH and EPH once a year (fall).

4 The individual compounds reported for the VPH analysis have reportable detection limits (RDLs) from 0.2 to 5.0 µg/L.

5 The individual compounds reported for the EPH analysis have reportable detection limits (RDLs) from 0.2 to 1.0 µg/L.

4.0 SAMPLE LOCATIONS AND FREQUENCY

Samples will be collected from 21 locations, as summarized on Table 4-1. The sampling locations are shown on Figure 4-1. The samples will be collected twice per year, once in late spring/early summer and once in the fall.

TABLE 4-1

SAMPLING LOCATIONS

GROUNDWATER MONITORING WELLS

DOLBY III

MW-107A	MW-304A	MW-402A
MW-301	MW-304B	MW-402B
MW-302B	MW-401A	
MW-302C	MW-401B	

DOLBY II

MW-104B	MW-205B	MW-303B
MW-202AR	MW-206A	
MW-202B	MW-206B	
MW-205A	MW-303A	

DOLBY I

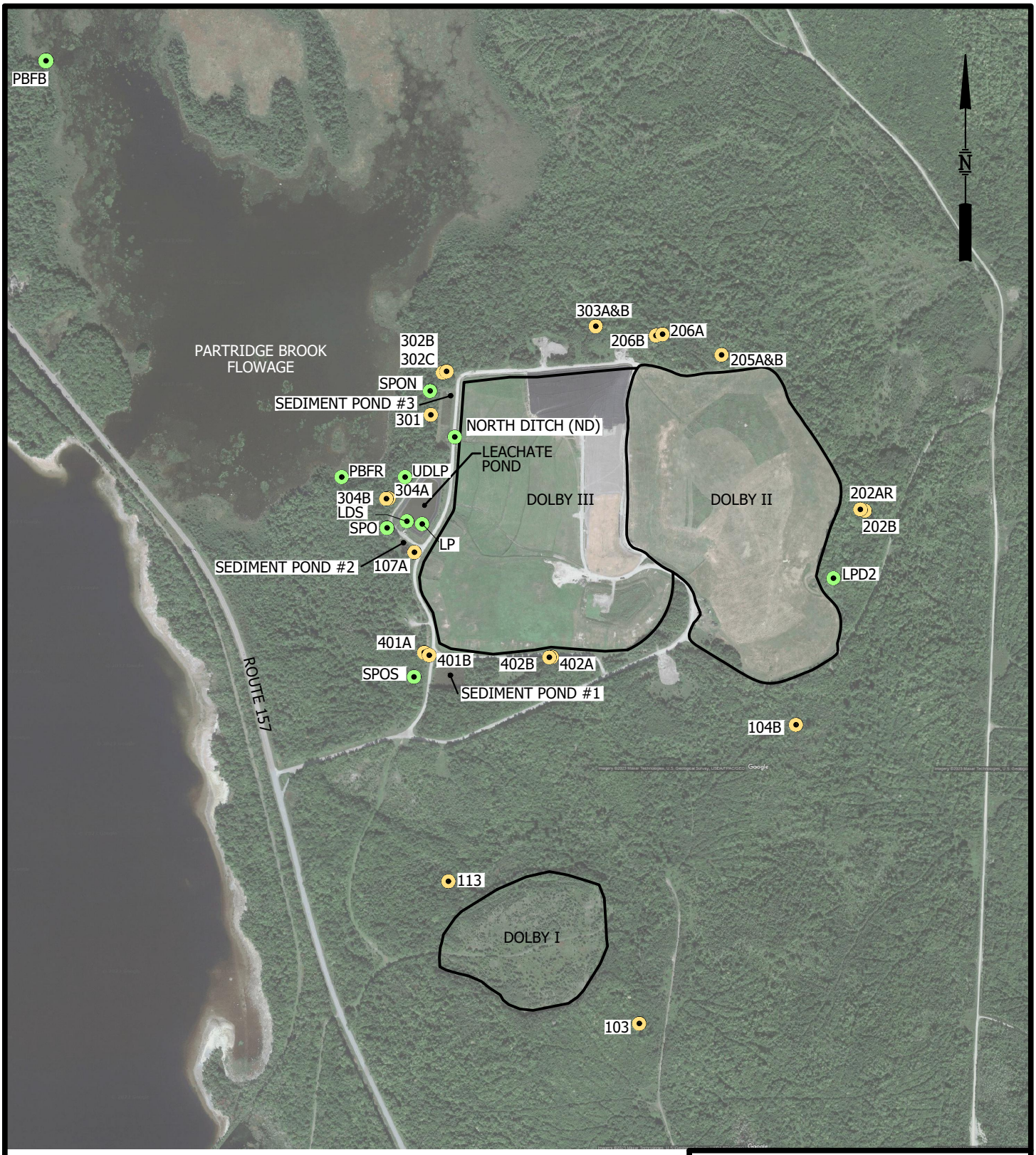
MW-103	MW-113

SURFACE WATER SAMPLING LOCATIONS

PBFB	Partridge Brook Flowage – Background
PBFR	Partridge Brook Flowage – Revised location beginning 2012
ND	North Ditch
SPO	Siltation Pond Outlet
SPON	Siltation Pond North
SPOS	Siltation Pond South

LEACHATE SAMPLING LOCATIONS

LP	Leachate Pond South of Dolby III
LPD2	Leachate Pond East of Dolby II
LDS	Leachate Pond Leak Detection Sump
UDLP	Leachate Pond Underdrain Manhole



AERIAL PHOTO DATED SEPTEMBER 16, 2022

LEGEND

- GROUNDWATER WELLS
- SURFACE WATER SITES

500 0 1000 FEET

DWG: AERIAL-2008 LMN: WAT SAMPL SITES WO CTB: SME-STD.CTB REV: 4/4/2024

FIGURE 4-1
WATER QUALITY
MONITORING LOCATIONS
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

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\\Nserver\cfs\Kpc\Dol\ACAD\WaterSampleSites\Aerial-2008.dwg, EMP FIGURE 4-1 W_O, 4/4/2024 4:49:07 PM, bwb

4.1 Monitoring Wells

Dolby I reached the end of its post-30-year closure monitoring requirement during 2010. Historical monitoring wells MW-103 and MW-113 were removed from the monitoring program in 2011. In an agreement with the MEDEP, the DFAS-BGS will continue to monitor field parameters at MW-103 and MW-113. Monitoring wells will be sampled at 19 locations around the Dolby II and Dolby III Landfills and include nine wells for Dolby II (MW-104B, MW-202AR, MW-202B, MW-205A, MW-205B, MW-206A, MW-206B, MW-303A, and MW-303B), and ten wells for Dolby III (MW-107A, MW-301, MW-302B, MW-302C, MW-304A, MW-304B, MW-401A, MW-401B, MW-402A, and MW-402B). Monitoring well MW-104B is upgradient of the landfill and is used as a background monitoring location.

Monitoring wells will be sampled using the low-flow sampling technique as required in SWMR Chapter 405.2.A(2)(b).

4.2 Surface Water

Surface water samples will be collected in six locations; one stormwater ditch along the northwest side of Cell 9 (ND), three stormwater siltation basins (SPO, SPON, and SPOS), and two locations on Partridge Brook Flowage (PBFR and PBFB). PBFR will be collected east of the landfill, downgradient of level spreader at a location west of likely drainage; and PBFB will be collected as a sample unaffected by discharge north of PBFR. Prior to 2012, Partridge Brook Flowage was sampled at a location west of the leachate pond underdrain outlet. Sampling of that location was discontinued at the end of 2011, since the leachate pond underdrain no longer discharges to Partridge Brook Flowage. Water from the leachate pond underdrain is collected and treated with the leachate.

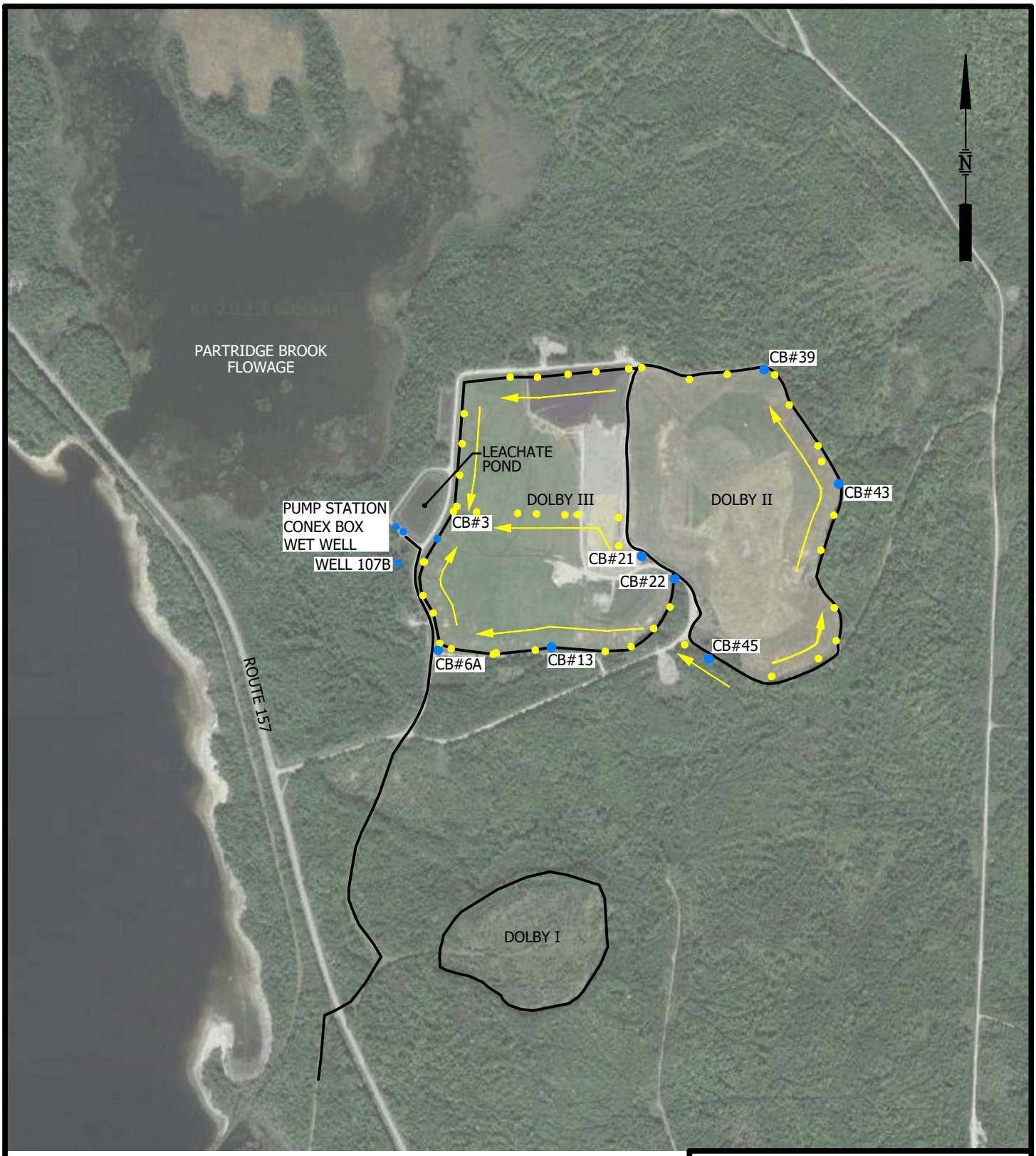
4.3 Leachate

The leachate pond (LP) will be sampled for the detection monitoring program test parameters every monitoring event and sampled for assessment monitoring parameters once a year. Parameters consistently undetected in the leachate sample will be deleted from the leachate monitoring program upon approval by the MEDEP.

Since spring 2005, the small leachate collection pond (LPD2), East of Dolby II, is sampled for detection monitoring parameters. Since spring 2008, the leachate pond leak detection system (LDS) for the leachate pond is sampled for detection monitoring parameters.

4.4 Gas Monitoring

The purpose of gas testing at Dolby Landfill is to ensure that operators, transient employees, and contractors are not being exposed to harmful levels of Hydrogen Sulfide (H_2S) or explosive gases. Gas monitoring at Dolby Landfill is conducted to protect workers. The gas monitoring locations are tested during each water quality sampling event. The locations consist of several manholes spaced along the perimeter of the landfill (i.e., CB#3, CB#6A, CB#13, CB#21, CB#22, CB#39, CB#43, and CB#45), one former groundwater monitoring well (107B), the Conex Box, the leachate pond pump station, and the associated wet well. Each location will be tested for H_2S and explosive gases as methane equivalent. The MEDEP is to be notified within 24 hours of any gas readings greater than 25 percent LEL. The gas monitoring sampling locations are shown on Figure 4-2.



AERIAL IMAGE FROM GOOGLE EARTH,
DATED SEPTEMBER 16, 2022

LEGEND

- SAMPLE LOCATIONS
- EXISTING MANHOLE/CATCH BASIN
- FLOW DIRECTION OF LEACHATE COLLECTION SYSTEM

500 0 1000 FEET

DWG: AERIAL-2008 LMN: CB GAS MONITOR CTB: SME-STD.CTB REV: 4/8/2024

FIGURE 4-2
LANDFILL GAS MONITORING LOCATIONS
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE

SME
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\\Nserver\cfs\Kpc\Dol\ACAD\WaterSampleSites\Aerial-2008.dwg, EMP FIGURE 4-2, 4/8/2024 8:05:40 AM, bwb

5.0 WATER QUALITY SAMPLING EQUIPMENT STAGING PROCEDURE

This section lists the equipment used for sampling groundwater, surface water, and leachate.

1. Sample Containers. New sample containers are received from the contracted laboratory prior to each sampling event.
2. Tubing. Due to biological contamination and iron staining over time, tubing at each well must be inspected and replaced if necessary every two years.
3. pH Meters. The portable pH meters (Hach One and Hach EC10) are checked using pH buffers and a certified known. This information is recorded in the Groundwater Staging Notebook. The pH buffer supply and expiration dates are inventoried at this time.
4. Conductivity Meters. The portable conductivity meter (Hach Sension5) is checked using purchased conductivity standard in the range of groundwater conductivities. The results are entered in the Groundwater Staging Notebook. The conductivity standards and expiration dates are inventoried at this time.
5. Water Level Meters. The batteries of the water level meter (Solinst Model 101) are checked by pressing the meter's battery test button and listening for the buzzer to sound. During sampling, the water level readings are compared to past.
6. Levels to ensure the accuracy of the meter. If this reading is questionable, the meter will be checked for accuracy in a container of water.
7. D.O. Meters. The batteries and probe membrane of the DO meters (YSI 58) are checked prior to each sampling event.
8. Turbidimeter. Prior to the first sampling event of each year, the meter's calibration is checked using primary turbidity standards. Adjustments are made if necessary. Additionally, a certified known sample is analyzed to check the accuracy of the calibration curve. Secondary turbidity standards are used in checking for calibration drift prior to subsequent groundwater sampling events during that year.
9. Gas Meter. RKI GX2003 portable gas detector (or equivalent) designed specifically to monitor landfill gas.
10. Certified Known. A yearly inventory of certified known samples used for quality assurance purposes is performed prior to the first sampling event.
11. Documentation. Records of these procedures are kept in the Groundwater Staging Notebook.
12. Sample Collection. Samples will be collected in the following order:
    a. VPH,

b. TOC and Ammonia Nitrogen Bottle,

c. EPH,

d. Metals and Total Phosphorous,

e. Chloride, Nitrate, Sulfate, and Alkalinity, and

f. TSS and TDS.

6.0 SAMPLING PROCEDURES

The following sections describe the protocols involved in the sampling of groundwater monitoring wells and surface water sample locations, including leachate.

6.1 Groundwater Sampling Procedure

The following low-flow sampling procedure is used for the monitoring wells at the Dolby Landfill.

1. Using the water level meter, obtain a static water level.
2. Begin pumping each well at a flow rate of approximately 100 ml/min. Measure the water level at one-minute intervals over the next three minutes. Perform adjustments to the pump rate to obtain water level stabilization.
3. After the first 3 minutes and at subsequent 3-minute intervals, a set of field parameters including water level is performed. The well will be purged until one of the four conditions listed below are met. After the well is stabilized, a complete set of field measurements will be obtained (pH, D.O., specific conductance, temperature, and turbidity) followed by filling the sample bottles. These measurements will be recorded on the Low-Flow Sample Purge Form (refer to Appendix A). All samples will be obtained through the peristaltic pump with no sample filtration.

   A. Condition 1

   Both field parameters and water levels stabilize within 30 minutes. The stabilization criteria are listed below.

   Complete stabilization is defined as three successive field parameter and water level measurements at 3-minute intervals, which must meet the following criteria.

pH	+/- .1 standard pH unit with respect to previous pH measurement
Specific conductance	+/- 5 percent of previous measurement
Turbidity	+/- 10 percent of previous measurement when turbidity is above 10 nephelometer turbidity units (NTU) +/- 1 NTU with respect to previous measurement when turbidity is below 10 NTU
Dissolved Oxygen	+/- 1 mg/L when D.O. is greater than 1 mg/L +/- .1 mg/L when D.O. is less than 1 mg/L
Maximum Drawdown	0.0 feet over a six-minute period

B. Condition 2

A drawdown of 3 feet from the static water level has occurred.

C. Condition 3

A time period of 30 minutes has elapsed without water level stabilization; however, the field parameters have stabilized as listed in Condition 1.

D. Condition 4

Well recharge is not sufficient to perform field parameter stabilization. In this instance, the amount of water contained in the sample tubing will be removed followed by the collection of water quality samples followed by one complete set of field readings.

6.2 Surface Water and Leachate Sampling Procedure

Surface water and leachate samples must be analyzed using unfiltered samples and collected in the following manner:

1. Collect the sample by immersing the sample bottle not more than 1 foot below the water surface. The sample will be collected upstream of the sampler with the opening of the sampling device oriented upstream but avoiding floating debris. Extreme care should be taken to avoid including bottom sediment in shallow water sampling sites. Surface water sample locations will always be taken from less than 10 feet deep to minimize the potential for stratification. The Dolby III leachate pond sample will be collected from the leachate pond. Extreme care should be taken to avoid including sediment in the samples that have been deposited onto the leachate pond liner. The leak detection sample will be collected using a peristaltic pump and tubing. A separate bottle is used to perform field parameter analyses for surface water samples.
2. Directly fill the appropriate sample containers from the sampling device.
3. Measure the following parameters, if possible, in the water body, not the sample:
   a. Temperature;
   b. pH;
   c. Specific conductance;
   d. Turbidity; and
   e. Dissolved oxygen.

   If direct measurement is not possible, these parameters will be measured from a container separate from the sample collection container used for performing the laboratory analysis. This

information will be recorded on the Surface Water Sampling Sheet, sample labels will be completed, and chain-of-custody procedures will be initiated.

4. Estimate surface water flow rate. The surface water flow rate will be measured when possible. The flow rate will be estimated by using an H-flume, calculating flow in a discharge pipe, or by timing a floating chip. The flow rate will be recorded on the Surface Water Sampling Sheet. If the water flow cannot be measured at a location, the lack of flow will be noted on the Surface Water Sampling Sheet.

7.0 FIELD TEST PROCEDURES

Due to the instability of certain analytical parameters with respect to time, some testing will be performed in the field to achieve representative results. Below are the field tests and their corresponding procedures.

7.1 Conductivity

1. Discussion. Conductivity measurements are useful indicators in detecting inorganic contamination. It is a numerical expression of the ability of an aqueous solution to carry an electrical current and is expressed as μmhos/cm.
2. Sampling and Preservation. Conductivity measurements are made continuously prior to sample collection to determine well water stabilization.
3. Methodology. Specific conductance, μmhos at 25°C – Method 120.1.
4. Reference Literature. U.S.EPA "Methods for Chemical Analysis of Water and Wastes" (EPA-600/4-79-20), revised March 1983.
5. Apparatus.
    a. Conductivity Meter (Hach Sension5)
6. Reagents.
    a. Primary Calibration Standards (purchased)
    b. Water (distilled)
7. Procedure.
    a. Place the conductivity probe into the flow through sampling cell.
    b. To measure conductivity, press the on/off button and allow time for the Automatic Temperature Compensator to correct for solution temperature changes. Start recording the conductivity readings, on the Low-Flow Sample Purge Form, every three minutes until one of the four sampling conditions are met. The conductivity readings for surface water and leachate samples will be taken once a stable reading is obtained.
8. Notes.
    a. Replace all batteries when the "bat" error message is displayed.
    b. To improve performance, clean the stainless-steel electrodes by rinsing them in alcohol for 10 to 15 minutes.
    c. Remove batteries if long-term storage is anticipated (2 to 3 months).

7.2 pH

1. Discussion. pH is a measure of the activity of hydrogen ions by potentiometric measurements using a hydrogen and reference electrode. A pH shift in the groundwater is an important indicator of groundwater contamination.
2. Sampling and Preservation. pH measurements are made continuously prior to sample collection to determine well water stabilization. If a problem should arise with the field pH meter, a backup meter will be used.
3. Methodology. Electrometric – Method 150.1.
4. Reference Literature. U.S.EPA "Methods for Chemical Analysis of Water and Wastes" (EPA-600/4-79-020), revised March 1983.
5. Apparatus.
    a. pH meter with combination electrode – portable (Hach One pH Meter).
    b. pH meter with combination electrode – portable (Hach Model EC10).
6. Reagents.
    a. Buffers (various – purchased).
    b. Water (distilled).
7. Procedure.
    a. Press the "POWER" button to turn meter on (display will light).
    b. To perform pH measurements, insert the electrode into the groundwater sampling flow through cell and press the "pH" key. Start recording the pH readings, on the Low-Flow Purge Form; every three minutes until one of the four sampling conditions are met. The pH readings for surface water and leachate samples will be taken once a stable reading is obtained.
8. Notes.
    a. Rinse electrode with distilled water between measurements to avoid sample contamination.
    b. Refer to operator's manual for error code information.
    c. Remove batteries for long-term storage (three or more months).

7.3 Temperature

1. Sampling and Preservation. Temperature measurements must be performed immediately.
2. Methodology. Thermometric – Method 170.1.

3. Reference Literature. U.S.EPA "Methods for Chemical Analysis of Water and Wastes" (EPA-600/4-79-020), revised March 1983.

4. Apparatus.

   a. Temperature readings are conducted using the temperature readings from the pH meter.

   b. Thermometers (NBS traceable).

5. Procedure.

   a. Temperature measurements are made utilizing the temperature readings on the pH meter.

   b. Start recording the temperature readings, on the Low-Flow Purge Form; every three minutes until one of the four sampling conditions are met. The temperature readings for surface water and leachate samples will be taken once a stable reading is obtained.

6. Notes.

   a. NBS traceable thermometers are used to ensure the accuracy of the digital thermometer. The results of these checks are kept in a laboratory bound notebook.

7.4 Water Level

1. Discussion. Water level measurements are critical to low-flow sampling to ensure water column draw down does not occur, thus allowing the field technician the ability to collect only the groundwater flowing past the screened interval of the well.

2. Sampling and Preservation. Water level readings must be taken immediately.

3. Apparatus (Water level Meter).

   a. Soil Test Water Level Indicator (DR-760A) is used for piezometric readings.

   b. Solinst Water Level Indicator (Model 101) is used for groundwater well readings

4. Groundwater and Piezometric Measurement Procedure.

   a. Energize the water level meter.

   b. Slowly lower the probe portion of the meter down the well until contact is made with the water. Contact will be either an audible alarm or visual signal.

   c. Record the depth to the water from the top of the PVC well casing to within 0.01 feet on the Low-Flow Sample Purge Form.

   d. Record the water level depth every minute, for the first three minutes, on the Low-Flow Sample Purge Form. Then record the water level every three minutes along with the other field meter readings.

e. Remove meter cable and probe and rinse with deionized water.

5. Notes.

   a. The static water level must be taken before there is any disturbance to the water in the well.

7.5 Dissolved Oxygen

1. Discussion. Dissolve Oxygen (D.O.) measurements are important in a groundwater monitoring program in indicating when well water stabilization has occurred.
2. Sampling and Preservation. Samples must be analyzed continuously throughout the low-flow sampling event.
3. Methodology. Oxygen, Dissolved – Method 360.1 (Membrane Electrode)
4. Reference Literature. U.S.EPA "Methods for Chemical Analysis of Water and Wastes" (EPA-600/4-79-20), revised March 1983.
5. Apparatus.
   a. D.O. Meters (YSI Model 58)
   b. Accessories and replacement parts
6. Reagents.
   a. KCl electrolyte solution (or equivalent)
   b. Distilled water
7. Procedure.
   a. Prior to performing D.O. measurements, check to ensure no air bubbles are present at the membrane interface. If a bubble is present, the membrane must be reconditioned as prescribed in the instrument's instruction manual.
   b. Set the function switch to % mode. Place the end of the probe in a plastic bottle containing a wetted sponge. This will expose the membrane to a constant temperature and 100 percent relative humidity.
   c. Set the function switch to "zero" and readjust the display to read 0.00 if necessary. Switch back to % air saturation mode.
   d. When the display reading has stabilized, unlock the "O_2 Calib" control locking ring, adjust the display to read 98.6, and relock the ring.
   e. Insert the probe's membrane in the groundwater flow through cell (water must be flowing through the cell) and the function switch should be set to the 0.1 mg/L range.

f. Start recording the D.O. readings, on the Low-Flow Purge Form, every three minutes until one of the four sampling conditions are met. The D.O. readings for surface water samples will be taken once a stable reading is obtained.

8. Notes.

   a. Meter must be energized at least one-half hour prior to performing D.O. measurements to ensure probe stabilization.

   b. Batteries should be removed from meter during long periods of storage (more than three months).

   c. Refer to operator's manual for measurement errors.

7.6 Turbidity

1. Discussion. An important field test parameter in determining well water stabilization is turbidity, since suspended matter can affect other test parameters (i.e., metals).
2. Sampling and Preservation. Samples are analyzed every three minutes throughout the low-flow sampling event.
3. Methodology. Turbidity, Method 180.1 (Nephelometric).
4. Reference Literature. U.S.EPA "Methods for Chemical Analysis of Water and Wastes" (EPA-600/4-79-20), revised March 1983.
5. Apparatus.

   a. Turbidimeter (Hach 2100P or equal)

   b. Cells

6. Reagents.

   a. Primary Turbidity Standards

   b. Secondary Turbidity Standards

   c. Distilled Water

7. Procedure.

   a. Energize the instrument. Rinse a clean sample cell with dilution water several times. Fill the cell to the line with the groundwater sample and wipe the cell with a lint-free cloth to remove water and fingerprints.

   b. Insert the sample cell into the cell compartment by aligning the orientation mark on the cell with the mark on front of the cell compartment and close the lid.

c. Select the automatic range selection by pressing the “Range” key. The display will show “Auto RNG” when the instrument is in the automatic range selection. This option will automatically be selected for subsequent samples.

d. Select the signal averaging mode by pressing the “Signal Average” key. The display will show SIG AVG when the instrument is using signal averaging. This option will automatically be selected for subsequent samples.

e. Press the “READ” button. The display will show ---- NTU, then the turbidity of the sample in NTU. Record the turbidity on the groundwater field data sheet.

f. For additional sample measurements, repeat steps a, b, and e.

8. Notes.

   a. Avoid entrained air bubbles by pouring the sample slowly down the side of the cell.

   b. Make sure cold samples do not fog the sample cell.

   c. Do not leave the sample cell in the sample compartment for extended periods of time, since this may compress the spring in the cell holder.

   d. When taking measurements make sure instrument is on a level, stationary surface.

   e. Remove sample cell and batteries from instrument if storing for an extended period of time.

   f. Avoid settling of sample prior to measurement.

   g. Wipe outside of sample cell prior to performing measurement with lint free cloth or paper.

7.7 H_2S Gas Testing

1. Discussion. The purpose of the testing for Hydrogen Sulfide gas (H_2S) is to ensure that operators and transient employees are not being exposed to harmful levels.
2. Sampling and Preservation. Sampling must be performed at the landfill.
3. Methodology. Single Sensor Gas Detector
4. Reference Literature. Refer to Biosystems Inc. Reference Manual.
5. Apparatus.
   a. RKI GX2003 portable gas detector (or equivalent) Aspirator and tygon tubing
6. Reagents.
   a. Calibration gas

7. Procedure.
    a. Energize the gas detector.
    b. Measurements are made at the operator's building and leachate pumping station by aspirating the surrounding air for two to three minutes.
    c. Measurements are performed on the leachate sump and catch basins by aspirating the air inside the structures for approximately two to three minutes.
    d. Measurements are performed at wells (e.g., MW-107B) via a capped tubing connection from the well to the meter's sensor. Sample collection involves aspirating the air inside the well for approximately two to three minutes.
    e. The highest value obtained over this two to three minutes is recorded on the Dolby Landfill Gas Monitoring Field Sheet (refer to Appendix A) at each location.
8. Notes.
    a. Refer to the reference manual for troubleshooting meter, calibrating, and changing batteries.

7.8 LEL/Gas Testing

Note, often time the H_2S meter will also include LEL (lower explosive limit) testing ability. If a separate LEL/Gas meter is used the following information applies.

1. Discussion. The purpose of LEL/gas testing is to determine the concentration of combustible gases at the landfill.
2. Sampling and Preservation. Samples must be analyzed in the field.
3. Methodology. Combustible Gas Indicator.
4. Reference Literature. Refer to Gascope Combustible Gas Indicator Instruction Manual.
5. Apparatus.
    a. Combustible Gas Indicator (Gascope MSA Model 62S).
    b. Aspirator and tygon tubing.
6. Reagents. (None)
7. Procedure.
    a. Open cover and set "RANGE" switch to LEL.
    b. Set "ON/OFF" switch to ON. READY indicator light should turn on within four seconds. BATT indicator pointer should be a least halfway into white zone.

c. Squeeze aspirator bulb eight to ten times to purge instrument with fresh air. Permit bulb to inflate completely after each squeeze.

d. Lift and adjust “LEL/ZERO” control to obtain zero indication on meter.

e. Set “RANGE” switch to GAS. The READY indicator should momentarily turn off and then turn on within 4 seconds.

f. Lift and adjust “GAS ZERO” control to obtain zero indication on meter.

g. Measurements are performed at the leachate pump station and operator’s building by aspirating the surrounding air for two to three minutes.

h. Measurements are performed on the leachate sump and catch basins by aspirating the air inside the structures for approximately two to three minutes.

i. Measurements are performed at the well (107B) via a capped tubing connection from the well to the meter’s sensor. Sample collection involves aspirating the air inside the well for a two-to-three-minute time period.

j. The highest measurement read at these four sample locations is recorded on the Dolby Landfill Gas Monitoring Field Sheet.

8. Notes.

a. Due to potential high concentration of combustible gas, set the function switch to GAS, rather than LEL, at the catch basin locations only. An extremely high concentration using the GAS mode could potentially ruin the gas detection sensor.

b. Refer to operator’s manual for maintenance and troubleshooting issues.

7.9 Quality Assurance

Quality assurance is necessary to ensure:

1. Representative samples have been collected.
2. Collected samples are properly labeled and preserved.
3. Field tests are performed accurately.

Quality assurance is accomplished by technicians trained in field testing and sample collection. The quality control measures implemented are as follows:

1. Sample Containers. New sample containers are received from the contracted laboratory prior to each sampling event.

2. Field Instrumentation. All probes (i.e., pH, temperature, D.O., and conductivity) and sample cells (i.e., turbidity) are rinsed thoroughly with distilled water between well sampling events to avoid contamination problems.

3. Field Instrument Calibration. Prior to performing field test measurements, instrument calibrations must be performed. The following steps are taken to ensure accurate and precise measurements are made:

   a. pH Meter.

      (1) A two-point calibration curve is performed using pH buffers bracketing the anticipated well water pH measurement following the manual's calibration procedure.

      (2) A known pH buffer solution is measured at the beginning and end of the sampling event. This serves as the precision and accuracy check for the instrument.

      (3) A certified known is measured annually for verification of proper instrument and electrode operation.

      (4) If a malfunction occurs with the field pH meter, the second portable pH meter will be utilized.

      (5) The following information is recorded on the Groundwater Well Sampling Meter Check Form (refer to Appendix A).

         - Accuracy and precision check;
         - Buffers used to calibrate pH meter; and
         - Make and model number of pH meter used.

   b. Conductivity Meter.

      (1) A purchased conductivity standard is measured before and after the sampling event. The results of these measurements serve as the precision and accuracy check.

      (2) If the conductivity reading is not within the tolerance range as specified on the conductivity standard's label, corrective steps are taken as outlined in the instruction manual.

      (3) A check of the temperature compensator performance is performed by measuring a cooled conductivity standard at the anticipated well water temperature. If inaccurate readings are observed, temperature measurements must be made using an NBS traceable thermometer and corrections in measured conductivities made.

      (4) The following information is recorded on the Groundwater Well Sampling Meter Check Form:

         - Accuracy and precision check;

- Conductivity of standard used; and
- Type and model number of instrument used.

c. Temperature Meter.

(1) Before the first round of sampling, an annual accuracy check of the temperature portion of the pH meter probe is performed by checking the field temperature probe in the range of the expected groundwater temperatures versus an NBS traceable thermometer. If the probe temperatures are not within the tolerance limits, a correction factor is applied.

(2) This information is recorded in the staging notebook along with the analyst's signature. The type and model number of the temperature meter used is recorded on the Groundwater Well Sampling Meter Check Form.

d. Water Level Meter.

(1) Before sampling the meter is checked to determine battery performance. If the meter does not respond, the battery is replaced and the meter rechecked.

(2) If there is any doubt the meter is not reading correctly, the operator may check the probe in a container of water to confirm that it is working properly.

(3) The type and model # of the water level meter being used is recorded on the Groundwater Well Sampling Check Form.

e. D.O. Meter.

(1) Check membrane of probe for bubble(s). If bubble(s) are present, remove membrane, refill the probe with electrolyte, and install a new membrane (refer to instruction manual).

(2) Replace batteries when "LOBAT" warning is displayed.

(3) An air calibration is performed by first placing a plastic bottle containing a wetted sponge over the probe. This subjects the membrane to a known oxygen concentration at 100 percent relative humidity. The function switch is set to % mode and after reading stabilization, the O_2 knob is adjusted to 100.0 percent and then locked in place.

(4) The function switch is then set to the proper concentration mode to perform D.O. measurements.

(5) The type and model # of the meter being used is recorded on the Groundwater Well Sampling Meter Check Form.

f. Turbidity Meter.

(1) An annual calibration check is performed prior to the first sampling event of each year using four primary standards. Follow the calibration procedure outline in the operator's manual (.

(2) After primary standard calibration, three secondary standards (gel filled) are measured. The values are recorded on a label and affixed to the cap of each secondary standard. The secondary standard is read prior to and after the subsequent groundwater monitoring event to ensure the instrument's calibration has not drifted. If a difference of more than +/- 10 percent has occurred, the instrument must be recalibrated.

(3) The following information is recorded on the Groundwater Well Sampling Meter Check Form.

a. Type and model # of meter used.

b. Turbidity value of known secondary standard used.

c. Turbidity reading before and after sampling event.

g. H_2S Meter.

(1) The H_2S meter is calibrated prior to each sampling event using a known standard gas in approximately the same range as the anticipated air samples. The calibration procedure used is in the meter's reference manual.

h. LEL/Gas Meter.

(1) The LEL/Gas meter is calibrated periodically by the manufacturer.

4. Calibration Standards. Purchased conductivity standards and pH buffers are dated when received and discarded before the expiration date.

5. Duplicate Sampling. Duplicate samples are collected randomly on 10 percent of the total number of wells sampled at each groundwater facility. This verifies uniformity of well water quality and field collection techniques.

6. Equipment Blanks. If non-dedicated sampling equipment is used, field equipment blanks will be collected. A field blank will be prepared using analyte-free water. This water will be passed through the sampling equipment and collected in an empty sample container for analysis. The field blank will be analyzed for the same sample parameters as the groundwater.

7. Chain-of-Custody. The contracted laboratory will supply a Chain-of-Custody form.

8. Trip Blanks. A VPH trip blank will accompany all VPH samples from sample collection to analysis to ensure airborne contamination has not occurred.

7.10 Well Maintenance

In order to maintain well integrity, a program was implemented, to perform annual well inspections. The inspection includes examination of:

1. The steel guard pipe;
2. Inner PVC pipe;
3. Bentonite seal around base of guard pipe; and
4. Ensure wells are locked.

If any damage is noticed (i.e., broken lock or PVC pipe), the following steps are taken:

1. The information is noted on the Groundwater Well Maintenance Form (refer to Appendix A) and a follow up entry is made when the repair work is completed.
2. The damage is reported immediately to the Landfill Operator, who is responsible for the repair work; and
3. All well maintenance work performed throughout the year is summarized in the yearend report sent to the MEDEP.

Annual well depth determinations are performed to monitor any sediment build-up. If significant build-up has occurred (>1 foot), the build-up must be pumped out. Well depths used for comparison will be the well depths in 1994. The depths recorded on the well logs were not used because the readings taken in 1994 varied by as much as four feet. The wells were cleaned in 1994 with no change in well depth. Therefore, the depths recorded in 1994 are considered baseline for the well depths. This information is recorded and kept on file at the Landfill Operator's office.

Additionally, the surface seal and protective casing is inspected during each sampling event. The condition of each well is recorded on the Low-Flow Sample Purge Form.

7.11 Site Location Maps

Site location maps showing monitoring well locations for Dolby I, II, and III and gas monitoring locations are included in sampling event reports to the MEDEP (Figure 4-1 and Figure 4-2). This provides a visual picture with regard to:

1. Groundwater, surface water and gas monitoring sampling locations;

2. Locations of potential impact areas; and
3. Drawing conclusions on analytical test results performed on ground and surface water.

7.12 Sample Volume, Preservation, and Holding Times

All sample volumes, preservation, and holding times will be set by the contracted laboratory and will follow required standard and EPA methods.

7.12.1 Sample Volume

The contracted laboratory will determine the needed sample size for each analysis.

7.12.2 Sample Preservation

The contracted laboratory will set the sample preservation for each sample.

7.12.3 Holding Times

The contracted laboratory will follow the holding times set forth in each analytical method.

8.0 DECONTAMINATION OF EQUIPMENT

Decontamination of sampling equipment is required both prior to initiation of sampling and between each sample location to eliminate the potential for cross contamination of samples with the analytes of interest.

8.1 Field Instrumentation

Field instrumentation, i.e., pH and specific conductance probes will, under no circumstances, be introduced into a sampling device or sample bottle. However, to minimize latent influences between sampling locations, the probes will be rinsed with clean water and, when appropriate, wiped dry with clean paper towels.

9.0 SAMPLE CHAIN OF CUSTODY

Chain-of-Custody forms supplied by the contracted laboratory will be utilized.

9.1 Sample Monitoring Form

The use of this form accomplishes one or more of the specific objectives of sample custody, identification, control, and written documentation that the Dolby Landfill EMP is being followed. The forms that have been mentioned in previous sections are discussed below and include:

1. Low-Flow Sample Purge Forms;
2. Surface Water Sampling Sheet;
3. Piezometer Well Sampling Sheet;
4. Groundwater Well Sampling Meter Checks;
5. Groundwater Well Maintenance Form;
6. Dolby Landfill Gas Monitoring Field Sheet;
7. Soil Sampling Sheet;
8. Instrument Calibration Sheet; and
9. Sample Chain-of-Custody Sheet.

A copy of these sample forms is provided in Attachment A.

9.1.1 Low-Flow Sample Purge Form

The function of this form is to note weather conditions, conditions of the well's surface seal and protective casing, field test measurements, and the sampling conditions met prior to sample collection.

9.1.2 Surface Water Sampling Sheet

The Surface Water Sample Data Sheet will be completed by the field technicians. The function of this form is to note weather conditions, date and time sample collected, flow at sample location (if applicable) and field test measurements.

9.1.3 Piezometer Well Sampling Sheet

This field sheet contains required information for the three piezometer wells. This information includes the water level, weather conditions, date of site visit, and field technician involved.

9.1.4 Groundwater Well Sampling Meter Checks Form

The purpose of this form is to document that the field instrumentation has been properly calibrated prior to the sampling event. This ensures accurate groundwater measurements are taken. The form is completed in the laboratory and signed by the field technician performing the calibration checks.

9.1.5 Groundwater Well Maintenance Form

The purpose of this form is to inspect the condition of each well, document any needed repair, and report this information to the Landfill Operator, who will oversee the repair work. This preventive maintenance schedule will help avoid any well water contamination problems. The form has a check list of critical items to inspect, any helpful comments describing the maintenance problem, and a follow-up section outlining what and when the repair work was performed. These forms are kept on file at the Landfill Operator's office. The maintenance work performed during the year is summarized in the yearend report sent to the MEDEP.

9.1.6 Dolby Landfill Gas Monitoring Field Sheet

The purpose of the sheet is to document gas testing performed by the field technicians at the landfill. The sheet contains information on the sample location, meters used, technician performing tests, and H_2S (ppm) and LEL (%) levels.

9.2 Packing and Shipping

In addition to sample collection and preservation requirements, especially the maintenance of sample temperature at four degrees centigrade until extraction or analysis, samples will be so packed and shipped as to maintain the sample container integrity and the health and safety of sample transporters.

9.2.1 Packing

Sample containers are generally packed in picnic coolers for shipment. Bottles are to be packed tightly, with ice, so that no motion is possible. All chain of custody forms are placed into a "Ziploc" bag and placed into the cooler. The cooler top is then taped shut. Custody seals and taping of coolers may be required for certain samples.

9.2.2 Shipping

The standard procedure followed for shipping environmental samples to the analytical laboratory is:

1. All shipping to outside laboratories of environmental samples collected by field personnel must be done through Federal Express or equivalent overnight delivery service.

2. If prompt shipping and laboratory receipt of the samples cannot be guaranteed (i.e., Sunday arrival), the samplers will be responsible for proper storage of the samples until suitable transportation arrangements can be made.

10.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

QA/QC is an integral part of the sampling and analytical program to allow assessment of the adequacy of analytical results for their intended use. QA/QC activities associated with sampling include the utilization of standardized collection procedures and sample data records (as described above), calibration of field instruments, and the use of chain-of-custody procedures. Analytical QA/QC involves the use of approved analytical protocols by qualified laboratories. Assessment of analytical data quality is performed through review of method-specified quality control data, to be delivered along with the analytical results.

10.1 Data Validation

The following data validation methods will be used to verify the accuracy and precision of the reported results:

1. Verification of continuous chain-of-custody for each sample;
2. Verification that sample holding times were met;
3. Total dissolved solids/specific conductivity ratio calculation and tabulation;
4. Duplicate sample Relative Percent Difference (RPD) calculation and tabulation;
5. Evaluation of duplicate analysis performance;
6. Comparison of current data with historical data and identification of anomalous results; and
7. Identification of any parameter in field equipment blanks.

10.2 Statistical Analyses

Where data is sufficient, statistical analysis of the sample data from each monitoring well will be completed annually and reported. Statistical analysis will be conducted in accordance with the July 1992 Addendum to Interim Final Guidance for Statistical Analysis of Groundwater Monitoring at RCRA Facilities and/or other approved procedures that are appropriate for the database.

11.0 PFAS SAMPLING AND ANALYSIS

In the event that PFAS sampling becomes necessary for the site water(s) or soil, standard procedures for PFAS sampling have been added to this EMP as Appendices B and C.

12.0 REPORTING REQUIREMENTS

Monitoring data will be submitted to the MEDEP within 30 days of receipt and evaluation of laboratory results. A report including the following will be submitted to the MEDEP on an annual basis:

1. Map showing the licensed facility, waste handling boundaries, and location of each monitoring point;
2. Summary of results of the environmental monitoring program;
3. Historical data summary;
4. Statistical analysis;
5. Data validation results;
6. Table of current and historical data (including field parameters and groundwater elevation levels);
7. Identification of elevation reference datum;
8. Exceedance of MCL/MEGs;
9. Copies of laboratory data sheets, chain of custody forms, all field data sheets, and recommendations for any proposed changes are kept on file for at least two years after sampling event.

APPENDIX A

FIELD DATA SHEETS

SME
SEVEE & MAHER
ENGINEERS

MONITORING WELL SAMPLE PURGING FORM

(page ___ of ___)

SITE: _____ PROJECT NO: _____ DATE: _____

SAMPLE LOCATION: _____ WEATHER: _____

SAMPLE ID: ___ _____ __ _____ START TIME: _____ END: _____

(DUPS) ___ _____ __ _____ TRIP BLANK ID: ___ _____ __ _____

___ _____ __ _____

WELL DEPTH: _____ FT
( ) TOP OF WELL ( ) TOP OF CASING
( ) MEASURED ( ) HISTORICAL

WATER DEPTH: _____ FT
( ) TOP OF WELL ( ) TOP OF CASING
( ) MEASURED ( ) HISTORICAL

CONDITION OF WELL:
SURFACE SEAL: ( )GOOD ( )CRACKED
( )OTHER: _____
PROTECTIVE CASING: ( )LOCKED
( )NO LOCK
( )SECURE
( )NEEDS REPAIR(ABLE TO MOVE)

TUBING INLET (TPVC) _____
TUBING DIAMETER _____ (ID)
SCREENED INTERVAL (TPVC) _____ TO _____

WELL: ( )CAP ( )NO CAP
WELL MATL: ( )PVC ( )SS ( )OTHER: _____

PUMPING START TIME: _____ PUMPING END TIME: _____

EQUIPMENT DECONTAMINATION

PURGING	SAMPLING	
( )	( )	PERISTALTIC PUMP ISCO
( )	( )	PERISTALTIC PUMP GEOTECH
( )	( )	SUBMERSIBLE PUMP
( )	( )	BLADDER PUMP
( )	( )	AIR LIFT PUMP
( )	( )	BAILER I.D._____
( )	( )	LDPE/SILICON TUBING
( )	( )	TEFLON/SILICON TUBING
( )	( )	IN-LINE FILTER
( )	( )	DEDICATED SIL. TUBING
( )	( )	DEDICATED POLY. TUBING

DECONTAMINATION FLUIDS USED

( ) DISTILLED/DEIONIZED WATER
( ) TAP WATER
( ) NON-PHOSPHATE DETERGENT
( ) 10% NITRIC ACID
( ) HIGH-PRESSURE STEAM CLEAN
( ) _____

AMOUNT OF WATER CONTAINED IN DEDICATED SYSTEM: _____
AMOUNT OF WATER PURGED PRIOR TO GRAB SAMPLE COLLECTION: _____

NOTES: _____

SAMPLED BY: _____

MONITORING WELL SAMPLE PURGING FORM - PART II

SITE: _____ DATE: _____

SAMPLE LOCATION: _____ ORP OFFSET: _____ mV

Elapsed Time (min)	Liters Pumped	Flow Rate (ml/min)	WL TPVC (ft)	WL Top of Casing (ft)	Turb (1)	pH (2)	Spec Cond (3)	Temp °C (4)	DO (5)	ORP (6)	Comments
Unit ID Number:											
Model ID :											

NOTES:

(1) TURBIDITY (NTU)
(2) pH (STD UNITS)
(3) SPECIFIC CONDUCTANCE (umhos/cm @25C)
(4) TEMPERATURE (C)
(5) DISSOLVED OXYGEN (ppm)
(6) UNADJUSTED OXIDATION REDUCTION POTENTIAL (+- mV)

SEVEE & MAHER ENGINEERS, INC.
SAMPLE DATA RECORD
SURFACE WATER

SITE ID: _____ SAMPLE DATE / TIME : _____

SAMPLE LOCATION: _____ SAMPLER : _____

SAMPLE ID _____ WATER BODY SAMPLED _____

SAMPLE COLLECTION METHOD DEPTH @ SAMPLE SITE _____

_____ DEPTH OF SAMPLE _____

DECON (Y/N) _____ FLOW RATE/VELOCITY _____

SAMPLE APPEARANCE/ODOR _____

TEMPERATURE _____C E_H _____mV

CONDUCTIVITY _____µmhos/cm E_H OFFSET _____mV

DISS. OX. _____mg/L PHENOLTHALIEN ALKALINITY _____ (# of drops) x
_____ (mg/L per drop) =
_____ mg/L

TURBIDITY _____NTU

TOTAL ALKALINITY _____ (# of drops) x
_____ (mg/L per drop) =
_____ mg/L

pH _____

INSTRUMENTS CALIBRATED (date) _____

DUPLICATE SAMPLE COLLECTED (Y/N) _____ IF YES, SAMPLE ID _____

SAMPLE BOTTLES FILLED (ID) _____(SEE COC)

NOTES:

LOCATION SKETCH:

SME
SEVEE & MAHER ENGINEERS
4 Blanchard Road, P.O. Box 85A
Cumberland, ME 04021
Tel: 207.829.5016 / Fax: 207.829.5692
smemaine.com

MONITORING WELL – SAMPLE PURGING

SITE: _____ PROJECT NO. _____ DATE: _____

SAMPLE LOCATION: _____ WEATHER: _____

SAMPLE ID: _____ START TIME: _____ END TIME: _____

(Duplicates) _____ TRIP BLANK ID: _____

_____

WELL DEPTH: _____ FT ☐ Top of Well ☐ Measured ☐ Top of Casing ☐ Historical

WATER DEPTH: _____ FT ☑ Top of Well ☑ Measured ☐ Top of Casing ☐ Historical

TUBING INLET (TPVC):

TUBING DIAMETER:

SCREENED INTERVAL (TPVC)

CONDITION OF WELL: _____

SURFACE SEAL: ☐ Good ☐ Cracked ☐ Other: _____

PROTECTIVE CASING: ☐ Locked ☐ No Lock ☐ Secure ☐ Needs Repair (able to move)

WELL: ☐ Cap ☐ No Cap

WELL MATERIAL: ☐ PVC ☐ SS ☐ Other _____

PUMPING START TIME: _____ PUMPING END TIME: _____

EQUIPMENT DOCUMENTATION

PURGING	SAMPLING	
☐	☐	Peristaltic Pump ISCO
☐	☐	Peristaltic Pump Geotech
☐	☐	Submersible Pump
☐	☐	Bladder Pump
☐	☐	Air Lift Pump
☐	☐	Bailer I.D. _____
☐	☐	LDPE / Silicon Tubing
☐	☐	Teflon / Silicon Tubing
☐	☐	In-Line Filter
☐	☐	Dedicated Silicone Tubing
☐	☐	Dedicated Polyethylene Tubing

DECONTAMINATION FLUIDS USED

- ☑ Distilled / Deionized Water
- ☐ Tap Water
- ☐ Non-phosphate Detergent
- ☐ 10% Nitric Acid
- ☐ High-Pressure Steam Clean
- ☐ Other _____

AMOUNT OF WATER CONTAINED IN DEDICATED SYSTEM: NA

AMOUNT OF WATER PURGED PRIOR TO GRAB SAMPLE COLLECTION: NA

NOTES:

SAMPLED BY : _____

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MONITORING WELL – SAMPLE PURGING

SITE: _____ DATE: _____

SAMPLE LOCATION: _____ ORP OFFSET: 0 mV

Elapsed Time (min)	Liters Pumped	Flow Rate (mL/min)	WL TPVC (FT)	WL Top of Casing (FT)	Turbidity (1)	pH (2)	Specific Cond. (3)	Temp °C (4)	DO (5)	ORP (6)	Comments
Unit ID No.:		↓		NA	← SET →						
Model ID:					*	REF	TO	CAL	SHEET		
0	0	0		NA							
5	1.0	200		NA							
10	2.0	200		NA							
15	3.0	200		NA							
18	3.6	200		NA							
21	4.2	200		NA							
24	4.8	200		NA							

NOTES:

1 TURBIDITY (NTU)
2 pH (STD UNITS)
3 SPECIFIC CONDUCTANCE (µmhos/cm @25°C)
4 TEMPERATURE
5 DISSOLVED OXYGEN (mg/L)
6 UNADJUSTED OXIDATION REDUCTION POTENTIAL (+/- mV)

Facility Location: _____ **Well No.** _____

Date: _____

Performed By: _____

Well Depth: _____ (measure to top of PVC pipe)

Top of PVC pipe to ground: _____

Well Condition:

Surface Seal: ( ) Good ( ) Cracked ( ) Other (See Comments)

Protective Casing: ( ) Good ( ) Locked ( ) Unlocked ( ) Needs Repair

PVC Pipe Conditions: ( ) Good ( ) Cracked ( ) Other (See Comments)

Comments: _____

_____

_____

_____

Completed Well Work: _____

_____

_____

_____

_____

_____

WATER LEVEL OBSERVATIONS FIELD DATA SHEET					
Project: MSPO – DOLBY LANDFILL				**Date:**	
Field Personnel:				**Job Number:**	
Well Number	**Time of Reading**	**Stickup** PVC (ft)	**Water Depth From Top of PVC (ft)**	**Bottom Depth From Top of PVC (ft)**	**Comments (Condition of Well)**

SITE: DOLBY LANDFILL GAS MONITORING PROJECT NO.:_____

DATE: _____ WEATHER:_____

METER ID:_____ CALIBRATION GAS:_____

LOCATION IDENTIFICATION NUMBER	TIME OF READING	METHANE EQUIVALENT		METHANE EQUIVALENT AMBIENT		H_2S ppm	H_2S AMBIENT ppm	COMMENTS
		% LEL	% VOLUME	% LEL	% VOLUME			
Catch Basin #4								
Catch Basin #6A								
Catch Basin #13								
Catch Basin #21								
Catch Basin #22								
Catch Basin #30								
Catch Basin #35								
Catch Basin #39								
Catch Basin #43								
Catch Basin #45								
Well 107B								
Operators Shack								
Leachate Pump Station								
Leachate Sump								

LEL CONVERSION: (%LEL/100) x 5 = %VOLUME

Sampler Signature:_____

Ambient readings for % LEL and H_2S should be taken next to the sample site prior to the reading taken at the sample site
Attention: If your % Methane reading equals 0, please write 0.1US as your reading

US – Not detected above the reported reporting limit determined by interpreted instrument specification

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SAMPLE DATA RECORD

SOIL

SITE ID: _____ **SAMPLE DATE:** _____

SAMPLE LOCATION: _____ **SAMPLE TIME:** _____

SAMPLE ID: _____ **SAMPLER:** _____

MATERIAL SAMPLED: _____ **DEPTH OF SAMPLE:** _____

COLLECTION METHOD: _____

DECONTAMINATED: ☐ YES ☐ NO

DUPLICATE SAMPLE COLLECTED: ☐ Yes ☐ No **IF YES, SAMPLE ID:** _____

PFAS SAMPLE COLLECTED: ☐ Yes ☐ No (SEE PAGE 2 AND 3 FOR SPECIFIC PROTOCOL CHECKLIST)

SAMPLE APPEARANCE / ODOR: _____

NOTES:

LOCATION SKETCH:

FIELD INSTRUMENT CALIBRATION
DAILY OPERATING LOG

CLIENT:	DATE/TIME:
PROJECT SITE:	JOB NUMBER:

Meter Set	INSTRUMENT	MODEL ID NUMBER	UNIT ID NUMBER	UNITS OF MEASURE	STANDARD(S) USED IN CALIBRATION	CALIBRATION OR OFFSET CALCULATED	OPERATOR INITIALS
A	pH	Cole Palmer Acorn pH 6	Box:	pH		NA	
	Specific Conductivity	Cole Palmer Acorn Con 5	Box:	Microsiemens		NA	
	Turbidity	LaMotte 2020 Turb.Meter	Box:	NTU		NA	
	ORP	Cole Palmer pH Series 20	Probe: Box:	mV	4 - 7 – Quinhydrone		
B	pH	Cole Palmer Acorn pH 6	Box:	pH		NA	
	Specific Conductivity	Cole Palmer Acorn Con 5	Box:	Microsiemens		NA	
	Turbidity	LaMotte 2020 Turb.Meter	Box:	NTU		NA	
	ORP	Cole Palmer pH Series 20	Probe: Box:	mV	4 - 7 - Quinhydrone		

ADDITIONAL NOTES:

FLOW CELL METERS

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FIELD INSTRUMENT CALIBRATION
DAILY OPERATING LOG

CLIENT:	DATE:
PROJECT SITE:	JOB NUMBER:

METER SET	INSTRUMENT	MODEL ID NUMBER	UNIT ID NUMBER	STANDARDS USED FOR CALIBRATION *	WAS CALIBRATION SUCCESSFULLY COMPLETED? (If yes, place ✓ in appropriate area) (Place results of calibration in appropriate box)	MIDDAY STANDARD(S) CHECK * (Place results of calibration in appropriate box)		OPERATOR INITIALS
						Standard	Reading	
C	pH	YSI PRO PLUS	SME003	4.01 7.01 10.00	☑ 4 reading 4.0 ☑ 7 reading 7.0 ☐ 10 reading	7.01		
	Specific Conductivity	YSI PRO PLUS	SME003	1413 Microsiemens	☑ 1413 reading 1413	1413 Microsiemens		
	DO	YSI PRO PLUS	SME003	100% ZERO Oxygen solution	☑ 100% reading 100 ☑ ZERO reading 0.0	100%		
	ORP	YSI PRO PLUS	SME003	240 mV ORP Solution	☑ 240 mV Reading 240	240 mV ORP		
	Turbidity	LaMotte 2020we	SME003	1 NTU 10 NTU	☑ 1 NTU Reading 1.0 ☑ 10 NTU Reading 10.0	1 NTU		

* Calibration of meters is completed once daily before work starts – a standards check for pH, conductivity, and turbidity should be completed midway through each day or if a particular field value falls outside of historic ranges.

ADDITIONAL NOTES: _____

CHAIN–OF–CUSTODY RECORD

PAGE ____ OF ____

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CLIENT:	PROJECT NAME:	PROJECT/ P.O. #:
REPORT TO:	ADDRESS:	
INVOICE TO:	ADDRESS:	
SAMPLED BY: (PRINT)	SAMPLER SIGNATURE:	

FILTERED (Y/N)
PRESERVED
ANALYSIS REQUIRED

LEGEND FOR PRESERVATIVE
1 – 4° CELSIUS
2 – HCL
3 – HNO_3
4 – H_2SO_4
5 – $Na_2SO_3 + H_2SO_4$
6 – NaOH

ITEM NO.	SAMPLE IDENTIFICATION	DATE	TIME	COMPOSITE OR GRAB	W–WATER L–LIQUID S–SOLID	TOTAL NUMBER OF CONTAINERS	REMARKS	LAB SAMPLE #
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE: TIME:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE: TIME:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE: TIME:

D:\FORM\ACAD\SME11 REV.7/13/2009

A CHAIN OF CUSTODY IS REQUESTED WITH EACH SET OF SAMPLES

APPENDIX B

SAMPLING AND ANALYSIS PROCEDURES FOR MEASURING PFAS

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COVER SHEET
STANDARD OPERATING PROCEDURE-ADDENDUM

OPERATION TITLE: **DEVELOPMENT OF A SAMPLING AND ANALYSIS PLAN-**

ADDENDUM - A – ADDITIONAL REQUIREMENTS FOR THE SAMPLING OF PERFLUORINATED ALKYLATED SUBSTANCES (PFASs), PERFLUOROOCTANOIC ACID (PFOA) and PERFLUOROOCTANE SULFONATE (PFOS).

1.0 APPLICABILITY

This Standard Operating Procedure (SOP) ADDENDUM applies to all programs in the Maine Department of Environmental Protection's (MEDEP) Division of Remediation (DR). It is also applicable to all parties that may submit data that will be used by the DEP/DR.

This SOP ADDENDUM is not a rule and is not intended to have the force of law, nor does it create or affect any legal rights of any individual, all of which are determined by applicable statutes and law. This SOP does not supersede statutes or rules.

2.0 PURPOSE

The purpose of this document is to describe the MEDEP/DRs requirements for the development of a Sampling and Analysis Plan (SAP) and outline specific requirements for the sampling of compounds related to Per- and Polyfluoroalkyl Substances (PFASs), including Perfluorooctanoic acid (PFOA) and Perfluorooctane sulfonate (PFOS).

Prior to conducting any investigative field work, routine monitoring, post closure sampling or any data gathering/sample collection project, a SAP will be developed that outlines the goals of the activity and methodology to achieve that goal. A well-developed SAP that is reviewed by all field team members will assure that the goals are obtainable, the methodology is consistent, and the data generated will meet the Data Quality Objectives (DQOs) for the project.

Given the ubiquitous nature of PFAS compounds, the low detection levels that are generally requested, and the different methodologies for which these compounds are tested, additional requirements regarding sampling methodology, equipment, and analysis for PFAS compounds should be included as part of the sampling plan and during the sampling event. This document outlines those specific requirements to be included in a PFAS sampling plan and during sampling.

3.0 GUIDELINES AND PROCEDURES

3.1 INTRODUCTION

A sampling and analysis plan, regardless of whether sampling for PFAS compounds or other potential contaminants, should include all the elements in SOP RWM-DR-014 – Development of a Sampling and Analysis Plan. Although not required to be included in the SAP, (as outlined in SOP RWM-DR-014), an assessment of the existing data should be conducted, a site reconnaissance completed, a conceptual site model developed, and data quality objectives determined as part of planning to assure the SAP will meet the goals of the sampling.

The SAP itself should include the goal of the sampling, end use of data, data quality objectives, schedule, sampling methodology, sampling locations, media to be sampled, analytical parameters, and QA/QC samples. Additionally, a site-specific health and safety plan may be necessary (see SOP-DR-014) depending on the scope of the sampling event. For example, collection of samples in a large or moving water body, or as part of large sampling effort

involving drilling rigs and/or excavation equipment would require a health and safety plan; residential well or routine monitoring well sampling would not.

3.2 SAMPLING METHODOLOGY/EQUIPMENT

A description of the sampling methodology will be included in the SAP. Generally, reference to an appropriate SOP for the sample methodology will be sufficient. The Division has developed multiple SOPs for sample collection of most media; please refer to the Division of Remediation's Quality Assurance Plan - Attachment B – Data Collection SOPs for a list of all data collection standard operating procedures.

3.2.1 Sampling Methodology

Sampling for PFAS will follow the standard procedures as outlined in the specific sampling method SOPs. In addition, the following task must be included in the SAP and field staff must perform the task as described below to prevent the introduction of contamination during collection of the sample:

> "Prior to sampling each location the sample handler must wash their hands and don nitrile gloves. This is particularly important when driving between locations or carrying pumps and other equipment between sample points. PFAS contamination during sample collection can occur from several common sources, including food packaging and certain foods and beverages. Proper hand washing and wearing nitrile gloves will help to minimize this type of accidental contamination of the samples."

It should be noted that samples collected for PFAS analysis do not have to be headspace free.

3.2.2 Sampling Equipment/Supplies/Personal Protective Equipment (PPE)

The low detection limits required for PFAS water analysis and their common occurrence in frequently used items warrant attention to equipment and PPE used for sampling. A sampling equipment list for PFAS projects should follow the material guidelines in Table 1 of Attachment A, avoiding use of LDPE and any Teflon-lined equipment or tubing. If field decontamination of submersible pumps or large non-disposable equipment is necessary, washing with a PFAS-free soap solution, rinsing with DI water and then a rinse with laboratory-supplied PFAS-free water is recommended. Small field equipment such as scoops or bowls can omit the DI rinse. New nitrile gloves should be used between locations and activities. For water sampling where there is adequate separation between the sample point (for example a kitchen tap) and sampler footwear then boot restrictions and PPE such as chicken boots may not be needed. Other recommended clothing and PPE requirements are noted in Table 1 of Attachment A.

3.3 Media Sampled/Analytical Parameters

A chart outlining the media collected and sample analysis methodology will be included in the SAP.

PFOA and PFOS are common potential contaminants of concern (COCs) at PFAS sites, but a wider suite of PFAS must be considered when evaluating a site. Laboratory reporting lists typically include approximately 20 PFAS compounds depending upon method and laboratory, and the DEP PFAS analytical services request required that laboratories report a list of 24 compounds PFAS. Until additional USEPA methods are finalized or unless otherwise required specifically for the project, the standard analysis for drinking water and groundwater will be Modified Method 537 using isotope dilution with the standard DEP reporting list from the most recent contract.

For sites where potential unidentified PFAS precursors are a concern, additional analyses such as the total extractable fluorinated compounds (TOP analysis) can be followed by analysis of specific compounds, to assess the presence of precursors in environmental media that are not captured by the compound specific methods. USEPA has also released a newer drinking water method (Method 533) with a longer standard list of compounds, but as of this revision few labs are offering this method.

Parameters will be identified by either laboratory analysis methodology number, or generally accepted name of analysis. Given the different methods currently available for sampling PFAS, there must be a clear understanding between the project manager and the laboratory providing the analysis as to what the media sampled, test methodology, and detection levels will be.

Table 1 provides the current standard methods with their associated media, other methods may be appropriate based on the data quality objectives of the sampling project:

Other methods may be appropriate based on the data quality objectives of the sampling project.

The contracted analytical laboratory must be Maine certified to perform any method for which Maine provides certification. The contract lab must be able to accommodate the sample load and perform the analyses within holding times. The contract lab must be able to achieve PQLs, for all analyses, which are below the associated regulatory guideline value. The contract lab must also provide electronic data deliverable (EDD) results for all samples.

Deviations can be made from the laboratory method on a site or event specific basis, based on the goals of the sampling, end use of the data, and the data quality objectives. Rationale for deviations from these methods should be described in the SAP and/or the final report.

All parameters, containers, preservation, and holding times will be as recommended by the laboratory providing analytical services. Special or out of the ordinary containers or preservation should be noted in the SAP.

TABLE 1
Media/Analytical Methodology

MEDIA	LABORATORY METHOD	HOLD TIME*/ PRESERVATION	ANALYSIS TIME	Reporting List
Public Drinking Water Supply **	USEPA Method 537.1	14 days to extraction/Trizma***	28 days after extraction	Method specific
Groundwater and Private Water Supplies	Modified Method 537 (Isotope Dilution)	14 days to extraction/<6°C	28 days after extraction	DEP Minibid list ****
Surface Water	Modified Method 537 (Isotope Dilution)	14 days to extraction/<6°C	28 days after extraction	DEP Minibid list ****
Soil/Sediment/sludge	Modified Method 537 (Isotope Dilution)	14 days to extraction/<6°C	28 days after extraction	DEP Minibid list ****
Other (vegetation…)	Modified Method 537 (Isotope Dilution)	Lab specific	Lab specific	DEP Minibid list ****
Water or Soil	TOP or other total fluorinated analysis	Lab specific/<6°C	Lab specific	Method specific

* Hold time of 14 days is specified by DEP
** USEPA 537.1 is currently the only Maine certified method for drinking water, others such as Method 533 will be offered in the future
*** Trizma needed for samples that may contain residual chlorine from treated water sources
*** Longer reporting lists may vary between laboratories, generally the DEP mini-bid list can be used for all projects

3.4 FIELD QC SAMPLES

Sample collection for PFAS analysis does not require specific field QC samples outside the normal requirements.

General recommendations for all sampling include one aqueous field blank, per field event, to be analyzed for PFASs to determine if water samples have been contaminated by sources unrelated to the project area, and to assess the overall field procedures. The field blank is typically one bottle of PFAS-free water supplied by the laboratory, which is uncapped and poured to a second bottle. For multi-day events, one blank per day should be considered. If non-dedicated or non-disposable equipment is used a PFAS-free water equipment blank is warranted to check field decontamination procedures.

4.0 PFAS SPECIFIC TEMPLATE

In the instances of a PFAS only sampling event, in which samples are being collected from a project which has a history of sampling for other analytes and a well-developed conceptual site

model and/or an SAP already exists, a PFAS sampling specific template has been developed which provides the general requirements of a sampling plan. This template can be found in Attachment A of this Addendum.

5.0 REPORT GENERATION

As stated in SOP RWM-DR-014, A Sampling Event Trip Report (SETR) will be developed for every sampling event (see MEDEP/DR SOP# RWM-DR-013). The staff person responsible for developing the SETR will be stated in the SAP. Data obtained as part of the SAP will be assessed in the final report for which the data has been collected.

ATTACHMENT A
PFAS SAMPLING AND ANALYSIS PLAN FORM TEMPLATE

1.1 INTRODUCTION

The introduction will state the objectives of the sampling plan which include:

- Goals of the sampling plan;
- End use of data.

2.0 BACKGROUND INFORMATION

A BRIEF explanation of the background of the Site and/or conceptual site model (CSM) and reason for sampling for PFAS will be presented.

3.0 SITE SPECIFIC HEALTH AND SAFETY PLAN

If determined necessary, a Site-Specific Health and Safety plan (HASP) will be developed and attached.

4.1 SAMPLING METHODOLOGY/ EQUIPMENT

A description of the sampling methodology will be included in the SAP. In instances where a MEDEP/DR SOP is available, reference to SOPs by either name or document number is sufficient.

Currently, the MEDEP/DR QAP has SOPs for the following sample collection tasks which may be pertinent to PFAS sampling:

- 001-Water-Sample-Colllection-From-Water-Supply-Wells;
- 002-Groundwater-for-Site-Investigation;
- 003-Low-Flow-Groundwater-Sampling;
- 004-surface-water-sediment;
- 006-soil-sampling;
- 010-Container-Sampling;
- 015-Incremental-sample-methodology;
- 023-Pore-Water-Sampling.

Other SOPs may be utilized on a project specific basis if MEDEP/DR does not have a current SOP for sampling a particular media or situation. Prior Department approval is necessary.

Prior to sampling each location the sample handler must wash their hands and don nitrile gloves. PFAS contamination during sample collection can occur from a number of common sources, including food packaging and certain foods and beverages. Proper hand washing and wearing nitrile gloves will help to minimize this type of accidental contamination of the samples, particularly when moving pumps, generators or other equipment between sample points.

Some sampling equipment, field supplies, field clothing and personal protective equipment are prohibited when sampling for PFAS. Table 1 outlines the prohibited items. This table must be included in the SOP and field staff informed as to what equipment is allowed.

Table 1: Summary of Prohibited and Acceptable Items for Use in PFAS Sampling

Prohibited Items	Acceptable Items
Field Equipment	
Teflon® containing materials. Aluminum foil.	High-density polyethylene (HDPE) and stainless steel materials
Storage of samples in containers made of LDPE materials	Acetate direct push liners
Teflon® tubing	Silicon or HDPE tubing
Waterproof field books. Water resistant sample bottle labels.	Loose paper (non-waterproof). Paper sample labels covered with clear packing tape, or lab-applied labels.
Plastic clipboards, binders, or spiral hard cover notebooks	Aluminum or Masonite field clipboards
	Sharpies®, pens
Post-It Notes	
Chemical (blue) ice packs	Regular ice
Excel Purity Paste TFW Multipurpose Thread Sealant Vibra-Tite Thread Sealant	Gasoils NT Non-PTFE Thread Sealant Bentonite
Equipment with Viton Components (need to be evaluated on a case by case basis, Viton contains PTFE, but may be acceptable if used in gaskets or O - rings that are sealed away and will not come into contact with sample or sampling equipment.)	
Field Clothing and PPE	
New clothing or water resistant, waterproof, or stain treated clothing, clothing laundered with fabric softeners, clothing containing Gore-Tex™	Well-laundered clothing, defined as clothing that has been washed 6 or more times after purchase, made of synthetic or natural fibers (preferable cotton). Cotton coveralls are one option that reduces the need for specialized personal clothing.
Clothing laundered using fabric softener	No fabric softener
Boots containing Gore-Tex™	Boots made with polyurethane and PVC for wet conditions, or rubber overboots (“chicken boots”)
	Reflective safety vests, Tyvek®, Cotton clothing, synthetic under clothing, medical braces

No cosmetics, moisturizers, hand cream, or other related products as part of personal cleaning/showering routine on the morning of sampling	**Sunscreens** - sunscreens that are "free" or "natural", or UV blocking clothing **Insect Repellents** - Sawyer permethrin clothing treatment, Deep Woods Off, Insect Shield pre-treated clothing (1)
Sample Containers	
LDPE, glass containers or passive diffusion bags.	HDPE (any media) or polypropylene (only for EPA Method 537.1 samples)
Teflon®-lined caps	Lined or unlined HDPE or polypropylene caps
Rain Events	
Gore-Tex™ or similar breathable coated waterproof or resistant rain gear	Polyurethane, vinyl, wax or rubber-coated rain gear. Gazebo tent that is only touched or moved prior to and following sampling activities
Equipment Decontamination	
Decon 90	Alconox® and/or Liquinox®
Water from an on-site well	Potable water from municipal drinking water supply (if tested as PFAS-free); Lab-supplied PFAS-free water
Food Considerations	
All food and drink, with exceptions noted on the right	Bottled water and hydration drinks (i.e. Gatorade® and Powerade®) to be brought and consumed only in the staging area

(1) Bartlett SA, Davis KL. Evaluating PFAS cross contamination issues. *Remediation*. 2018;28:53–57.

It is recommended that all water samples will be collected using dedicated or disposable sampling equipment where possible. Any re-usable equipment, such as plumbing fittings, that may be needed in certain cases to obtain a sample from the pressure tank tap, should be deconned using Alconox/Liquinox soap and rinsed with PFAS-free water prior to use and between locations.

5.0 Sample Locations

A map showing planned sampling locations will be included in the sampling plan. If locations are not pre - determined, the method that samples will be chosen and collected (field observations, random, etc.) will be outlined in the SAP. Field or laboratory compositing procedures will also be described, if applicable.

This section should also indicate sampling collection priority and order, to assure that the most important samples are obtained, and that sampling is generally done from low areas of contamination to higher levels of contamination. It is recommended that critical samples be collected in duplicate.

6.0 Media Sampled

A chart outlining the media collected and sample analysis will be included in the SAP. Table 2 provides several current methods with their associated media:

TABLE 2
Media/Analytical Methodology

MEDIA	LABORATORY METHOD	HOLD TIME*/ PRESERVATION	ANALYSIS TIME	Reporting List
Public Drinking Water Supply **	USEPA Method 537.1	14 days to extraction/Trizma***	28 days after extraction	Method specific
Groundwater and Private Water Supplies	Modified Method 537 (Isotope Dilution)	14 days to extraction/<6°C	28 days after extraction	DEP Minibid list ****
Surface Water	Modified Method 537 (Isotope Dilution)	14 days to extraction/<6°C	28 days after extraction	DEP Minibid list ****
Soil/Sediment/sludge	Modified Method 537 (Isotope Dilution)	14 days to extraction/<6°C	28 days after extraction	DEP Minibid list ****
Other (vegetation…)	Modified Method 537 (Isotope Dilution)	Lab specific	Lab specific	DEP Minibid list ****
Water or Soil	TOP or other total fluorinated analysis	Lab specific/<6°C	Lab specific	Method specific

* Hold time of 14 days is specified by DEP
** USEPA 537.1 is currently the only Maine certified method for drinking water, others such as Method 533 will be offered in the future
*** Trizma needed for samples that may contain residual chlorine from treated water sources
**** Longer reporting lists may vary between laboratories, generally the DEP mini-bid list can be used for all projects

Other methods may be appropriate based on the data quality objectives of the sampling project.

The contracted analytical laboratory must be Maine certified to perform any method for which Maine provides certification. The contract lab must be able to accommodate the sample load and perform the analyses within holding times. The contract lab must be able to achieve PQLs, for all analyses, which are below the associated regulatory guideline value.

Containers, preservation, and holding times will be as recommended by the laboratory providing analytical services. Special or out of the ordinary containers or preservation should be noted in the SAP.

7.0 FIELD QC SAMPLES

The specific needs for QC samples for the project will be outlined. General requirements for PFAS sampling events include one aqueous field blank, per field event, to be tested for PFASs to determine if water samples have been contaminated by sources unrelated to the project area, and to assess the overall field procedures. The field blank is typically

one bottle of PFAS-free water supplied by the laboratory, which is uncapped and poured to a second bottle. An equipment blank should be collected if non-dedicated equipment is used. For multi-day events, one blank per day should be considered, and for large events one blank per 10 or 20 samples is warranted, depending upon the project requirements. All blanks should be collected with laboratory supplied PFAS-free water. A source-water blank is handled like a trip blank, and assesses the laboratory supplied water and sample containers. This blank may be warranted depending on DEP experience with the laboratory or sensitivity of the project.

Additionally, any QC samples that will be collected in the field that are required as part of laboratory QC requirements and to allow data validation will be outlined.

4.9 REPORT GENERATION

A Sampling Event Trip Report (SETR) will be developed for every sampling event (See MEDEP/DR SOP# RWM-DR-013). Staff person responsible for developing the SETR will be stated.

APPENDIX C

PFAS PROTOCOL CHECKLIST

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ENGINEERS

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4 Blanchard Road, P.O. Box 85A
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smemaine.com

PFAS PROTOCOL CHECKLIST

- ☐ Nitrile powderless gloves
- ☐ Sample area clear of possible PFAS contaminants
- ☐ All surfaces touching sample bottle are PFAS free
- ☐ No contact with inside of sample bottle and bottle cap
- ☐ Sample bottle kept sealed and only opened during sample collection
- ☐ New gloves used before sample bottles touched and filled
- ☐ Label attached after bottles are filled/use ball point pen
- ☐ Field blank taken prior to sample collected/new gloves used
- ☐ Use ice in Ziplock bag for sample preservation
- ☐ Each PFAS sample has its own cooler
- ☐ Decontamination with PFAS free water when sampling material used across multiple locations
- ☐ PFAS free clothing and footwear worn
- ☐ No bug repellent or cosmetics used containing PFAS

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smemaine.com

Field Clothing and Personal Protective Equipment

- Do not wear clothing or boots containing Gore-Tex®.
- Wear new nitrile gloves.
- Wet weather gear should be made of polyurethane and polyvinylchloride (PVC) only.
- Wear safety boots made from polyurethane and PVC.
- Do not use materials containing Tyvek® or polytetrafluoroethylene (PTFE), also known as Teflon®.
- Do not use fabric softener on clothing to be worn in field.
- Do not use cosmetics, moisturizers, hand cream or other related products the morning of sampling.
- Do not use prohibited sunscreen or insect repellant. See Do's and Don'ts table below for more information.

Food Considerations

- No food or drink allowed on-site with exception of bottled water.

Field Equipment

- Must not contain Teflon® (aka PTFE) or low-density polyethylene (LDPE) materials.
- All sampling materials must be made from stainless steel, high-density polyethylene (HDPE), acetate, silicone or polypropylene.
- No waterproof field books can be used.
- No plastic clipboards, binders or spiral hard cover notebooks can be used.
- Permanent markers not allowed; regular ball point pens are acceptable.
- Keep PFAS samples in separate cooler, away from sampling containers that may contain PFAS.
- Coolers filled with regular ice in Ziploc bags only – Do not use chemical (blue) ice packs.

Sample Containers

- All sample containers must be high-density polyethylene (HDPE).
- Caps must be unlined HDPE (no Teflon®-lined caps).

Equipment Decontamination

- Have "PFAS-free" water on-site for decontamination rinsing of sample equipment. No other water sources are to be used.
- Only Alconox® and Liquinox® can be used for decontamination washing.

APPENDIX D

WATER QUALITY MONITORING FREQUENCY

SME
SEVEE & MAHER
ENGINEERS

STATE OF MAINE
Department of Environmental Protection (MEDEP)
Bureau of Remediation and Waste Management

MEMORANDUM

TO: Lou Pizzuti, Project Manager, Solid Waste Licensing Unit

FROM: Sean Dougherty, Senior Environmental Hydrogeologist,
Division of Technical Services

DATE: July 23, 2020

RE: 2019 Annual Report, Dolby Landfill, East Millinocket, Maine

Consultant – Sevee & Maher Engineers, Inc. (SME)
EGAD Site No. 31341

I have reviewed the 2019 Annual Report for the Dolby landfills, located in East Millinocket, as submitted by SME, dated May 2020. My review was primarily focused on the water quality monitoring portion of the report. To support my review, I prepared the following figures and tables.

- Figure 1 – Groundwater Monitoring Results 2010-2019, Dolby I Landfill;
- Figure 2A – Groundwater Monitoring Results 2010-2019, North Side Dolby II Landfill;
- Figure 2B – Groundwater Monitoring Results 2010-2019, East Side Dolby II Landfill;
- Figure 2C – Groundwater Monitoring Results 2010-2019, West Side Dolby III;
- Figure 2D – Groundwater Monitoring Results 2010-2019, South Side Dolby III; and
- Figure 3 – Surface Water, Storm Water, and Leachate 2010-2019.
- Table 1 – Summary of Sampling Results, 2019; and
- Table 2 – Mann Kendall Trend Analysis, 2010 through 2019.

Summary and General Comments

Active water quality monitoring locations in the vicinity of the Dolby landfills are currently monitored three times per year. Overall, water quality monitoring results from 2019 are generally consistent with historical sampling results. While water quality appears to be improving in some areas, other monitoring locations show evidence of degrading water quality. In particular, several groundwater monitoring locations to the north and west of Dolby III show elevated dissolved ion content and many indicator parameters with increasing concentration trends.

Surface water sample locations at the Partridge Brook Flowage continue to show minimal evidence of impact from the landfill; however, concentrations of several landfill indicator

parameters appear to have started to increase over the past couple of years at location PBFR. Water quality in the site sedimentation ponds continues to remain relatively stable.

DOLBY I

upgradient bedrock - monitoring well 103
shallow bedrock - monitoring well 113

Currently, monitoring wells 103 and 113 are monitored for field parameters, only. Specific conductance at 103 remains low and relatively consistent. Measurements at 113 are still elevated, but may be slowly decreasing, as would be expected as the landfill continues to mature.

DOLBY II

shallow bedrock - monitoring wells 104B, 205A, 206A, 303A
deep bedrock - monitoring well 202AR
overburden - monitoring wells 202B, 205B, 206B, 303B

In general, water quality appears to be stable or improving in the majority of monitoring locations around the Dolby II landfill. The exception to this is monitoring location 206A. Well 206A is located near the boundary between Dolby II and Dolby III. This monitoring location exhibits elevated dissolved ion content and several landfill indicator parameters with increasing concentration trends. The specific conductance measurements at 206A during the August and October 2019 sampling events were significantly higher than the specific conductance measurements at the two site leachate ponds.

The MCL and/or MEG for arsenic, iron, manganese, sodium and ammonia was exceeded in monitoring locations sampled in the vicinity of the Dolby II landfill, in 2019.

DOLBY III

bedrock - monitoring wells 107A, 302B, 304A, 401A, 402A
overburden - monitoring wells 301, 302C, 304B, 401B, 402B

Groundwater quality in monitoring locations along the east side of the Dolby III landfill shows the most significant impact from the landfill. Monitoring locations 107A, 301, 302B and 302C all show high dissolved ion content and several landfill indicator parameters with increasing concentration trends. Alternatively, monitoring locations 304A and 304B, located immediately downgradient from the leachate pond show little evidence of impact.

Monitoring locations 301, 302B and 302C were tested for VPH and EPH in 2019, No VPH or EPH were detected.

There were MEG exceedances for sodium and manganese measured at monitoring locations 107A, 301, 302B and 302C in 2109.

Monitoring locations to the south of Dolby III exhibit low to moderate concentrations of landfill indicator parameters. Concentrations at monitoring locations 401A, 401B and 402A appear to be slowly increasing, while many indicator parameters at location 402B are decreasing in concentration.

There were MCL and/or MEG exceedances for sodium, arsenic, iron and manganese measured at monitoring locations to the south of Dolby III, in 2019.

SURFACE WATER AND LEACHATE

Samples collected from the Leachate Pond (LP) located west of Dolby III are typical of landfill leachate, with high specific conductance and dissolved ion content. Leachate Pond 2 (LP2), located east of Dolby II, exhibits much lower specific conductance and dissolved ion content. This likely due to that fact that the Dolby II landfill is a more mature landfill. The Leak Detection System (LDS) sample appears to show relatively high concentrations of landfill indicator parameters. Overall, the Leachate Detection System sample results for 2019 were within historical ranges for this location.

Monitoring of the Partridge Brook Flowage continues to show minimal evidence of impact to the surface water from the landfill. Field monitoring results at location PBFR during the October 2019 sampling event appear to be far outside of the normal range for this monitoring location. Specific conductance was measured at 378 uS/cm during the October event, compared to 61 uS/cm during the August 2019 event. The reported TDS for the October 2019 event was 70 mg/L, which does not equate to the specific conductance measurement. The pH measurement during the October 2019 event was 3.8 SU, compared to 8.0 SU during the August 2019 event. This would be an unusually low and potentially alarming pH measurement for a surface water body. For now, I would assume that this pH value is attributable to either instrument malfunction or recording error.

Comments on 2019 Annual Report

- In section 3.10 System Failures and Repairs, SME states that:

  "On October 15, 2019 leachate from the pond exceeded the action leakage rate (ALR). The conductivity of the pond, leak detection layer, and underdrain pump station at the time was 1750 microsiemens per centimeter (uS/cm), 997 uS/cm, and 750 uS/cm, respectively. The leak detection conductivity is closer to the underdrain pump station conductivity than the leachate conductivity. Accordingly, it appears the leak detection layer may be more influenced by groundwater in the underdrain layer than from a leak in the primary liner for the leachate pond.".

  While this seems like a reasonable assessment, I think that it is also debatable. SME has concluded in the past that groundwater likely seeps into the leak

detection layer of the pond liner system. I suspect that this is true. However, it is also possible that the elevated specific conductance in the leak detection layer is not entirely attributable to groundwater with elevated dissolved ion content. The fluid in the leak detection layer may very well be leachate that has seeped through the primary liner and has been diluted by groundwater that has infiltrated the secondary liner. Monitoring results at groundwater monitoring locations 304A and 304B, located immediately downgradient of the leachate pond, do not show groundwater in this area to have elevated specific conductance in the range observed in the leak detection layer, or the underdrain pump station. This is also evidence that any leakage from the leachate pond is not significantly impacting groundwater.

- In section 4.1 Monitoring Locations, SME states that:

  "… monitoring events occurred during the periods of June 3 through 6, August 12 through 15, and November 21 through 24".

  I think there might be an error here. Based on the data tables provided in the report it looks like the fall sample event was conducted in October rather than November.

- In section 10.0 Recommendations, SME recommends that water quality monitoring frequency be reduced from three events per year to two events per year, omitting the summer monitoring event.

  This is a bit unusual given that there is a portion of Dolby III that remains open; however, SME states that this open landfill area will only receive small amounts of waste material in the coming years and will be closed in the near future. Given this, I think it is reasonable to consider a decrease in monitoring frequency at this time. While some monitoring locations show clear landfill impact with changing concentration trends, I do not believe that reducing the monitoring frequency to two events per year will limit the ability to identify changes in the overall groundwater quality. The locations where monitoring frequency may be the most critical are in the leachate pond and the associated leak detection system. These monitoring locations do exhibit relatively wide fluctuations in parameter concentrations between monitoring events; however, two monitoring events per year should be sufficient for identifying trends in the data indicative of significant leakage.

Recommendations

1. I am comfortable with SME's recommendation to decrease the groundwater and surface water quality monitoring frequency to two events per year.

Cc Kathy Tarbuck

FIGURE 1: Groundwater Monitoring Results 2010 - 2019
Dolby I Landfill, East Millinocket

Figure prepared by Sean Dougherty, MEDEP
July 2020

N

0 250 500 1,000 1,500 2,000 Feet

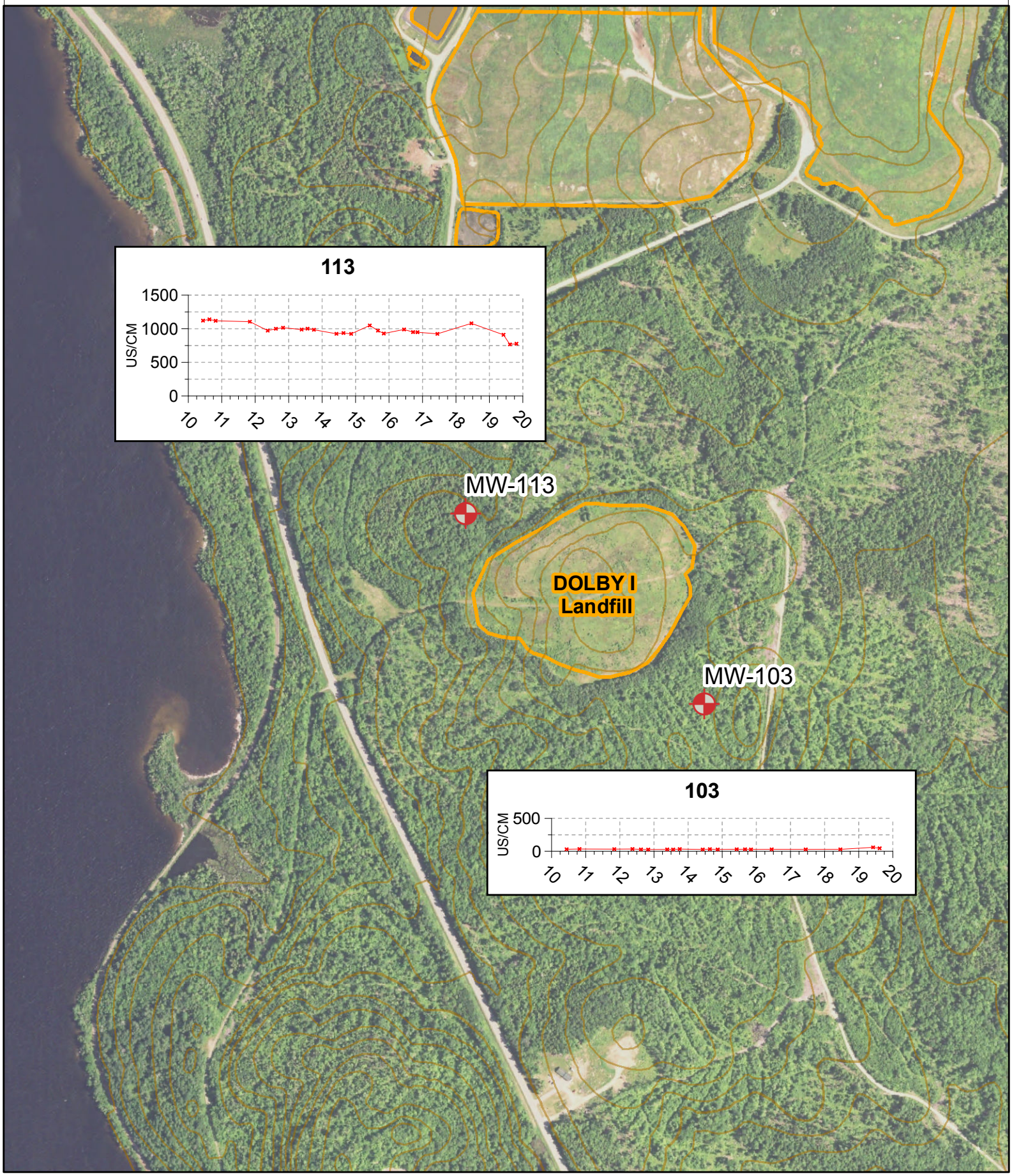
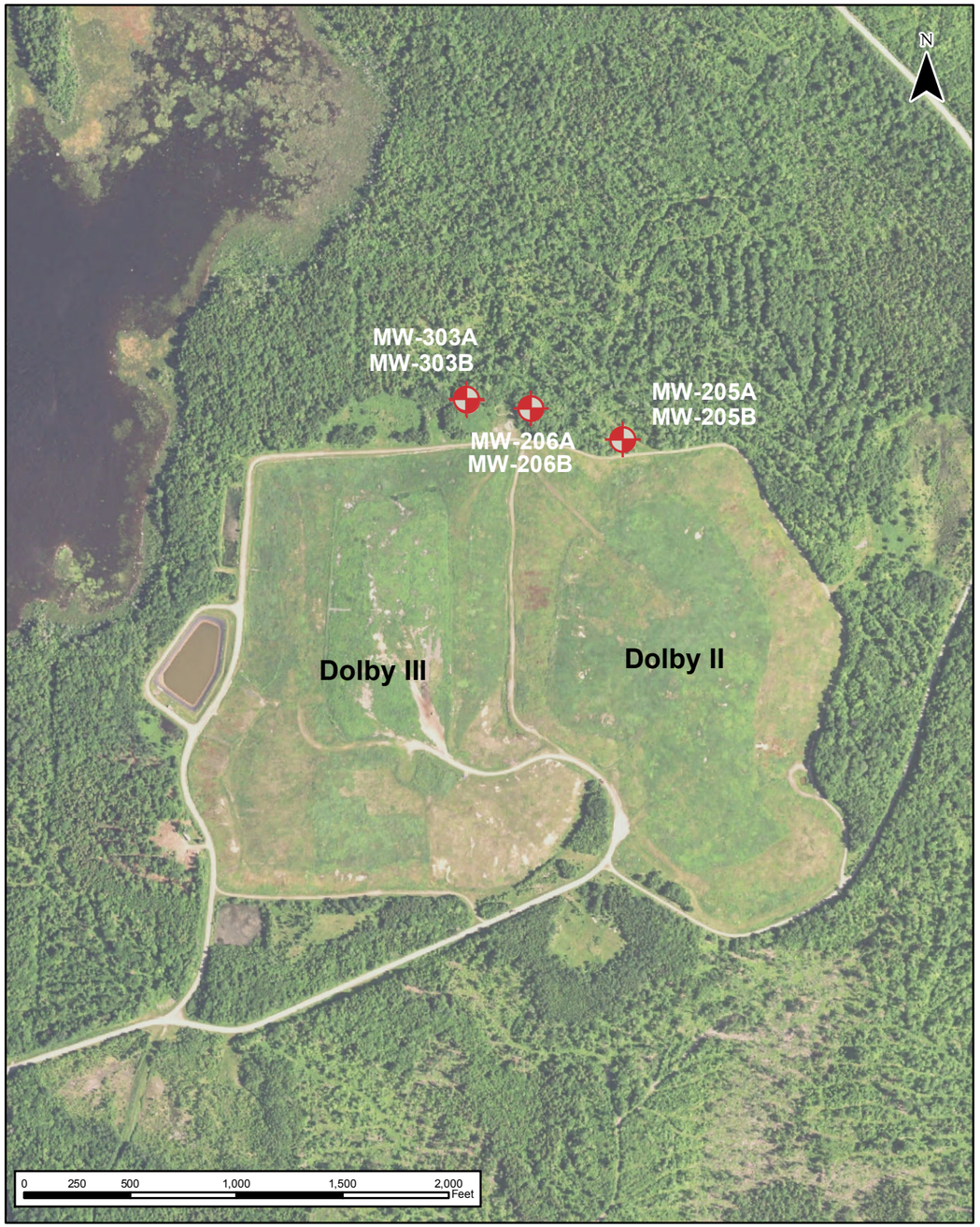


FIGURE 2A: Groundwater Monitoring Results 2010 - 2019
North Side Dolby II Landfill, East Millinocket



PLOT LEGEND

Indicator: SPC
Indicator: TDS
Cations: CA, MG, K, NA
Anions: HCO3, CL-, SO4-, ALK, TOC

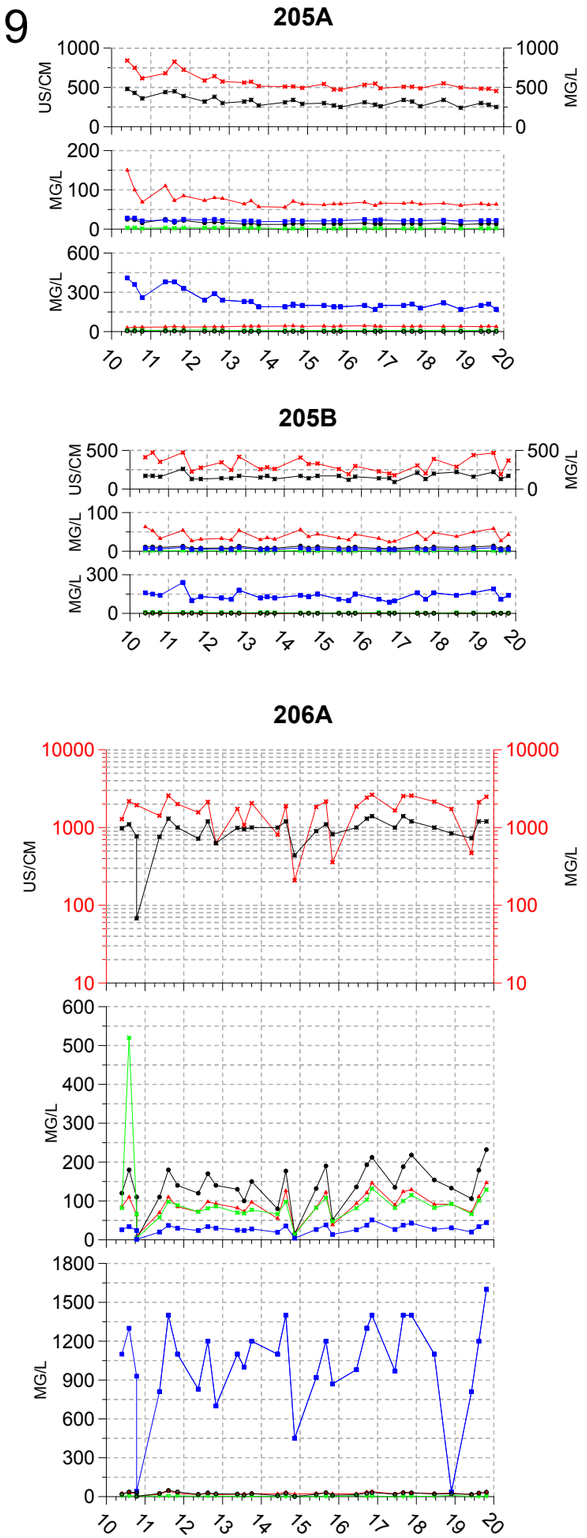
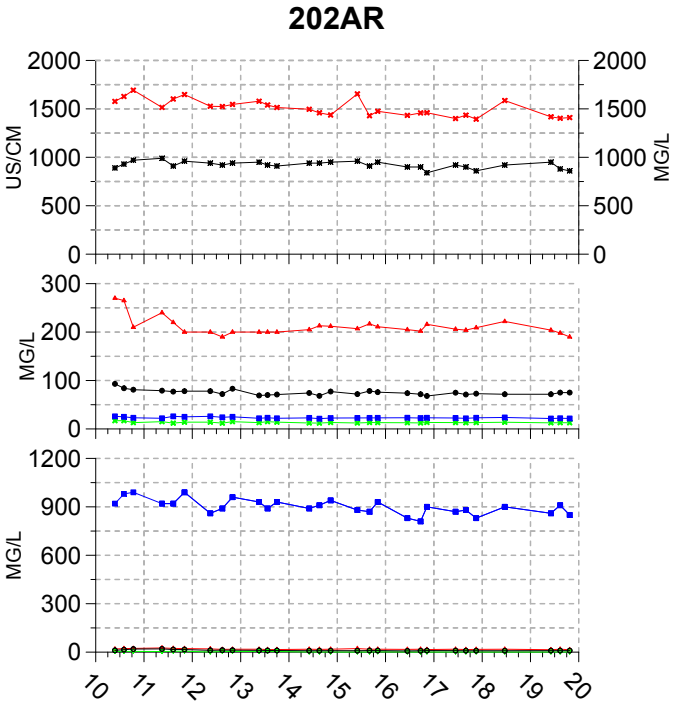
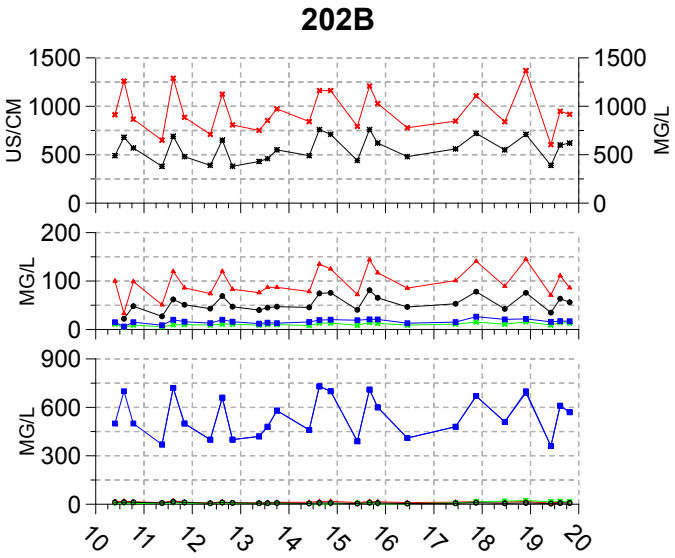
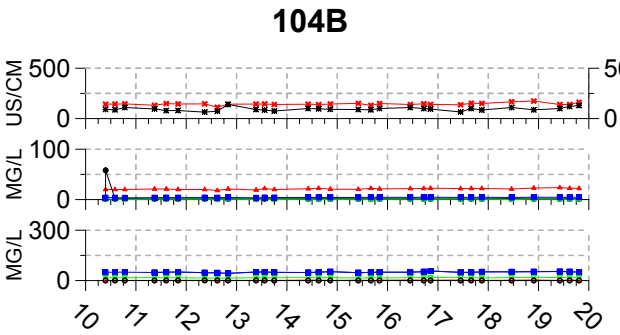


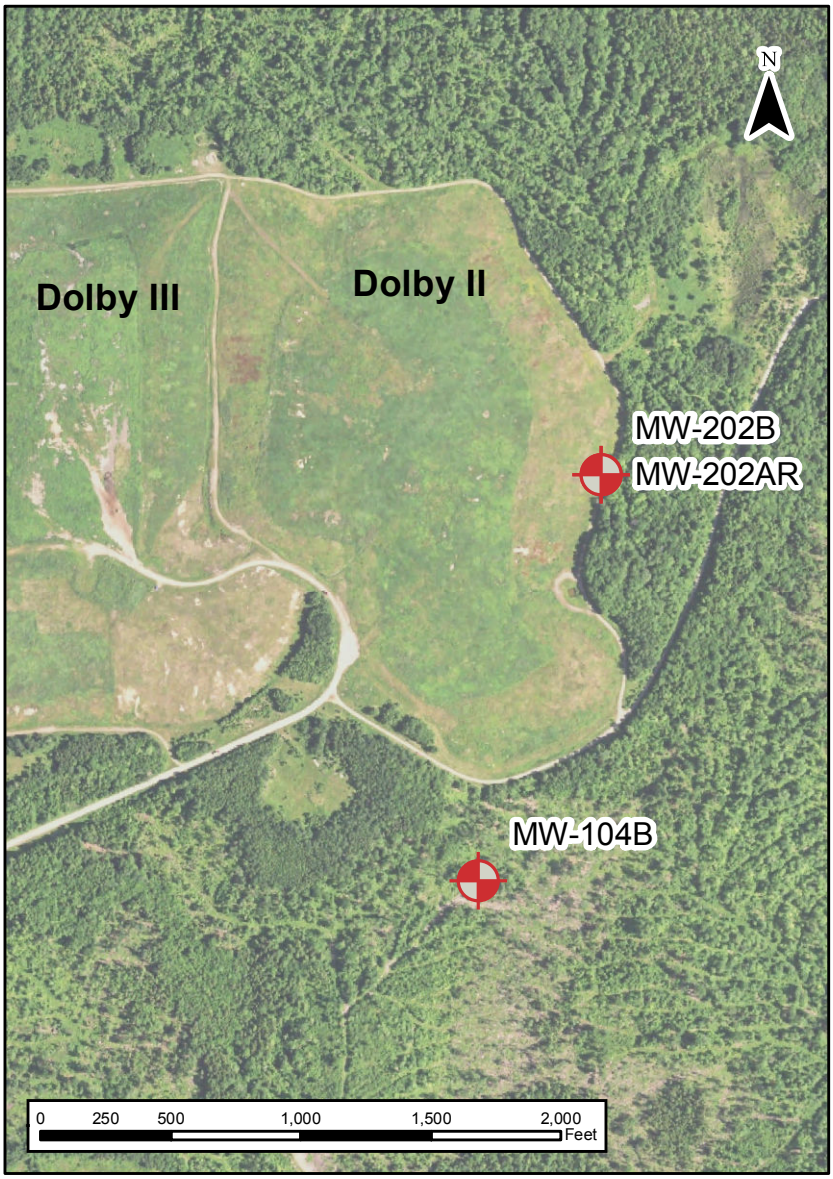
Figure prepared by Sean Doughety, MEDEP
July 2020

FIGURE 2B: Groundwater Monitoring Results 2010 - 2019
East Side Dolby II Landfill, East Millinocket









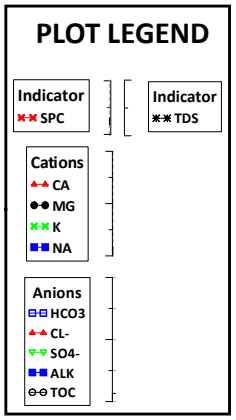
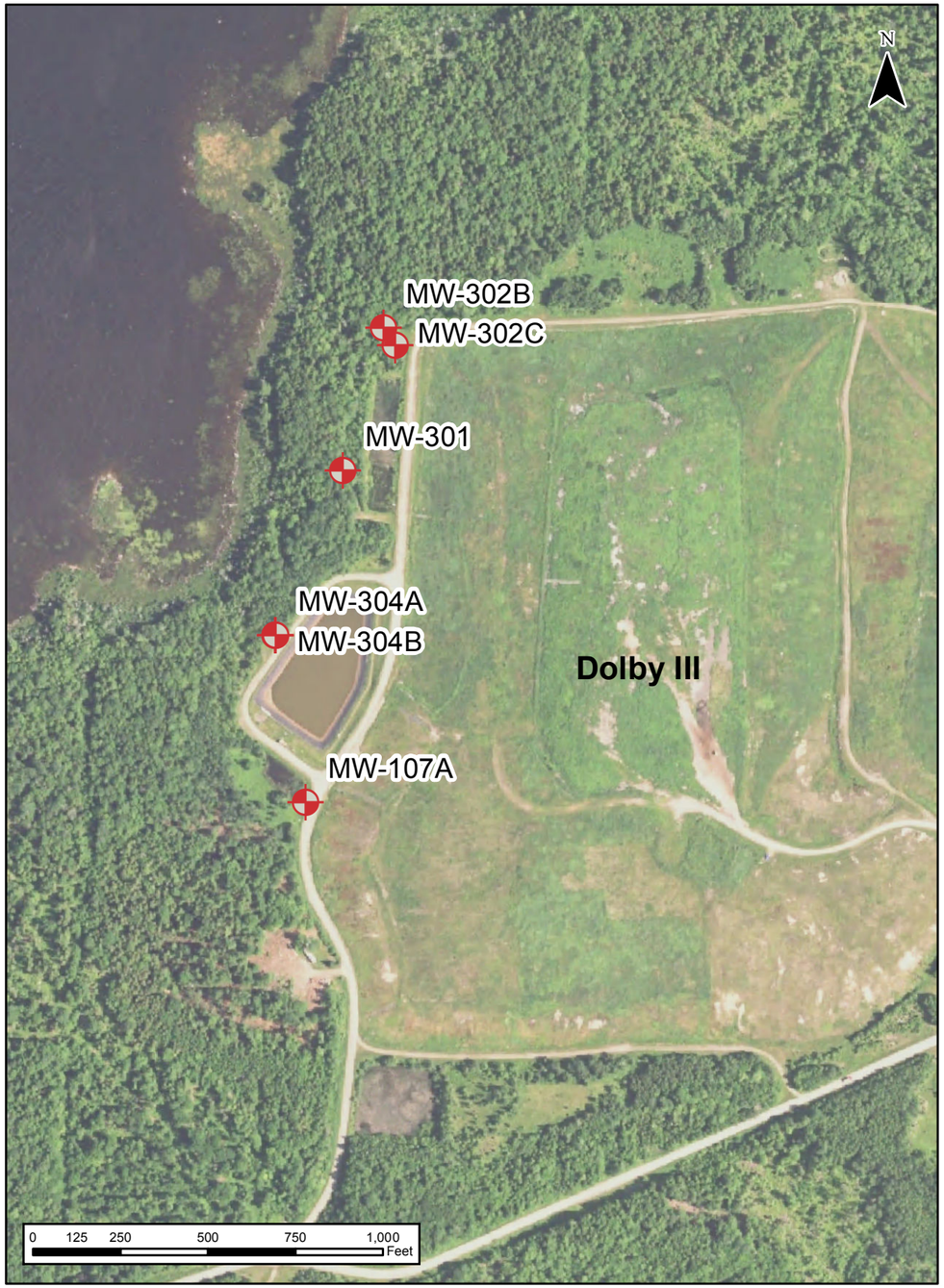


Figure prepared by Sean Dougherty, MEDEP
July 2020

FIGURE 2C: Groundwater Monitoring Results 2010 - 2019
West Side Dolby III Landfill, East Millinocket



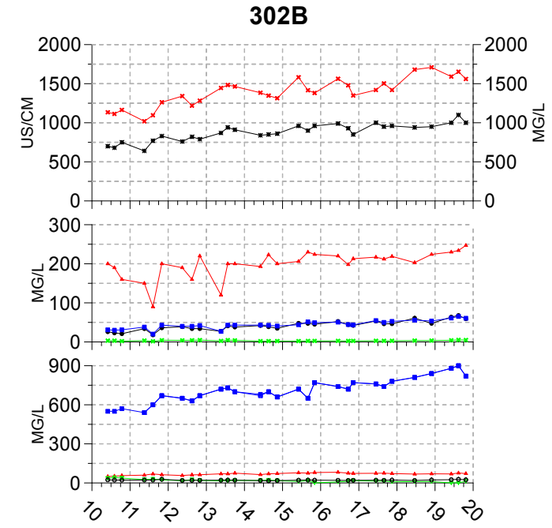
PLOT LEGEND

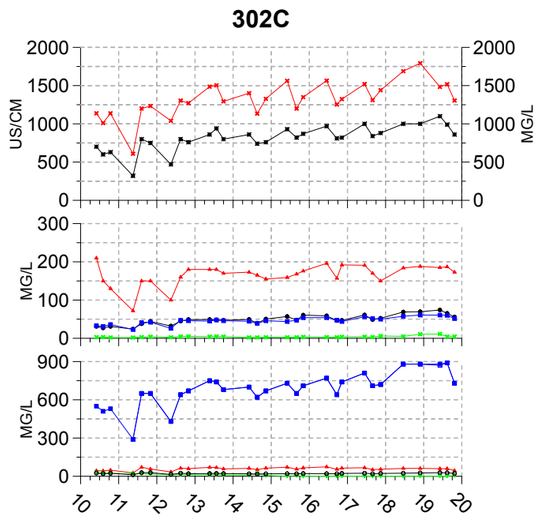
Indicator	Indicator
SPC	TDS

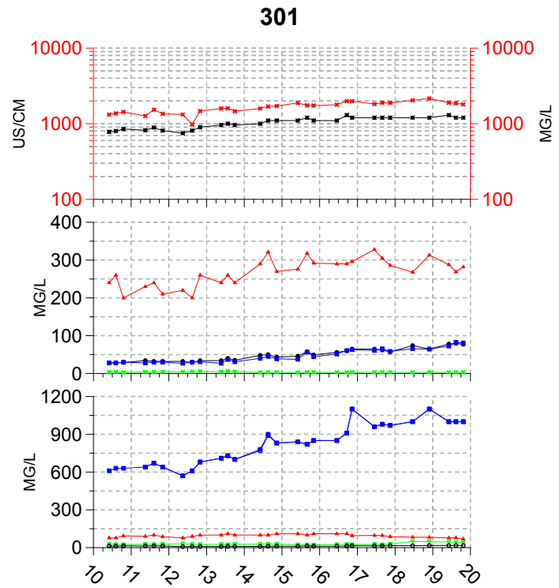
Cations: CA, MG, K, NA

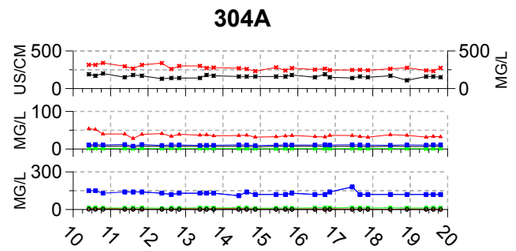
Anions: HCO3, CL-, SO4-, ALK, TOC

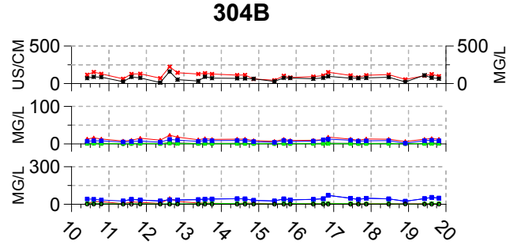
Map created by Sean Dougherty, MEDEP
July 2020











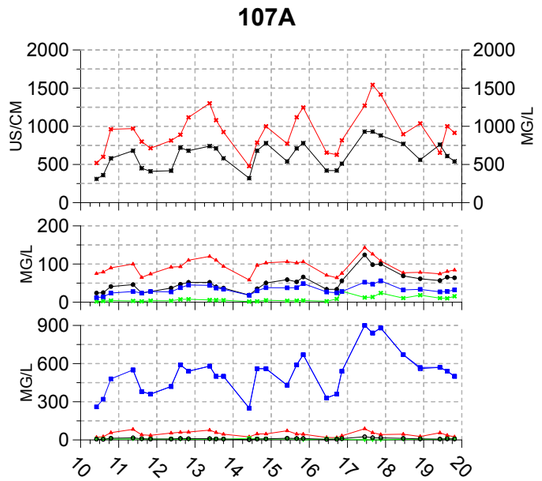
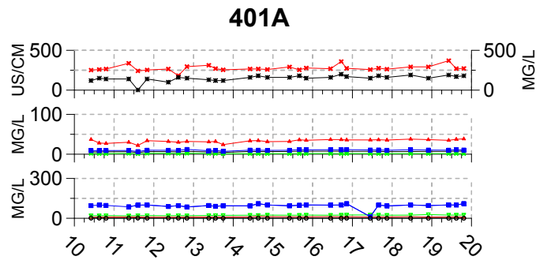
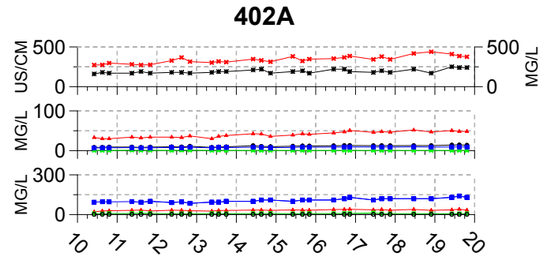
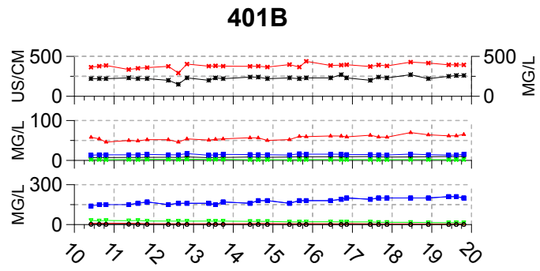


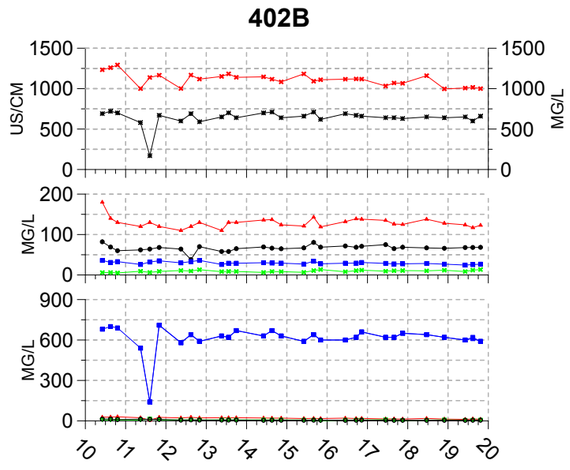
FIGURE 2D: Groundwater Monitoring Results 2010 - 2019
South Side Dolby III Landfill, East MIllinocket











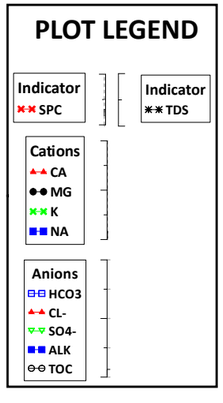
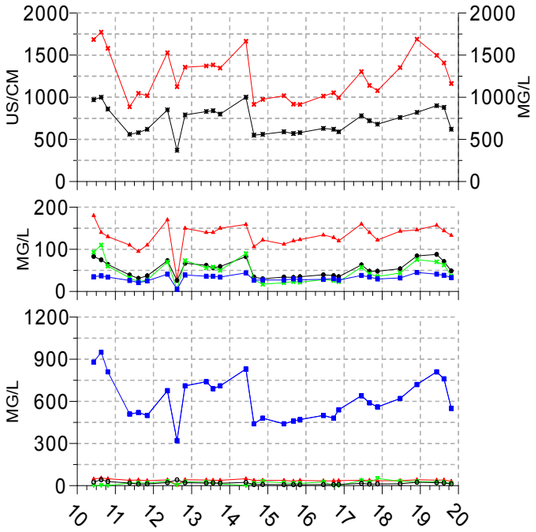


Figure prepared by Sean Dougherty, MEDEP
July 2020

FIGURE 3: Surface Water, Storm Water, and Leachate 2010 - 2019
Dolby II & III Landfills, East Millinocket

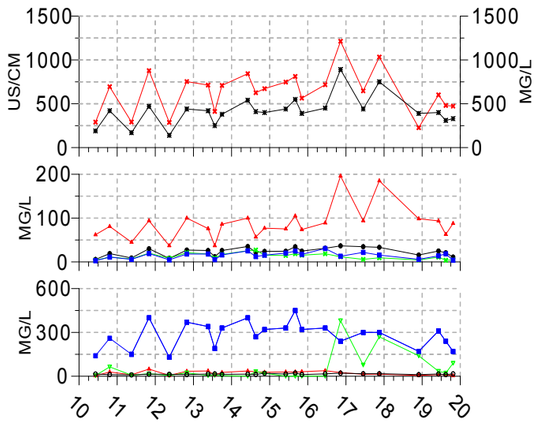
Leak Detection System

LDS



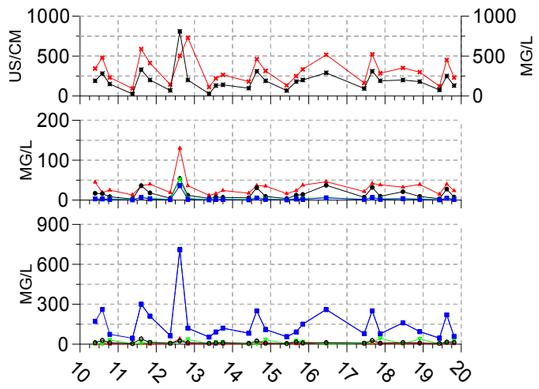
Sedimentation Pond North

SPON



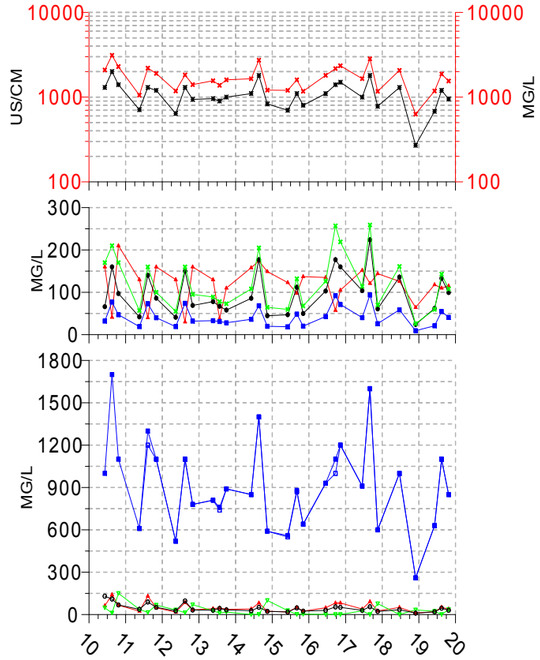
Leachate Pond 2

LPD2



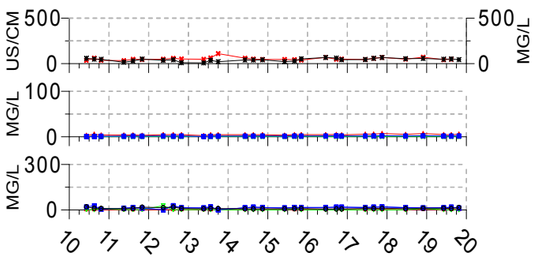
Leachate Pond

LP



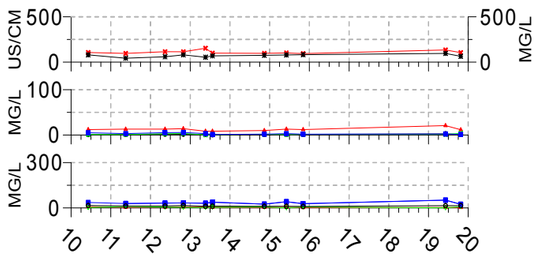
Partridge Brook Flowage (Background)

PBFB



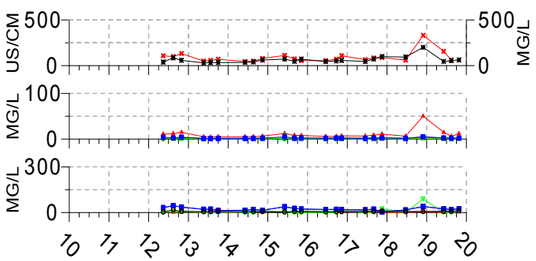
Sedimentation Pond

SPO



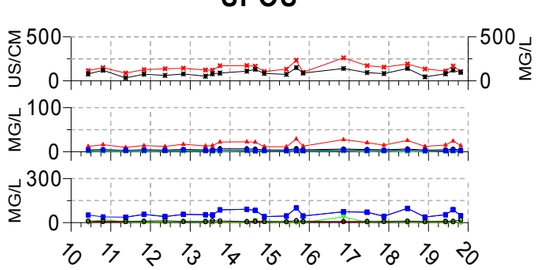
Partridge Brook Flowage Replacement

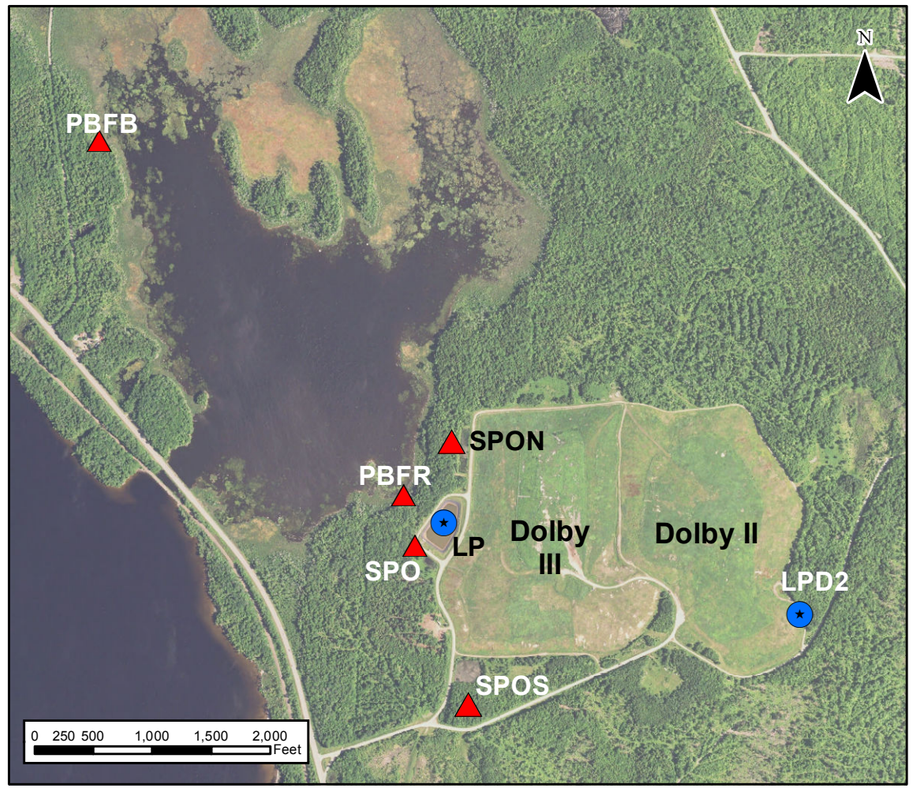
PBFR



Sedimentation Pond South

SPOS





PLOT LEGEND

Indicator: SPC

Indicator: TDS

Cations: CA, MG, K, NA

Anions: HCO3, CL-, SO4-, ALK, TOC

Figure prepared by Sean Dougherty, MEDEP
July 2020

TABLE 1
Summary of Sampling Results
Dolby Landfills, East Millinocket
2019

SAMPLE LOCATION	SAMPLE DATE	GUIDELINES	ANION					CATION				FIELD		INDICATOR									SPECIFIC CONDUCTANCE
			ALKALINITY, BICARBONATE	CHLORIDE	SULFATE	TOTAL ALKALINITY	TOTAL ORGANIC CARBON	CALCIUM	MAGNESIUM	POTASSIUM	SODIUM	DISSOLVED OXYGEN	PH	TOTAL DISSOLVED SOLIDS	TOTAL HARDNESS	TOTAL SUSPENDED SOLIDS	ARSENIC	BARIUM	IRON	MANGANESE	AMMONIA AS NITROGEN	NITRATE AS NITROGEN	
			MG/L					MG/L				MG/L	STU	MG/L			MG/L						UMHOS/CM
		MCL															0.01	2				10	MODERATE
		MEG									20						0.01	1	5	0.3	30	10	HIGH
GROUNDWATER	103	6/1/2019										12.7	7.6										59
		8/1/2019										12.3	7										45
	104B	6/1/2019	54	<2	18	54	<1	23.7	1.84	<1	4.62	4.6	7.8	120	66.8	<4	<0.008		<0.1	0.0132	<0.1	0.092	140
		8/1/2019	53	3.4	18	53	<1	22.5	1.78	<1	4.38	5.5	8.3	120	63.5	<4	<0.008		<0.1	0.0144	<0.1	0.076	140
		10/1/2019	50	2.3	17	50	<1	22.1	1.78	1.03	4.81	5	7.1	130	62.5	<4	<0.008		<0.1	0.0079	<0.1	0.082	162
	107A	6/1/2019	570	56	3.4	570	6.5	74.3	56.6	10.6	27.1		7.2	760	419	<4	<0.008		<0.1	8.16	<0.1	0.22	653
		8/1/2019	540	36	10	540	7.9	80.5	65.4	9.96	28.2	3.5	6.9	610	470	<4	<0.008		<0.1	17	0.21	<0.05	1000
		10/1/2019	500	24	6.2	500	7.6	84.3	63.9	15.6	32.3	0.5	7.1	540	474	<4	<0.008		0.197	18.6	0.92	<0.05	914
	113	6/1/2019										9.9	7.1										910
		8/1/2019										3.2	6.9										767
		10/1/2019										8.3	7.3										777
	202AR	6/1/2019	860	15	<1	860	9.2	204	71.6	12.6	21.5	2.8	6.6	950	804	<4	0.026		1.66	15	3.5	<0.05	1418
		8/1/2019	910	18	<1	910	9.4	198	75	12.9	22.1	1.6	6.6	880	802	<4	0.016		1.48	14.5	3.4	<0.05	1403
		10/1/2019	850	15	<1	850	9.5	190	75	12.7	21.6	0.4	6.9	860	784	5.6	0.014		1.58	14.5	3.2	<0.05	1410
	202B	6/1/2019	360	6.5	15	360	3.7	70.8	34.8	9.12	15.8	2.4	6.7	390	320	8.8	<0.008		1.68	4.66	1.5	<0.05	604
		8/1/2019	610	14	18	610	6.9	111	63.5	14.1	17.3	3.5	6.6	600	539	<4	<0.008		1.16	8.13	2.6	0.052	949
		10/1/2019	570	14	16	570	7.3	86.2	56.1	13.1	17	0.6	6.9	620	446	6.8	<0.008		0.538	5.89	2.3	0.24	917
	205A	6/1/2019	200	38	9.4	200	1.3	64.7	13.6	1.82	21.5	2.1	7.5	300	217	<4	<0.008		<0.1	0.16	<0.1	<0.05	484
		8/1/2019	210	41	7.9	210	1.3	62.3	14.4	1.84	22.1	4.5	7.3	280	215	<4	<0.008		0.112	0.913	0.13	<0.05	482
		10/1/2019	170	38	7.5	170	1.6	63.3	13.1	1.98	22.1	0.6	7.6	250	212	<4	<0.008		0.138	0.911	0.29	<0.05	454
	205B	6/1/2019	190	<2	4.3	190	1.1	58.5	13.5	1.24	9.01	2.1	7.4	220	202	<4	<0.008		<0.1	0.14	<0.1	<0.05	467
		8/1/2019	110	2.6	3.6	110	<1	27.3	6.88	<1	3.64	4.4	7.2	130	96.5	<4	<0.008		<0.1	0.0924	<0.1	<0.05	190
		10/1/2019	140	<2	3.9	140	1.2	43	9.89	1.16	4.93	0.5	7.9	170	148	<4	<0.008		<0.1	0.205	<0.1	<0.05	369
	206A	6/1/2019	810	16	2.3	810	17	70.5	106	66.2	20.1	2.1	6.7	730	614	24	0.122		19.6	2.62	23	0.2	470
		8/1/2019	1200	27	<1	1200	27	111	179	101	33.9	5.1	6.7	1200	1020	90	0.309		45.4	3.95	39	<0.05	2125
		10/1/2019	1600	30	<1	1600	34	147	232	129	44.3	0.5	6.9	1200	1320	96	0.316		49.2	4.19	47	<0.05	2490
	206B	6/1/2019	39	<2	4.1	39	1.5	14.4	4.12	4.2	1.54	10.6	7.2	81	53	<4	<0.008		<0.1	0.0182	<0.1	0.17	146
		8/1/2019	64	3	7.8	64	1.2	15.3	6.24	5.56	1.93	10.7	6.8	98	64	19	<0.008		2.43	0.194	<0.1	0.45	191
	301	6/1/2019	1000	77	44	1000	17	288	77.8	2.85	72.6	1.1	6.6	1300	1040	<4	<0.008		0.197	0.709	<0.1	<0.05	1896
		8/1/2019	1000	78	42	1000	17	269	79.4	3.2	82.3	2.5	6.6	1200	999	<4	<0.008		0.106	0.597	<0.1	<0.05	1867
		10/1/2019	1000	69	38	1000	17	282	77	3.2	80.8	0.3	6.8	1200	1020	<4	<0.008		0.166	0.631	<0.1	<0.05	1803
		11/1/2019					17																
	302B	6/1/2019	880	69	<1	880	25	230	63.6	4.22	61.1	12.5	6.6	1000	837	4.4	<0.008		<0.1	35.5	0.81	0.068	1591
		8/1/2019	900	76	<1	900	28	234	67.7	5.06	65.2	6	6.6	1100	863	<4	<0.008		<0.1	39.8	1.1	<0.05	1653
		10/1/2019	820	72	13	820	24	247	59.3	4.85	60.6	0.5	6.7	1000	861	<4	<0.008		<0.1	37.5	0.86	<0.05	1560
		11/1/2019		73																			
	302C	6/1/2019	870	60	<1	880	28	185	74	11.4	60.7	6.6	6.5	1100	767	<4	<0.008		0.167	55	4	<0.05	1483
		8/1/2019	900	61	<1	900	27	187	65.2	4.49	60.1	4.5	6.5	1000	736	<4	<0.008		1.11	<0.01	0.72	<0.05	1518
		10/1/2019	750	47	<1	750	23	178	60.1	8.28	55.2	0.4	6.7	860	692	<4	<0.008		0.673	44.9	1.9	<0.05	1305
		11/1/2019		46																			
	303A	6/1/2019	350	5.9	12	350	4.8	43.8	43	27.1	9.84	0.1	6.7	410	286	<4	<0.008		<0.1	6.83	5	2.5	830
		8/1/2019	350	6.9	16	350	3.9	40	34.1	26.2	8.22	3.9	6.6	370	240	<4	<0.008		<0.1	5.58	5.3	1.1	556
		10/1/2019	380	11	12	380	5.9	50.9	49.2	31.5	9.56	3.5	6.7	430	330	<4	<0.008		<0.1	8.19	5.7	<0.05	771
	303B	6/1/2019	220	3.1	12	220	3.4	29.1	26.5	19.9	6.37	2.4	6.7	260	182	<4	<0.008		<0.1	4.24	3.9	2.6	456
		8/1/2019	210	6.3	14	210	3.2	28.8	25.7	21	5.46	4.2	6.4	250	178	<4	<0.008		<0.1	4.34	3.2	1.8	423
		10/1/2019	430	15	9.6	430	7.6	63.7	62.2	33.8	13.9	4.2	6.4	490	415	<4	<0.008		<0.1	10.1	4.6	0.16	800
	304A	6/1/2019	120	3.7	12	120	<1	32.6	7	<1	10.7	4	8.2	170	110	<4	<0.008		<0.1	0.0066	<0.1	<0.05	241
		8/1/2019	120	3.1	14	120	<1	33.7	7.95	1	11.2	3.6	8.1	160	117	<4	<0.008		0.134	0.0327	<0.1	<0.05	233
		10/1/2019	120	3.3	12	120	<1	32.5	7.49	1.1	11.3	0.3	7.9	160	112	<4	<0.008		0.13	0.0264	<0.1	<0.05	275
		11/1/2019																			<0.1		
	304B	6/1/2019	45	3.8	2.3	45	<1	12.4	1.39	<1	8.54	13.5	7	110	36.7	5.2	<0.008		<0.1	0.015	<0.1	<0.05	104
		8/1/2019	55	6	4.6	55	<1	14.2	1.67	<1	9.81	9.5	7.2	77	42.4	47	<0.008		0.198	0.0337	<0.1	<0.05	124
		10/1/2019	49	5.3	4.2	49	<1	12.4	1.66	<1	8.36	4.4	7.5	65	37.7	47	<0.008		0.952	0.108	<0.1	<0.05	98
	401A	6/1/2019	100	10	24	100	<1	34.8	7.19	1.7	10.1	10.9	7.8	190	116	<4	0.141		<0.1	<0.005	<0.1	<0.05	370
		8/1/2019	100	11	24	100	<1	37.5	7.6	1.78	11	10.5	8.1	170	125	<4	0.148		<0.1	0.0055	<0.1	<0.05	270
		10/1/2019	110	8.9	24	110	<1	38.5	7.53	1.71	10.5	4.6	7.9	180	127	<4	0.135		<0.1	0.0053	<0.1	<0.05	272
	401B	6/1/2019	210	3.6	14	210	<1	61.6	9.64	1.88	13.4	2.4	8	250	194	<4	<0.008		<0.1	0.085	<0.1	<0.05	394
		8/1/2019	210	5.7	15	210	<1	61.8	9.59	1.91	13.8	4.4	8	260	194	<4	<0.008		<0.1	0.383	<0.1	<0.05	394
		10/1/2019	200	4.3	14	200	<1	65.1	10.3	2.11	15.2	0.7	8	260	205	<4	<0.008		<0.1	0.606	<0.1	<0.05	393
	402A	6/1/2019	130	36	6.5	130	1.5	50.5	14	<1	9.19	0.4	7.7	250	184	<4	<0.008		0.143	0.176	<0.1	<0.05	410
		8/1/2019	140	40	6.6	140	1.6	48.4	14.4	<1	9.38	6.8	7.9	240	180	<4	<0.008		0.228	0.175	<0.1	<0.05	385
		10/1/2019	130	34	7.4	130	1.9	48.4	13.6	<1	9.16	3	7.8	240	177	<4	<0.008		0.12	0.164	<0.1	0.44	376
	402B	6/1/2019	600	11	4.9	600	4.3	124	67.8	8.42	24.5	0.4	7	650	588	<4	<0.008		<0.1	0.452	<0.1	<0.05	1007
		8/1/2019	610	14	5.6	620	4.9	117	68	11.9	25.6	1.6	7.1	600	572	<4	<0.008		<0.1	0.891	<0.1	<0.05	1016
		10/1/2019	590	12	6.4	590	5	123	68.3	13.4	26.7	1.9	7	660	588	<4	<0.008		<0.1	1.32	<0.1	<0.05	1000
LEACHATE	LDS	6/1/2019	810	39	26	810	21	157	87.9	70.3	41.1	3.4	7.1	900	755	4.8	0.01		5.06	5.46	6.6	<0.05	1497
		8/1/2019	760	40	23	760	19	144	71	62.9	38.2	2.5	7.1	880	651	8	0.015		5.16	4.86	6	<0.05	1408
		10/1/2019	550	31	16	550	12	133	48.7	36.6	33	0.5	7.2	620	533	23	0.013		7.9	3.76	2.3	<0.05	1162
	LP	6/1/2019	630	20	23	630	19	118	62	59.7	20.9	12.4	7.4	680	551	17	0.01		3.46	4.63	7.5	0.18	1182
		8/1/2019	1100	51	<1	1100	45	110	133	143	54.6	6.6	7.9	1200	824	<4	0.015		1.88	1.7	16	<0.05	1875
		10/1/2019	850	39	35	850	30	115	99.4	108	40.9	5.4	7.7	950	696	6.8	0.012	0.107	3.69	2.68	12	0.68	1549
	LPD2	6/1/2019	45	<2	2.9	45	5.2	14.8	3.32	1.15	<1	8.5	7.8	76	50.5	<4	<0.008		1.28	0.0706	<0.1	<0.05	123
		8/1/2019	220	4.4	11	220	15	39.9	27.6	4.96	4.68	0.5	7.5	250	213	7.2	<0.008		3.18	1.04	4.5	<0.05	451
		10/1/2019	58	3.6	23	58	12	23.6	7.44	2.82	1.57	2.3	7.6	130	89.7	8	<0.008		3.62	1.02	1	2.7	231
		AWQC																	1				
SURFACE WATER	PBFB	6/1/2019	14	<2	<1	14	11	4.89	1.48	<1	1.65	7.5	7.9	48	18.3	<4	<0.008		0.511	0.0595	<0.1	<0.05	43
		8/1/2019	18	3.2	<1	18	9.1	4.38	1.58	<1	1.48	9.1	7.9	51	17.4	<4	<0.008		0.226	0.0267	<0.1	<0.05	48
		10/1/2019	12	3.5	<1	12	16	5.78	1.41	<1	1.73	7.6	7.7	44	20.2	7.2	<0.008		0.952	0.153	<0.1	0.06	
	PBFR	6/1/2019	24	2.3	<1	24	8.9	14.7	2.17	<1	2.44	5.8	7.3	48	45.6	<4	<0.008		0.267	0.548	<0.1	<0.05	156
		8/1/2019	20	4	<1	20	9	6.26	1.88	<1	1.9	8.1	8	55	23.4	<4	<0.008		0.133	0.0415	<0.1	<0.05	61
		10/1/2019	25	4.3	11	25	13	12	1.96	1.4	2.44	7.1	3.8	70	38.1	<4	<0.008		0.271	0.0405	<0.1	0.14	378
	SPO	6/1/2019	51	2.8	<1	52	15	20.8	2.55	1.44	2.26	8.5	7.5	96	62.5	16	<0.008		2.18	0.715	<0.1	<0.05	134
		10/1/2019	24	3.1	7.9	24	15	11.7	1.33	3.85	1.33	7.8	7.8	64	34.8	5.2	<0.008		0.331	0.0434	<0.1	0.34	105
	SPON	6/1/2019	310	11	34	310	15	93.6	24.9	10.9	13.8	3.4	7.3	400	336	5.6	<0.008		0.394	4.28	0.26	0.093	601
		8/1/2019	240	11	22	240	11	62.8	21	3.87	18.4	3	7.5	310	243	16	<0.008		1.55	1.95	<0.1	<0.05	481
		10/1/2019	170	3.7	89	170	16	87.8	11.1	4.36	3.85	7.9	7.7	330	265	7.6	<0.008		0.606	0.223	<0.1	0.52	473
	SPOS	6/1/2019	54	<2	<1	54	9.2	15.2	4.39	1.41	2.45	8.1	7.8	80	56	<4	<0.008		0.33	0.0919	<0.1	<0.05	111
		8/1/2019	88	2.5	<1	88	8.6	24.4	5.88	<1	3.34	9	8.1	120	85.2	<4	<0.008		0.704	0.211	<0.1	<0.05	169
		10/1/2019	47	3.1	<1	47	18	14	3.94	1.71	2.67	9.2	7.8	96	51.1	<4	<0.008		0.132	0.0265	<0.1	<0.05	106

TABLE 2

Mann-Kendall Trend Analysis

DOLBY LANDFILLS, East Millinocket

2010 through 2019

Sample Type	Well ID	Trend	Confidence Level	CALCIUM	MAGNESIUM	SODIUM	POTASSIUM	TOTAL ALKALINITY	ALKALINITY, BICARBONAT	ARSENIC	CHLORIDE	SULFATE	DISSOLVED OXYGEN	IRON	MANGANESE	NITRATE AS NITROGEN	PH	SPECIFIC CONDUCTANCE	TOTAL DISSOLVED SOLIDS	TOTAL ORGANIC CARBON
GROUNDWATER	103	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	113	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	301	Down	0.95	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE
			0.99	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE
	104B	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE
			0.99	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	107A	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE
			0.99	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	202AR	Down	0.95	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE
			0.99	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	202B	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE
		Up	0.95	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	205A	Down	0.95	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE
			0.99	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	205B	Down	0.95	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	206A	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	206B	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	302B	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE
			0.99	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE
	302C	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE
			0.99	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE
	303A	Down	0.95	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE
			0.99	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	303B	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	304A	Down	0.95	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE
			0.99	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	304B	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

TABLE 2

Mann-Kendall Trend Analysis

DOLBY LANDFILLS, East Millinocket

2010 through 2019

Sample Type	Well ID	Trend	Confidence Level	CALCIUM	MAGNESIUM	SODIUM	POTASSIUM	TOTAL ALKALINITY	ALKALINITY, BICARBONAT	ARSENIC	CHLORIDE	SULFATE	DISSOLVED OXYGEN	IRON	MANGANESE	NITRATE AS NITROGEN	PH	SPECIFIC CONDUCTANCE	TOTAL DISSOLVED SOLIDS	TOTAL ORGANIC CARBON
		Up	0.95	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE
	401A	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE
			0.99	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE
	401B	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE
		Up	0.95	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE
			0.99	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE
	402A	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE
			0.99	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE
	402B	Down	0.95	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE
			0.99	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE
		Up	0.95	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
LEACHATE	LDS	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	LP	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	LPD2	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
SURFACE WATER	PBFB	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE
			0.99	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	PBFR	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE
			0.99	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
	SPO	Down	0.95	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	SPON	Down	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	SPOS	Down	0.95	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Up	0.95	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE
			0.99	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE

APPENDIX J

LEACHATE POND PUMPING INFORMATION

SME
SEVEE & MAHER
ENGINEERS

ATTACHMENT 1
LEACHATE FLOW DATA
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
January 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED FLOW (GPM)	LEACHATE VOLUME				LEACHATE POND LEVEL (Feet)	LEAK DETECTION			DAILY RAINFALL[5] (Inches)	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED TOTAL (Minutes)		PUMPED[2] ESTIMATE (Gallons)	METERED[3] (Gallons)	DIFFERENCE[4] (Gallons)	DIFFERENCE[4] (%)		SUMP LEVEL (Inches)	TOTALIZER (gallons)	VOLUME (gallons)		Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Total Flow (Gallons)	
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)																
1																				
2	10,675.6	10,675.6	10,359.3	10,359.3	0	0	0	9,580	-826,820	-98.85%	2.65	5.70	421954	0	0.559	11949.4	11968.2	1128	28200	Discrepancy in Flow but no indication of release
3																				
4	10,675.6	10,702.6	10,359.3	10,386.1	3,228	310	1,000,680				1.86	6.10	421954	0	0.000	11968.2	11986.5	1098	27450	Pumps Ran at the same time 1/2/2023 thru 1/3/2023
5																				
6	10,702.6	10,702.6	10,386.1	10,386.1	0	0	0				2.36	6.60	421954	0	0.000	11986.5	11997.8	678	16950	
7																				
8																				
9	10,702.6	10,727.0	10,386.1	10,386.1	1,464	550	805,200	1,794,131	-11749	-0.7%	2.26	6.90	421954	0	0.219	11997.8	12012.2	864	21600	
10																				
11	10,727.0	10,742.2	10,386.1	10,386.1	912	550	501,600				1.84	6.90	421954	0	0.024	12012.2	12021.3	546	13650	
12																				
13	10,742.2	10,742.2	10,386.1	10,386.1	0	0	0				2.50	8.80	421954	0	0.000	12021.3	12030.0	522	13050	
14																				
15																				
16	10,742.2	10,758.4	10,386.1	10,402.3	1,944	310	602,640	1,090,412	-13828	-1.3%	2.09	9.90	421954	0	1.037	12030.0	12043.3	798	19950	Pumps Ran at the same time 1/14/2022 thru 1/15/2023
17																				
18	10,758.4	10,758.4	10,402.3	10,402.3	0	0	0				2.54	10.20	421954	0	0.130	12043.3	12052.2	534	13350	
19																				
20	10,758	10,775	10,402.3	10,418.8	1,980	310	613,800				2.35	10.30	421954.0	0	0.350	12052.2	12061.7	570	14250	Pumps ran at the same time 1/16/2023 to 1/18/2022
21																				
22																				
23	10,775	10,775	10,418.8	10,418.8	0	0	0	617,350	3550	0.6%	2.93	9.90	422926	972	0.111	12061.7	12075.9	852	21300	
24																				
25	10,774.9	10,790.1	10,418.8	10,433.9	1,818	310	563,580				2.38	3.50	427306	4,380	0.066	12075.9	12085.7	588	14700	Pumps ran at the same time on 1/25/2023
26																				
27	10,790.1	10,790.1	10,433.9	10,433.9	0	0	0				2.68	3.10	434335	7,029	0.216	12085.7	12095.7	600	15000	
28																				
29																				
30	10,790.1	10,804.7	10,433.9	10,433.9	876	550	481,800	1,020,479	-24901	-2.4%	2.46	10.00	442607	8,272	0.598	12095.7	12110.5	888	22200	
31																		0	0	
							4,569,300	4,531,952	gallons/month						3.310		TOTAL	9,666	241,650	
					12,222		147,397	146,192	gallons/day											
							102	102	gallons/minute											

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Average flow rate (gallon per minute) x combined total (minutes).
3. Metered flow from Flowmeter in Flow Meter Buidling.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is pumped flow divided by metered flow, minus 100%.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.

ATTACHMENT 1
LEACHATE FLOW DATA
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
FEBRUARY 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED FLOW (GPM)	LEACHATE VOLUME				LEACHATE POND LEVEL (Feet)	LEAK DETECTION			DAILY RAINFALL[5] (Inches)	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED TOTAL (Minutes)		PUMPED[2] ESTIMATE (Gallons)	METERED[3] (Gallons)	DIFFERENCE[4] (Gallons)	(%)		SUMP LEVEL (Inches)	TOTALIZER (gallons)	VOLUME (gallons)		Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Volume (Gallons)	
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)																
1	10,804.7	10,804.7	10,433.9	10,433.9	0		0				2.66	3.20	450,002	7,395	0.094	12,110.5	12,120.3	588	14,700	
2																				
3	10,804.7	10,816.4	10,433.9	10,433.9	702	615	431,730				2.31	2.70	455,070	5,068	0.000	12,120.3	12,126.6	378	9,450	
4																				
5																				
6	10,816.4	10,816.4	10,433.9	10,433.9	0	0	0	380,650	51,080	13%	2.55	2.50	465,588	10,518	0.000	12,126.6	12,130.5	234	5,850	
7																				
8	10,816.4	10,826.3	10,433.9	10,433.9	594	609	361,746				2.25	1.70	469,394	3,806	0.021	12,130.5	12,136.5	360	9,000	
9																				
10	10,826.3	10,826.3	10,433.9	10,433.9	0	0	0				2.46	3.50	475,068	5,674	0.054	12,136.5	12,136.5	0	0	Underdrain pump out of service
11																				
12																				
13	10,826.3	10,826.3	10,433.9	10,433.9	0	0	0	314,630	47,116	15.0%	2.74	17.70	481,603	6,535	0.246	12,136.5	12,136.5	0	0	
14																				
15	10,826.3	10,839.0	10,433.9	10,433.9	762	530	403,860	422,368	-18,508	-4.4%	2.28	3.50			0.042	12,136.5	12,136.5	0	0	
16																				
17	10,839.0	10,839.0	10,433.9	10,434.7	48	530	25,440				2.47	35.70	487,204	5,601	0.028	12,136.5	12,136.5	0	0	
18																				
19																				
20	10,839.0	10,847.3	10,434.7	10,434.7	498	530	263,940	280,969	8,411	3.0%	2.49	38.60	489,023	1,819	0.111	12,136.5	12,136.5	0	0	
21																				
22	10,847.3	10,847.3	10,434.7	10,434.7	0	0	0				2.71	1.40	505,763	16,740	0.000	12,136.5	12,136.5	0	0	
23																				New underdrain pump installed
24	10,847.3	10,860.3	10,434.7	10,434.7	780	530	413,400				2.37	5.80	509,291	3,528	0.000	NA	NA	NA	NA	See Note 7 for UD Volume
25																				
26																				
27	10,860.3	10,860.3	10,434.7	10,434.7	0	0	0	425,113	-11,713	-2.8%	2.69	6.20	509,291	0	0.000	NA	NA	NA	NA	See Note 7 for UD Volume
28																				
							1,900,116	1,823,730	gallons/month					66,684	0.596		TOTAL	1,560	39,000	
							67,861	65,133	gallons/day											
							47	45	gallons/minute											

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Average flow rate (gallon per minute) x combined total (minutes).
3. Metered flow from Flowmeter in Flow Meter Buidling determined from flow meter totalizer.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is pumped flow divided by metered flow, minus 100%.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.
7. Underdrain pump found on its side on 2/27/2023. The pump was fixed and continued to operate without issues. Given the pump condition no volume was entered for 2/24/23 through 2/27/23.

ATTACHMENT 1
LEACHATE FLOW DATA
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
MARCH 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED FLOW (GPM)	LEACHATE VOLUME				LEACHATE POND LEVEL (Feet)	LEAK DETECTION			DAILY RAINFALL[5] (Inches)	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED TOTAL (Minutes)		PUMPED[2] ESTIMATE (Gallons)	METERED[3] (Gallons)	DIFFERENCE[4] (Gallons)	(%)		SUMP LEVEL (Inches)	TOTALIZER (gallons)[7]	VOLUME (gallons)[8]		Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Total Flow (Gallons)	
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)																
1	10,860.3	10,872.3	10,434.7	10,434.7	720	530	381,600				2.30	7.40	317,499		0.039	12,228.1	12,232.7	276	6,900	
2																				
3	10,872.3	10,879.7	10,434.7	10,434.7	444	530	235,320				2.48	7.10	317,499		0.211	12,232.7	12,235.2	150	3,750	
4																				
5																				
6	10,879.7	10,879.7	10,434.7	10,434.7	0			623,411	-6,491	-1.0%	2.39	8.90	317,499		0.197	12,235.2	12,244.6	564	14,100	
7																				
8	10,879.7	10,879.7	10,434.7	10,434.7	0						2.54	8.70	317,499		0.065	12,244.6	12,250.7	366	9,150	
9																				
10	10,879.7	10,888.9	10,434.7	10,434.7	552	530	292,560				2.21	9.80	317,499		0.005	12,250.7	12,255.6	294	7,350	
11																				
12																				
13	10,888.9	10,888.9	10,434.7	10,434.7	0			300,814	-8,254	-2.7%	2.69	9.80	317,499		0.000	12,255.6	12,265.1	570	14,250	
14																				
15	10,888.9	10,899.1	10,434.7	10,434.7	612	585	358,020				2.40	3.80	318,546	1,047	0.074	12,265.1	12,272.1	420	10,500	
16																				
17	10,899.1	10,907.8	10,434.7	10,434.7	522	585	305,370				2.17	5.50	318,546		0.000	12,272.1	12,279.0	414	10,350	
18																				
19																				
20	10,907.8	10,907.8	10,434.7	10,434.7	0			605,149	58,241	9.6%	2.76	5.80	318,546		0.193	12,279.0	12,291.7	762	19,050	
21																				
22	10,907.8	10,922.2	10,434.7	10,435.2	894	566	506,004				2.38	5.80	318,546		0.000	12,291.7	12,298.7	420	10,500	
23																				
24	10,922.2	10,940.3	10,435.2	10,435.2	1,086	556	603,816				2.18	5.80	318,546		0.826	12,298.7	12,309.2	630	15,750	
25																				
26																				
27	10,940.3	10,957.7	10,435.2	10,435.2	1,044	495	516,780	1,628,401	-1,801	-0.1%	2.41	6.60	318,546		0.715	12,309.2	12,325.7	990	24,750	
28																				
29	10,957.7	10,981.1	10,435.2	10,435.2	1,404	510	716,040				2.37	6.70	318,546		0.005	12,325.7	12,337.2	690	17,250	
30																				
31	10,981.1	11,006.3	10,435.2	10,435.2	1,512	520	786,240				2.15	6.70	318,546		0.109	12,337.2	12,348.6	684	17,100	
								3,157,775	gallons/month					1047	2.439		TOTAL	7,230	180,750	
								101,864	gallons/day											
								71	gallons/minute											

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Average flow rate (gallon per minute) x combined total (minutes).
3. Metered flow from Flowmeter in Flow Meter Buidling.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is pumped flow divided by metered flow, minus 100%.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.
7. Leak Detection Totalizer reading from meter instaled in 2021.
8. Leakage Rate from 2/24/2023 to 3/15/2023 was 27.5 gal/acre-day. This is less than the Action Leakage Rate (ALR) of 40 gal/acre/day.

ATTACHMENT 1
LEACHATE FLOW DATA
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
APRIL 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED	LEACHATE VOLUME					LEACHATE POND	LEAK DETECTION			DAILY	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED		PUMPED[2]	Totalizer	METERED[3]	DIFFERENCE[4]						RAINFALL[5]					
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)	TOTAL (Minutes)	FLOW (GPM)	ESTIMATE (Gallons)	(Gallons)	(Gallons)	(Gallons)	(%)	LEVEL (Feet)	SUMP LEVEL (Inches)	TOTALIZER[7] (gallons)	VOLUME (gallons)	(Inches)	Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Total Flow (Gallons)	
1								0	0												Totalizer Zeroed
2																					
3	11,006.3	11,019.7	10,435.2	10,461.9	2,406	435.5	1,047,813	1,071,434	1,071,434	23,621	-2.2%	2.05	6.8	318,546		0.305	12,348.6	12,366.2	1,056	26,400	
4	11,019.7	11,039.4	10,461.9	10,484.3	2,526	217.8	550,036					-0.98	6.1	318,546		0.000	12,366.2	12,371.6	324	8,100	Two Pumps in Parallel
5	11,039.4	11,039.4	10,484.3	10,501.4	1,026	471.0	483,246					-0.72	6.0	318,546		0.000	12,371.6	12,377.2	336	8,400	
6	11,039.4	11,039.4	10,501.4	10,518.7	1,038	471.0	488,898					-1.00	6.3	318,546		0.165	12,377.2	12,384.2	420	10,500	
7	11,039.4	11,039.4	10,518.7	10,518.7	0							2.00	7.0	318,546		0.837	12,384.2	12,390.8	396	9,900	
8	11,039.4	11,063.0	10,518.7	10,542.3	2,832	288.0	815,616					-0.90	6.4	318,546		0.000	12,390.8	12,397.3	390	9,750	Two Pumps in Parallel
9																					
10	11,063.0	11,063.0	10,542.3	10,573.7	1,884	435.5	820,482	4,632,042	3,560,608	402,329	-11.3%	-0.90	6.1	318,546		0.000	12,397.3	12,409.4	726	18,150	
11	11,063.0	11,063.0	10,573.7	10,591.4	1,062	435.5	462,501					1.27	6.4	318,546		0.000	12,409.4	12,416.5	426	10,650	
12	11,063.0	11,063.0	10,592.4	10,598.0	336	435.5	146,328					2.23	7.0	318,546		0.000	12,416.5	12,424.2	462	11,550	
13	11,063.0	11,087.4	10,598.0	10,622.2	2,916	275.0	801,900					1.64	6.5	318,546		0.000	12,424.2	12,430.7	390	9,750	Two Pumps in Parallel
14	11,087.4	11,093.7	10,622.2	10,645.4	1,770	217.8	385,418					-0.94	6.3	318,546		0.000	12,430.7	12,436.9	372	9,300	Two Pumps in Parallel
15																					
16																					
17	11,093.7	11,093.7	10,645.4	10,663.2	1,068	435.5	465,114	7,328,560	2,696,518	435,257	-16.1%	1.97	7.1	318,546		0.055	12,436.9	12,453.6	1,002	25,050	
18																					
19	11,093.7	11,112.0	10,663.2	10,663.2	1,098	435.5	478,179					2.25	7.0	318,546		0.828	12,453.6	12,464.2	636	15,900	
20	11,112.0	11,115.4	10,663.2	10,663.2	204	435.5	88,842					2.89	7.4	318,546		0.010	12,464.2	12,475.2	660	16,500	
21																					
22																					
23																					#1 Pump came on 476 gpm
24	11,115.4	11,141.3	10,663.2	10,663.2	1,554	476.0	739,704	8,714,884	1,386,324	79,599	-5.7%	2.24	7.5	318,546		0.000	12,475.2	12,489.0	828	20,700	
25																					
26	11,141.3	11,141.3	10,663.2	10,663.2	0							2.65	7.6	318,546		0.106	12,489.0	12,497.7	522	13,050	
27																					
28	11,141.3	11,165.6	10,663.2	10,663.2	1,458	476.0	694,008					2.00	7.5	318,546		0.021	12,497.7	12,505.9	492	12,300	
29																					
30																					
31																					
1-May	11,157	11,166	10,663.2	10,675.4	1,272	490.0	623,280	9,811,565	1,096,681	-220607	20.1%										
									9,811,565	gallons/month						2.327		TOTAL	9,438	235,950	
									327,052	gallons/day											
									227	gallons/minute											

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Average flow rate (gallon per minute) x combined total (minutes).
3. Metered flow from Flowmeter in Flow Meter Buidling.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is pumped flow divided by metered flow, minus 100%.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.
7. Totalizer reading from meter instaled in 2021.

ATTACHMENT 1
LEACHATE FLOW DATA
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
MAY 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED FLOW (GPM)	LEACHATE VOLUME					LEACHATE POND LEVEL (Feet)	LEAK DETECTION			DAILY RAINFALL[5] (Inches)	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED TOTAL (Minutes)		PUMPED[2] ESTIMATE (Gallons)	TOTALIZER FLOW (Gallons)	METERED[3] (Gallons)	DIFFERENCE[4] (Gallons)	(%)		SUMP LEVEL (Inches)	TOTALIZER[7] (gallons)	VOLUME[8] (gallons)		Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Total Flow (Gallons)	
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)																	
1	11,166	11,166	10,663	10,675	732	492	360,144	9,811,565	1,096,681	220,607	10.4%	2.20	8.10	318546	0	0.786	12505.9	12518.6	762	19,050	Metered flow for May 1 was couned in April
2																					
3	11,165.6	11,169.5	10,675	10,688	978	492	481,176					1.95	7.70	318546	0	0.326	12518.6	12527.7	546	13,650	
4																					
5	11,169.5	11,181.5	10,688	10,688	720	492	354,240					1.91	7.50	318546	0	0.031	12527.7	12536.4	522	13,050	
6																					
7																					
8	11,181.5	11,181.5	10,687.8	10,698.6	648	492	318,816	11,179,221	1,367,656	(213,424)	-15.6%	1.90	8.30	318546	0	0.000	12536.4	12549.1	762	19,050	
9																					
10	11,181.5	11,181.5	10,699	10,699	0	0	0					2.46	8.40	318546	0	0.000	12549.1	12557.2	486	12,150	
11																					
12	11,181.5	11,192.6	10,699	10,699	666	492	327,672					1.84	8.80	318546	0	0.000	12557.2	12564.7	450	11,250	
13																					
14																					
15	11,192.6	11,192.6	10,698.6	10,708.9	618	492	304,056	11,823,079	643,858	(12,130)	-1.9%	1.86	8.90	318546		0.039	12564.7	12575.2	630	15,750	
16																					
17	11,192.6	11,192.6	10,709	10,709	0	0	0					2.29	9.30	318546	0	0.256	12575.2	12582.2	420	10,500	
18																					
19	11,192.6	11,196.3	10,709	10,709	222	492	109,224					1.98	9.10	318546	0	0.010	12582.2	12588	348	8,700	#1 pump running
20																					flow 492 GPMs 39 PSI
21																					
22	11,196.3	11,202.9	10,708.9	10,716.0	822	500	411,000	12,336,125	513,046	7,178	1.4%	1.73	9.50	318546	0	1.567	12588	12598.5	630	15,750	Pumps ran 500 GPMs
23																					40 PSI
24	11,202.9	11,202.9	10,716.0	10,719.6	216	500	108,000					2.07	10.10	318546	0	0.000	12598.5	12606.5	480	12,000	
25																					
26	11,202.9	11,214.2	10,719.6	10,719.6	678	500	339,000					2.20	9.40	318546	0	0.968	12606.5	12615	510	12,750	
27																					
28																					
29	11,214.2	11,214.2	10,719.6	10,719.6	0	0	0	12,804,442	468,317	(21,317)	-4.6%	2.20	5.60	319854	1308	0.020	12615	12627.4	744	18,600	Leak Detection Pump Ran
30																					
31	11,214.2	11,214.2	10,719.6	10,749.3	1,782	500	891,000					1.94	6.50	319854	0	0.000	12627.4	12635.1	462	11,550	
									2,992,877	gallons/month						4.003		TOTAL	7,752	193,800	
									96,544	gallons/day											
									67	gallons/minute											

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Average flow rate (gallon per minute) x combined total (minutes).
3. Metered flow from Flowmeter in Flow Meter Buidling.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is pumped flow divided by metered flow, minus 100%.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.
7. Totalizer reading from meter instaled in 2021.
8. Leakage of 1,308 gallons from March 15, 2023 to May 19, 2023 is approximately 8.72 gallons/acre/day. This is less than the Action Leakage Rate (ALR) of 40 gal/acre/day.

ATTACHMENT 1
LEACHATE FLOW DATA
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
JUNE 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED FLOW (GPM)	LEACHATE VOLUME						LEACHATE POND LEVEL (Feet)	LEAK DETECTION			DAILY RAINFALL[5] (Inches)	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED TOTAL (Minutes)		PUMPED[2] ESTIMATE (Gallons)	PUMPED TOTAL (Gallons)	TOTALIZER FLOW (Gallons)	METERED[3] (Gallons)	DIFFERENCE[4] (Gallons)	DIFFERENCE[4] (%)		SUMP LEVEL (Inches)	TOTALIZER[7] (gallons)	VOLUME[8] (gallons)		Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Total Flow (Gallons)	
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)																		
1																						
2	11,214.2	11,214.2	10,729.3	10,729.3	0								1.98	7.50	319855	1	0.000	12635.1	12641.9	408	10,200	
3																						
4																						
5	11,214.2	11,223.5	10,729.3	10,729.3	558	492	274,536	565,536	13,393,873	589,431	-23,895	4.1%	2.16	7.50	319855	0	1.614	12641.9	12651.8	594	14,850	
6																						
7	11,223.5	11,223.5	10,729.3	10,739.5	612	511	312,732						1.94	8.10	319855	0	0.459	12651.8	12659.6	468	11,700	
8																						
9	11,223.5	11,223.5	10,739.5	10,740.8	78	511	39,858						1.92	8.60	319855	0	0.607	12659.6	12668.7	546	13,650	#2 pump running @ 511 GPM
10																						
11																						
12	11,223.5	11,229.3	10,739.5	10,749.2	930	500	465,000	817,590	14,211,015	817,142	448	-0.1%	1.63	9.50	319855	0	0.060	12668.7	12682.6	834	20,850	
13																						
14	11,229.3	11,233.6	10,749.2	10,749.2	258	492	126,936						1.89	10.30	319855	0	0.000	12682.6	12691.0	504	12,600	
15																						
16	11,233.6	11,233.6	10,749.2	10,752.4	192	511	98,112						1.64	6.40	321016	1,161	0.025	12691.0	12698.9	474	11,850	
17																						
18																						
19	11,233.6	11,247.0	10,752.4	10,757.9	1,134	500	567,000	792,048	15,057,057	846,042	-53,994	6.4%	1.94	7.00	321016	0	2.109	12698.9	12712.4	810	20,250	
20																						
21	11,247.0	11,247.0	10,757.9	10,767.8	594	511	303,534						1.84	7.80	321016.0	0	0.028	12712.4	12721.7	558	13,950	
22																						
23	11,247.0	11,247.0	10,767.8	10,767.8	0								2.07	8.80	321016	0	0.000	12721.7	12730.6	534	13,350	
24																						
25																						
26	11,247.0	11,256.5	10,767.8	10,777.0	1,122	500	561,000	864,534	15,991,912	934,855	-70,321	7.5%	1.84	9.40	321016	0	1.585	12730.6	12743.6	780	19,500	
27																						
28	11,256.5	11,268.6	10,777.0	10,777.0	726	492	357,192						2.00	9.50	321016	0	0.837	12743.6	12754.8	672	16,800	
29																						
30	11,268.6	11,282.6	10,777.0	10,777.0	840	492	413,280						2.07	9.90	321016	0	0.379	12754.8	12766.5	702	17,550	
31																						
										3,187,470	gallons/month						7.703		TOTAL	7,884	197,100	
										106,249	gallons/day											
										74	gallons/minute											

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Average flow rate (gallon per minute) x combined total (minutes).
3. Metered flow from Flowmeter in Flow Meter Buidling.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is pumped flow divided by metered flow, minus 100%.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.
7. Totalizer reading from meter instaled in 2021.
8 Leakage of 1,162 gallons from May 19, 2023 to June 16, 2023 is approximately 21 gallons/acre/day. This is less than the Action Leakage Rate (ALR) of 40 gal/acre/day.

ATTACHMENT 1
LEACHATE FLOW DATA
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
JULY 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED FLOW (GPM)	LEACHATE VOLUME					LEACHATE POND LEVEL (Feet)	LEAK DETECTION			DAILY RAINFALL[5] (Inches)	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED		PUMPED[2]	TOTALIZER	METERED[3]	DIFFERENCE[4]											
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)	TOTAL (Minutes)		ESTIMATE (Gallons)	(Gallons)	FLOW (Gallons)	(Gallons)	(%)		SUMP LEVEL (Inches)	TOTALIZER[7] (gallons)	VOLUME (gallons)		Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Total Flow (Gallons)	
1																					
2																					
3	11282.6	11292.4	10777.0	10788.2	1,260	525	661,500	17,534,427	1,542,515	110,543	7.2%	1.90	10.10	321016	0	0.546	12767	12781	894	22350	
4																					
5	11292.4	11292.4	10788.2	10796.7	510	492	250,920					1.85	5.10	322356	1,340	0.010	12781.4	12790.4	540	13500	
6																					
7	11292.4	11295.2	10796.7	10796.7	168	525	88,200					1.72	6.80	322356	0	0.000	12790.4	12799.2	528	13200	
8																					
9																					
10	11295.2	11301.3	10796.7	10796.7	366	525	192,150	18,108,555	574,128	42,858	7.5%	2.17	8.10	322358	2	0.000	12799.2	12811.4	732	18300	
11																					
12	11301.3	11301.3	10796.7	10796.7	0		0					2.47	8.70	322358	0	1.486	12811.4	12819.3	474	11850	
13																					
14	11301.3	11301.3	10796.7	10796.7	0		0					2.69	9.50	322358	0	0.097	12819.3	12827.5	492	12300	
15																					
16																					
17	11301.3	11301.3	10796.7	10796.7	0		0	18,108,555				3.06	10.30	322358	0	1.008	12827.5	12839.1	696	17400	
18	11301.3	11320.4	10796.7	10797.5	1,194	543	648,342					2.02	4.40	323724	1,366	0.001	12839.1	12843.1	240	6000	Leak Detection Pumped due to Outage
19	11320.4	11333.3	10797.5	10797.5	774	543	420,282					1.72	5.60	323724	0	0.115	12843.1	12846.8	222	5550	
20	11333.3	11334.7	10797.5	10797.5	84	543	45,612					1.91	6.00	323724	0	0.000	12846.8	12851.0	252	6300	
21	11334.7	11334.7	10797.5	10797.5	0		0					1.96	6.30	323724	0	0.000	12851.0	12854.8	228	5700	
22																					
23																					
24	11334.7	11341.2	10797.5	10797.5	390	543	211,770	19,454,882	1,346,327	20,321	1.5%	1.95	7.30	323724	0	0.272	12854.8	12865.0	612	15300	
25																					
26	11341.2	11341.2	10797.5	10797.5	0		0					2.14	8.10	323724	0	0.407	12865.0	12871.4	384	9600	
27																					
28	11341.2	11348.5	10797.5	10797.5	438	543	237,834					2.01	8.50	323724	0	0.627	12871.4	12877.4	360	9000	
29																					
30																					
31	11,348.5	11,348.5	10,797.5	10,797.5	0		0	19,698,357	243,475	5641	2.3%	2.17	9.50	323724	0	0.283	12877.4	12886.5	546	13650	
									3,706,445	gallons/month						4.852		TOTAL	7,200	180,000	
									119,563	gallons/day											
									83	gallons/minute											

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Average flow rate (gallon per minute) x combined total (minutes).
3. Metered flow from Flowmeter in Flow Meter Buidling.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is difference in flow divided by metered flow, as a percentage.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.
7. Totalizer reading from meter instaled in 2021.
8 Leakage of 2,708 gallons from June 16, 2023 to July 31, 2023 is approximately 29.4 gallons/acre/day. This is less than the Action Leakage Rate (ALR) of 40 gal/acre/day.

ATTACHMENT 1
LEACHATE FLOW DATA
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
AUGUST 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED FLOW (GPM)	LEACHATE VOLUME					LEACHATE POND LEVEL (Feet)	LEAK DETECTION			DAILY RAINFALL[5] (Inches)	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED		PUMPED[2]	TOTALIZER	METERED[3]	DIFFERENCE[4]											
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)	TOTAL (Minutes)		ESTIMATE (Gallons)	(Gallons)	FLOW (Gallons)	(Gallons)	(%)		SUMP LEVEL (Inches)	TOTALIZER[7] (gallons)	VOLUME (gallons)		Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Total Flow (Gallons)	
1																					
2	11348.5	11358.7	10797.5	10797.5	612	543	332,316					1.95	9.30	323724	0	0.602	12886.5	12892.5	360	9000	Flow meter totalizer "Rolled Over" at
3																					10-million gallons during this time.
4	11358.7	11358.7	10797.5	10797.5	0		0					2.06	10.00	323724	0	0.409	12892.5	12898.5	360	9000	
5																					
6																					
7	11358.7	11369.8	10797.5	10797.5	666	545	362,970	409,564	711,207	15,921	2.2%	2.04	10.00	323724	0	1.075	12898.5	12909.8	678	16950	
8																					
9	11369.8	11369.8	10797.5	10813.6	966	545	526,470					2.09	5.70	325197	1,473	3.019	12909.8	12919.9	606	15150	
10																					
11	11369.8	11379.8	10813.6	10822.5	1,134	545	618,030					2.13	6.60	325197	0	1.385	12919.9	12931.6	702	17550	
12																					
13																					
14	11379.8	11394.4	10822.5	10832.4	1,470	545	801,150	2,420,296	2,010,732	65,082	3.2%	2.14	7.40	325197	0	0.148	12931.6	12948.5	1014	25350	
15																					
16	11394.4	11403.8	10832.4	10832.4	564	545	307,380					2.11	8.00	325197	0	0.002	12948.5	12957.1	516	12900	
17																					
18	11403.8	11403.8	10832.4	10840.6	492	545	268,140					2.06	8.50	325197	0	0.037	12957.1	12965.3	492	12300	
19	11403.8	11409.7	10840.6	10840.6	354	545	192,930					1.72	8.50	325197	0	0.574	12965.3	12969.7	264	6600	
20																					
21	11409.7	11412.6	10840.6	10840.6	174	545	94,830	3,294,170	873,874	10,594	1.2%	2.19	9.30	325197	0	0.035	12969.7	12977.4	462	11550	
22																					
23	11412.6	11412.6	10840.6	10848.8	492	545	268,140					2.06	9.50	325197	0	0.000	12977.4	12984.8	444	11100	
24																					
25	11412.6	11412.6	10848.8	10848.8	0							2.25	10.20	325197	0	0.018	12984.8	12991.8	420	10500	
26																					
27																					
28	11412.6	11413.3	10848.8	10857.4	558	545	304,110	3,885,344	591,174	18,924	3.2%	2.18	10.10	325197	0	0.701	12991.8	13001.7	594	14850	
29																					
30	11,413.3	11,420.7	10,857.4	10,857.4	444	545	241,980					2.03	5.80	326571	1,374	0.019	13001.7	13008.3	396	9900	
31																					
									4,186,987	gallons/month					2847	8.024		TOTAL	7,308	182,700	
									135,064	gallons/day											
									94	gallons/minute											

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Average flow rate (gallon per minute) x combined total (minutes).
3. Metered flow from Flowmeter in Flow Meter Buidling.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is difference in flow divided by metered flow, as a percentage.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.
7. Totalizer reading from meter instaled in 2021.
8. Leakage of 1,473 gallons from July 18, 2023 to August 9, 2023 is approximately 33.4 gallons/acre/day. This is less than the Action Leakage Rate (ALR) of 40 gal/acre/day.
9. Leakage of 1,374 gallons from August 9, 2023 to August 30, 2023 is approximately 32.7 gallons/acre/day. This is less than the Action Leakage Rate (ALR) of 40 gal/acre/day.

ATTACHMENT 1
LEACHATE FLOW DATA
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
SEPTEMBER 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED FLOW (GPM)	LEACHATE VOLUME					LEACHATE POND LEVEL (Feet)	LEAK DETECTION			DAILY RAINFALL[5] (Inches)	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED		PUMPED[2]	TOTALIZER	METERED[3]	DIFFERENCE[4]											
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)	TOTAL (Minutes)		ESTIMATE (Gallons)	(Gallons)	(Gallons)	(Gallons)	(%)		SUMP LEVEL (Inches)	TOTALIZER[7] (gallons)	VOLUME (gallons)		Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Total Flow (Gallons)	
1	11420.7	11420.7	10857.4	10857.4	0		0					2.27	6.30	326571		0.240	13008.3	13014.3	360	9,000	
2					0		0												0	0	
3					0		0												0	0	
4	11420.7	11420.7	10857.4	10864.2	408	545	222,360	4,363,884	478,540	14,200	-3.0%	2.10	7.50	326571		0.000	13014.3	13022.7	504	12,600	
5					0		0												0	0	
6	11420.7	11420.7	10864.2	10864.2	0		0					2.22	8.30	326571		0.000	13022.7	13028.4	342	8,550	
7					0		0												0	0	
8	11420.7	11428.8	10864.2	10864.2	486	545	264,870					2.03	8.70	326571		1.062	13028.4	13033.3	294	7,350	
9					0		0												0	0	
10					0		0												0	0	
11	11428.8	11428.8	10864.2	10864.2	0		0	4,640,139	276,255	11,385	-4.1%	2.27	9.50	326571		0.528	13033.3	13042.4	546	13,650	
12					0		0												0	0	
13					0		0												0	0	
14					0		0												0	0	
15	11428.8	11436.1	10864.2	10868.3	684	565	386,460					2.31	9.80	326571		1.246	13042.4	13057.4	900	22,500	
16					0		0												0	0	
17	11436.1	11450.0	10868.3	10875.4	1,260	565	711,900					1.80	9.70	326571		0.509	13057.4	13069.0	696	17,400	
18	11450.0	11451.0	10875.4	10878.7	258	570	147,060	5,914,875	1,274,736	29,316	-2.3%	1.88	10.20	326571		0.000	13069.0	13074.9	354	8,850	
19	11451.0	11461.8	10878.7	10880.0	726	315	228,690					1.82	4.70	327682	1,111	1.088	13074.9	13080.8	354	8,850	Begin Pumping Pond Down - Both Pumps On
20	11461.8	11484.6	10880.0	10900.8	2,616	315	824,040					-0.75	5.90	327682		0.095	13080.8	13088.3	450	11,250	
21					0		0												0	0	
22	11484.6	11493.4	10900.8	10921.5	1,770	315	557,550					-0.85	6.40	327682		0.005	13088.3	13099.6	678	16,950	Return to Single Pump Operation
23					0		0												0	0	
24					0		0												0	0	
25	11493.4	11516.8	10921.5	10921.5	1,404	545	765,180	8,151,749	2,236,874	-138,586	6.2%	-0.84	7.60	327682		0.000	13099.6	13114.1	870	21,750	Pond Cleaning Begins
26					0		0												0	0	
27	11516.8	11525.4	10921.5	10929.5	996	315	313,740					2.09	3.70	327682		0.000	13114.1	13123.0	534	13,350	Pumping from CB#3 to the LP Pump Station
28					0		0												0	0	
29	11525.4	11528.1	10929.5	10932.1	318	300	95,400					2.21	1.50	327682		0.000	13123.0	13131.3	498	12,450	Pumping from CB#3 to LP Pump Station
30					0		0												0	0	Pond Cleaning Ends
									4,266,405	gallons/month						4.773		TOTAL	7,380	184,500	
									142,214	gallons/day											
									99	gallons/minute											

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Average flow rate (gallon per minute) x combined total (minutes).
3. Metered flows from flow totalizer in Flow Meter Building near East Millinocket WWTP.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is pumped flow divided by metered flow, minus 100%.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.
7. Totalizer reading from meter instaled in 2021.
8. Leakage of 1,111 gallons from August 30, 2023 to September 19, 2023 was approximately 27.8 gallons/acre/day. This is less than the Action Leakage Rate (ALR) of 40 gal/acre/day.

ATTACHMENT 1
LEACHATE FLOW DATA
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
OCTOBER 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED FLOW (GPM)	LEACHATE VOLUME					LEACHATE POND LEVEL (Feet)	LEAK DETECTION			DAILY RAINFALL[5] (Inches)	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED TOTAL (Minutes)		PUMPED[2] ESTIMATE (Gallons)	TOTALIZER (Gallons)	METERED[3] (Gallons)	DIFFERENCE[4] (Gallons)	(%)		SUMP LEVEL (Inches)	TOTALIZER[7] (gallons)	VOLUME (gallons)		Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Total Flow (Gallons)	
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)																	
1																					
2	11,528.1	11,528.3	10,932.1	10,932.2	18	545	9,810	8,889,939	738,190	22,060	3.0%	1.14	8.50	327682	0	0.000	13131.3	13142.9	696	17400	First Pump-On Since Pond Cleaning
3																					
4	11,528.3	11,528.3	10,932.2	10,932.2	0							1.28	7.80	329224	1,542	0.000	13142.9	13149.4	390	9750	LD Pumped Down Manually
5																					
6	11,528.3	11,528.3	10,932.2	10,932.3	6	300	1,800					1.47	8.60	329224		0.000	13149.4	13155.5	366	9150	
7																					
8	11,528.3	11,528.3	10,932.3	10,932.3	0		0					1.81	9.20	329224		0.736	13155.5	13162.4	414	10350	
9	11,528.3	11,551.2	10,932.3	10,938.7	1,758	283	496,635	9,384,681	494,742	-3,693	-0.7%	-0.84	6.40	329732	508	0.038	13162.4	13166.9	270	6750	Pipeline Cleaning Starts
10																					LD Pumped Down Manually
11																					
12	11,551.2	11,551.2	10,938.7	10,939.9	72	310	22,320					1.86	7.50	332577	2,845	0.100	13166.9	13175.4	510	12750	Leak Detection System Pumped Down Manually
13	11,551.2	11,551.5	10,938.9	10,940.3	102	310	31,620					2.08	8.10	332577		0.045	13175.4	13179.0	216	5400	Pipeline Cleaning Ends
14																					
15																					
16	11,551.2	11,553.0	10,940.3	10,942.6	246	310	76,260	9,480,340	95,659	-34,541	136.1%	2.39	8.40	332577		0.169	13179.0	13188.2	552	13800	Pumped and Metered flows don't match due
17																					to line charging
18	11,553.0	11,555.1	10,942.6	10,942.6	126	560	70,560					2.25	8.30	332577		0.098	13188.2	13193.7	330	8250	
19[8]																					
20	11,555.1	11,560.1	10,942.6	10,942.6	300	650	195,000					2.18	8.30	332577		0.000	13193.7	13200.0	378	9450	
21																					
22																					
23	11,560	11,566	10,942.6	10,945.6	558	650	362,700	127,590	647,250	18,990	2.9%	2.33	8.20	332577		0.308	13200.0	13210.7	642	16050	
24																					
25	11,566.4	11,570.5	10,945.6	10,951.3	588	650	382,200					2.18	8.30	332577		0.009	13210.7	13218.7	480	12000	
26																					
27	11,570.5	11,576.2	10,951.3	10,951.3	342	650	222,300					2.09	8.50	332577		0.000	13218.7	13226.1	444	11100	
28																					
29																					
30	11,576.2	11,576.2	10,951.3	10,955.5	252	650	163,800	925,169	797,579	29,279	3.7%	2.26	8.50	332577		0.000	13226.1	13237.0	654	16350	
31[9]																					
									2,773,420	gallons/month						1.503		TOTAL	6,342	158,550	
									89,465	gallons/day											
									62	gallons/minute											

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Observed Flow (gallon per minute) x combined total (minutes).
3. Metered flow from totalizer on the Flowmeter in Flow Meter Buidling.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is pumped flow divided by metered flow, minus 100%.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.
7. Totalizer reading from meter instaled in 2021.

ATTACHMENT 1
LEACHATE FLOW DATA
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
NOVEMBER 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED FLOW (GPM)	LEACHATE VOLUME					LEACHATE POND LEVEL (Feet)	LEAK DETECTION			DAILY RAINFALL[5] (Inches)	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED TOTAL (Minutes)		PUMPED[2] ESTIMATE (Gallons)	TOTALIZER (Gallons)	METERED[3] (Gallons)	DIFFERENCE[4] (Gallons)	(%)		SUMP LEVEL (Inches)	TOTALIZER[7] (gallons)	VOLUME (gallons)		Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Total Flow (Gallons)	
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)																	
1	11,576	11,581	10,956	10,956	306	650	198,900					2.26	9.50	332578	1	0.198	13237.0	13243.9	414	10350	
2																					
3	11,581.3	11,581.3	10,955.5	10,960.5	300	650	195,000					2.24	9.50	332578	0	0.001	13243.9	13250.4	390	9750	
4																					
5																					
6	11,581.3	11,586.9	10,960.5	10,960.5	336	650	218,400	1,550,928	625,759	13,459	2.2%	2.20	9.40	332578	0	0.000	13250.4	13260.9	630	15750	
7																					
8	11,586.9	11,586.9	10,960.5	10,960.5	0	650	0					2.47	9.60	332578	0	0.299	13260.9	13267.7	408	10200	
9																					
10	11,586.9	11,586.9	10,960.5	10,965.5	300	650	195,000					2.37	9.70	332578	0	0.000	13267.7	13274.2	390	9750	
11																					
12																					
13	11,586.9	11,592.3	10,965.5	10,965.5	324	650	210,600	1,968,975	418,047	12,447	3.0%	2.32	9.70	332578	0	0.069	13274.2	13283.6	564	14100	
14																					
15	11,592.3	11,592.3	10,965.5	10,965.5	0		0					2.43	10.00	332578	0	0.000	13283.6	13289.6	360	9000	
16																					Floats set to Winter Levels
17	11,592.3	11,597.7	10,965.5	10,965.5	324	650	210,600					2.26	9.80	332578	0	0.000	13289.6	13295.9	378	9450	
18																					
19																					
20	11,597.7	11,597.7	10,965.5	10,965.5	0	0	0	2,182,777	213,802	3,202	1.5%	2.59	6.40	333822	1,244	0.263	13295.9	13305.4	570	14250	
21																					
22	11,597.7	11,601.0	10,965.5	10,965.5	198	650	128,700					2.70	1.50	334936	1,114	0.016	13305.4	13312.5	426	10650	
23																					
24	11,601.0	11,601.0	10,965.5	10,971.5	360	650	234,000					2.65	8.30	334936	0	0.373	13312.5	13319.4	414	10350	
25																					
26																					
27	11,601.0	11,607.3	10,971.5	10,971.5	378	650	245,700	2,806,788	624,011	15,611	2.5%	2.76	4.70	336133	1,197	0.279	13319.4	13330.7	678	16950	
28																					
29	11,607.3	11,614.6	10,971.5	10,981.3	1,026	650	666,900					2.67	9.00	336133	0	0.041	13330.7	13341.2	630	15750	
30																					
									1,881,619	gallons/month					3556	1.539		TOTAL	6,252	156,300	
									62,721	gallons/day											
									44	gallons/minute											

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Observed Flow (gallon per minute) x combined total (minutes).
3. Metered flow from totalizer on the Flowmeter in Flow Meter Buidling.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is pumped flow divided by metered flow, minus 100%.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.
7. Totalizer reading from meter instaled in 2021.

ATTACHMENT 1
DOLBY LANDFILL FACILITY
EAST MILLINOCKET, MAINE
DECEMBER 2023

DAY OF MONTH	PUMP RUN TIME					ESTIMATED FLOW (GPM)	LEACHATE VOLUME				LEACHATE POND LEVEL (Feet)	LEAK DETECTION			DAILY RAINFALL[5] (Inches)	LEACHATE POND UNDERDRAIN				COMMENTS
	PUMP #1		PUMP #2		COMBINED TOTAL (Minutes)		PUMPED[2] ESTIMATE (Gallons)	METERED[3] (Gallons)	DIFFERENCE[4] (Gallons)	DIFFERENCE[4] (%)		SUMP LEVEL (Inches)	TOTALIZER[7] (gallons)	VOLUME (gallons)		Initial[6] (Hours)	End[6] (Hours)	Total (Minutes)	Total Flow (Gallons)	
	INITIAL[1] (Hours)	FINAL[1] (Hours)	INITIAL[1] (Hours)	FINAL[1] (Hours)																
1	11,615	11,617	10,981	10,985	342	650	222,300					10.30	336133	0	0.000	13341.2	13349.6	504	12600	
2							0													
3							0													
4	11,617.0	11,621.3	10,981.3	10,990.8	828	650	538,200	4,140,534	1,333,746	-7%	2.76	7.20	337122	989	0.295	13349.6	13361.4	708	17700	
5							0													
6	11,621.3	11,628.0	10,990.8	10,990.8	402	650	261,300				2.76	7.50	337122	0	0.016	13361.4	13368.8	444	11100	
7							0													
8	11,628.0	11,628.0	10,990.8	10,996.3	330	650	214,500				2.74	7.70	337122	0	0.000	13368.8	13376.3	450	11250	
9							0													
10							0													
11	11,628.0	11,633.8	10,996.3	10,996.3	348	650	226,200				2.65	8.10	337122	0	0.213	13376.3	13384.1	468	11700	
12	11,633.8	11,633.8	10,996.3	11,030.4	2,046	660	1,350,360				2.55	8.50	337122	0	0.144	13384.1	13396.8	762	19050	
13	11,633.8	11,633.8	11,030.4	11,044.3	834	660	550,440	6,777,703	2,637,169	1.3%	2.82	8.60	337122	0	0.000	13396.8	13402.7	354	8850	
14							0													
15	11,633.8	11,641.8	11,044.3	11,050.7	864	660	570,240				2.70	8.80	337122	0	0.000	13402.7	13411.8	546	13650	
16							0													
17							0													
18	11,641.8	11,657.4	11,050.7	11,051.0	954	650	620,100	7,905,700	1,127,997	-5.5%	2.32	9.50	337122	0	0.559	13411.8	13425.5	822	20550	
19	11,657.4	11,673.0	11,051.0	11,055.0	1,176	650	764,400				2.90	9.80	337122	0	1.553	13425.5	13434.1	516	12900	
20	11,673.0	11,696.8	11,055.0	11,058.5	1,638	650	1,064,700				2.36	9.00	337122	0	0.000	13434.1	13440.4	378	9450	
21							0													
22	11,696.8	11,701.9	11,058.5	11,066.9	810	650	526,500				2.82	9.40	337122	0	0.000	13440.4	13451.6	672	16800	
23							0													
24							0													
25	11,701.9	11,710.1	11,066.9	11,074.2	930	650	604,500	758,045	2,852,345	-3.8%	2.76	10.00	337122	0	0.000	13451.6	13465.1	810	20250	
26							0													
27	11,710.1	11,717.7	11,074.2	11,074.2	456	650	296,400				2.79	10.40	337122	0	0.000	13465.1	13473.6	510	12750	
28							0													
29	11,717.7	11,717.7	11,074.2	11,082.7	510	640	326,400	1,353,244	595,199	-4.6%	2.42	5.20	338165	1,043	0.004	13473.6	13481.8	492	12300	
30							0													
31							0													
							gallons/month	8,546,456					TOTAL	1043	2.784		TOTAL	8,436	210,900	
							gallons/day	267,077												
							gallons/minute	185												

Notes:

1. Pumped hours as indicated by pump time display located within the leachate pump station building adjacent to the leacahte pond.
2. Pumped Estimate = Average flow rate (gallon per minute) x combined total (minutes).
3. Metered flow from Flowmeter in Flow Meter Buidling.
4. Difference is calculated as pumped flow minus metered flow. Percentage difference is pumped flow divided by metered flow, minus 100%.
5. Rainfall as measured at leachate pump station adjacent to leachate pond.
6. Total pumping time from underdrain pump run time meter located in the leachate pump station building. Average flow assumed to be 25 gallons per minute.
7. Totalizer reading from meter instaled in 2021.

APPENDIX K

COMPLIANCE SELF-AUDIT CHECKLIST

SME
SEVEE & MAHER
ENGINEERS

State of Maine, Bureau of General Services
Dolby III Landfill Compliance Self-Audit Checklist

Report Year:

General License Information

* Any new licenses or revisions issued to the facility during the year? ☐ Yes ☒ No

If yes, was the new license listed in the submitted facilities annual report? ☐ Yes ☒ No
List the new licenses: Minor Revision #S-000796-2D-AD-N for landfill cover upgrade.

Chapter 400 Requirements

* Was the annual report fee submitted with the annual report? ☒ Yes ☐ No

If no, reason the fee was not submitted:_____

Chapter 401, Section 4 Requirements

401.4.A Requirements

* Is the facilities operations manual being properly maintained? ☒ Yes ☐ No (This includes up-to-date certified copies to the Department and to key operating and management personnel of the landfill.)

If no, describe what is being done to bring the facility up to compliance: _____

* Is there a certified copy of the operations manual available for use at the facility at all times? ☐ Yes ☒ No

If no, describe what is being done to bring the facility up to compliance: Landfill not operating daily. Operations Manual with Landfill Operator and Subcontractors.

* Was the operations manual reviewed annually by the operator and updated as necessary? ☒ Yes (4/20/2024) ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

401.4.B Requirements

* Were operational personnel appropriately trained in relevant sections of the operations manual? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Are at least two key personnel trained in the operation of, and regulatory requirements for, the landfill facilities? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

401.4.C Requirements

* Were all waste excepted at the facility allowed under the current license and handled as described in the landfill's approved operations manual? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Was the facility operations manual, solid waste characterization plan, followed?
☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Access to the facility is controlled so that the public is not exposed to potential health and safety hazards and access is only permitted when an attendant is on duty. ☒ Yes ☐ No

The hours of operation and other limitations to access are prominently posted at the entrance to the landfill. ☒ Yes ☐ No

If no in either, describe what is being done to bring the facility up to compliance: _____

* Are access roads within the facility maintained and is the road maintenance program implemented to prevent the migration of dust, mud or waste from the facility on access, public or private roads? ☒ Yes ☐ No

Are access roads onto a cell of a landfill constructed and maintained to prevent the migration of leachate outside the cell? ☒ Yes ☐ No

If no in either, describe what is being done to bring the facility up to compliance: _____

* Is the facilities cell development plans up-to-date and submitted with the annual report?
☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Was the waste in the active landfill cell compacted at least once during the operating day?
☐ Yes ☒ No

If no, describe what is being done to bring the facility up to compliance: Landfill is not active daily, only small amounts of wood ash disposed of a few times annually

* Was daily, intermediate, and phased final cover placed according to the facilities operating manual? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance:

401.4.C Requirements continued

* Was the facilities stormwater management and erosion control plan followed?
☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Was the facilities leachate management plan followed? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Was the facilities methane and H_2S gas monitoring program done quarterly and any exceedances of triggers reported to the Department within 24hrs? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Were required quarterly landfill inspections completed? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance:

* Was the facilities dust control plan followed? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Is the landfill operation equipment sufficient to meet operating requirements of this section? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Does the facility have proper fire and emergency plan? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Was the facilities hazardous and special waste handling and exclusion plan properly followed? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Was the facilities litter control plan properly followed? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

401.4.C Requirements continued

* Was the facilities quarterly groundwater and leachate reports submitted to the Department? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Are all the facilities operation records maintained on file as required? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

* Was the facilities asbestos disposal plan followed? ☒ Yes ☐ No

If no, describe what is being done to bring the facility up to compliance: _____

Lane Gould — Evaluator

Landfill Manager — Title

4/24/2024

Date

APPENDIX L

WATER QUALITY MONITORING DATA

SME
SEVEE & MAHER
ENGINEERS

WATER LEVEL SUMMARY

Water Levels

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Location / Date	Height Above Measuring Point (feet)	Depth Below Measuring Point (feet)	Measuring Point Elevation (feet)	Water Level Elevation (feet)
P-302			Current ground surface elevation: (feet)	
5/17/2012		6.18		
8/16/2012		9.21		
10/30/2012		5.85		
5/21/2013		7.15		
7/25/2013		7.92		
10/3/2013		7.20		
6/2/2014		7.40		
8/20/2014		8.18		
11/14/2014		6.31		
6/5/2015		6.47		
9/3/2015		7.54		
11/5/2015		6.40		
6/15/2016		7.40		
9/22/2016		8.88		
11/10/2016		7.69		
6/12/2017		7.44		
8/31/2017		9.55		
11/16/2017		6.90		
6/18/2018		8.19		
8/14/2018		7.63		
11/26/2018		6.44		
6/6/2019		6.92		
8/15/2019		8.03		
10/23/2019		7.43		
6/18/2020		8.18		
8/6/2020		9.13		
10/22/2020		6.48		
6/24/2021		8.72		
9/22/2021		7.36		
6/30/2022		7.86		
10/20/2022		5.35		
6/8/2023		6.53		
10/19/2023		6.32		
P-403			Current ground surface elevation: (feet)	
5/17/2012		2.69		
8/15/2012		6.00		
10/30/2012		5.30		
5/21/2013		3.59		
7/25/2013		4.31		
10/3/2013		4.51		
6/2/2014		3.78		
8/20/2014		4.82		
11/14/2014		3.83		
6/5/2015		3.12		
9/3/2015		4.45		
11/5/2015		3.23		
6/15/2016		3.96		
9/22/2016		5.91		

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Location / Date	Height Above Measuring Point (feet)	Depth Below Measuring Point (feet)	Measuring Point Elevation (feet)	Water Level Elevation (feet)
(P-403)				
11/10/2016		5.20		
6/12/2017		3.87		
8/31/2017		5.72		
11/16/2017		6.65		
6/18/2018		4.55		
8/14/2018		4.50		
11/26/2018		3.55		
6/6/2019		3.26		
8/15/2019		4.53		
10/23/2019		3.86		
6/18/2020		4.42		
8/6/2020		5.35		
10/22/2020		4.23		
6/24/2021		5.03		
9/22/2021		4.12		
6/30/2022		4.34		
10/20/2022		2.12		
6/8/2023		3.56		
10/19/2023		3.95		
P-404			Current ground surface elevation: (feet)	
5/17/2012		4.98		
8/15/2012		6.28		
10/30/2012		2.80		
5/21/2013		6.60		
7/25/2013		7.25		
10/3/2013		16.43		
6/2/2014		6.46		
8/20/2014		7.90		
11/14/2014		6.52		
6/5/2015		5.52		
9/3/2015		7.38		
11/5/2015		5.75		
6/15/2016		6.85		
9/22/2016		9.11		
11/10/2016		8.30		
6/12/2017		6.64		
8/31/2017		8.80		
11/16/2017		1.84		
6/18/2018		7.43		
8/14/2018		7.40		
11/26/2018		6.21		
6/6/2019		5.90		
8/15/2019		6.15		
10/23/2019		5.56		
6/18/2020		7.28		
8/6/2020		8.52		
10/22/2020		7.20		
6/24/2021		7.73		
9/22/2021		7.40		
6/30/2022		7.25		

WATER LEVEL SUMMARY

Water Levels

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Location Date	Height Above Measuring Point (feet)	Depth Below Measuring Point (feet)	Measuring Point Elevation (feet)	Water Level Elevation (feet)
(P-404)				
10/20/2022		4.69		
6/8/2023		5.63		
10/19/2023		6.64		

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(103)

Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
103											
4/27/2000	XX	103XX36643	24	6.24	3.3		434.32				
8/1/2000	XX	103XX36739	30	6.03	7		425.86		15.81	9.1	4.2
10/24/2000	XX	103XX36823	D	D	D						
5/8/2001	XX	103XX37019	25.7	6.04	5.4		432.35			11.2	2.3
7/24/2001	XX	103XX37096	D	D	D				18.86	D	D
10/16/2001	XX	103XX37180	D	D	D					D	
5/15/2002	XX	103XX37391	23	6.21	5		431.95			11.2	3.15
7/29/2002	XX	103XX37466	28	4.93	10.2		426.33		15.69	9.6	1.03
10/18/2002	XX	103XX37547	D	D	D					D	D
6/18/2003	XX	103XX37790	26.9	6.43	7.2		430.62			10.2	0.98
8/6/2003	XX	103XX37839	27.2	6.07	10.3		428.02		15.92	9	0.78
10/6/2003	XX	103XX37900	30.2	5.9	9.5		429.02			10.1	1.12
5/12/2004	XX	103XX38119	28.9	5.8	5.8		431.2			14.3	1.9
8/19/2004	XX	103XX38218	31	6.3	10.3		426.06		15.88	9.1	0.44
10/18/2004	XX	103XX38278	D	D	D					D	D
5/24/2005	XX	GW103X004	25.2	7.35	6.1	7.56	432.01	439.57		10.5	1
8/17/2005	XX	GW103X01G	31	6.13	6.7	14	425.57	439.57	15.92	10.5	0.8
10/13/2005	XX	GW103X038	D	D	D	D				D	D
5/15/2006	XX	GW103X084	26.1	6.49	5.3		432.85			9.7	1.4
8/7/2006	XX	GW103X06C	31	6.28	11.4		430.95		15.81	10.1	1.24
10/11/2006	XX	GW103X050	32	6.69	9.8		427.29			8.2	0.7
5/22/2007	XX	GW103X09G	28	6.67	5.9		432.42			10.4	0.6
8/21/2007	XX	GW103X0B9	D	D	D		D		16.05	D	D
11/1/2007	XX	GW103X0D1	34	5.67	9.6		428.26			9.8	1.6
5/28/2008	XX	GW103X0F9	29	5.63	8.1		429.35			9.6	1.9
8/26/2008	XX	GW103X0H9	32	5.3	10.5		429.21			8.9	1.4
10/28/2008	XX	GW103X0IH	34	5.47	9.7		429.21			8.7	0.8
5/18/2009	XX	GW103X10H	29	5.05	6.3	8.27	431.3	439.57		10.7	0.9
8/17/2009	XX	GW103X12H	30	4.58	11.7	9.41	430.16	439.57		8.4	2.7
10/29/2009	XX	GW103X145	31	5.48	8.8	9.29	346.49	439.57		9.44	1.2
6/10/2010	XX	GW103X166	30	7.15	8.1		428.48			8.8	1.01
8/19/2010	XX	GW103X187	D	D	D		424.22			D	D
10/26/2010	XX	GW103X19F	34	6.21	10		426.93			9.51	23.4
11/3/2011	XX	GW103X1I2	32	5.9	9.9	9.66	429.91	439.57	16.05	4	1.3
5/15/2012	XX	GW103X1JF	34	6	11.1	6.86	432.71	439.57	14.4	4	2.1
8/14/2012	XX	GW103X218	28	5.4	12.3	13.93	425.64	439.57		8	1.2
10/31/2012	XX	GW103X232	26	5.9	11.2	8.2	431.37	439.57	16.05	8	0
5/22/2013	XX	GW103X24G	28	6.7	7.3	10.01	429.56	439.57		6	0.6
7/25/2013	XX	GW103X26A	27	7.2	12.5	11.52	428.05	439.57		5	0
10/3/2013	XX	GW103X284	33	6.2	11.7	11.99	427.58	439.57	16.03	4	0.5
6/6/2014	XX	GW103X29I	27	5.8	7.6	9.9	429.67	439.57		2	0.4
8/22/2014	XX	GW103X2BC	32	6.7	11.3	14.48	425.09	439.57		1	0.2
11/14/2014	XX	GW103X2D6	27	7	7	9.43	430.14	439.57	16.1	2	1.4
6/5/2015	XX	GW103X2F2	30	7.6	7.5	8.12	431.45	439.57		10.4	0.4
9/2/2015	XX	GW103X2GH	30	9.1	10.2	13.58	425.99	439.57		8.9	0.05 U
11/5/2015	XX	GW103X2IB	28	6.6	9.5	8.83	430.74	439.57	16.08	9.8	0.1
6/13/2016	XX	GW103X321	29	5.9	7.6	11.57	428	439.57		9.2	2
9/19/2016	XX	GW103X33F	D	D	D	D	D	D		D	D

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(103) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
11/7/2016	XX	GW103X359	D	D	D	D	D	D	16.09	D	D
6/12/2017	XX	GW103X374	28	6.3	9.9	9.5	430.07	439.57		10.5	5
8/28/2017	XX	GW103X38I	I	I	I	I	I	439.57		I	I
11/13/2017	XX	GW103X3AC	25	7	9.3	13.95	425.62	439.57	16.09	9.9	0.2
6/18/2018	XX	GW103X3C7	29	6.5	8.1	11.69	427.88	439.57		9.4	0.5
8/13/2018	XX	GW103X3D2	I	I	I	I	I	439.57		I	I
11/26/2018	XX	GW103X3FF	A	A	A	A	A	439.57		A	A
6/3/2019	XX	GW103X3HA	59	7.6	11.7	8.02	431.55	439.57		12.7	1.1
8/12/2019	XX	GW103X3I5	45	7	12.2	13.35	426.22	439.57		12.3	1.1
10/23/2019	XX	GW103X40I	D	D	D	D		439.57		D	D
6/15/2020	XX	GW103X42D	90	6.6	11.2	11.5	428.07	439.57		8.6	1.1
8/3/2020	XX	GW103X438	I	I	I	I		439.57		I	I
10/19/2020	XX	GW103X461	D	D	D	D		439.57	16.04	D	D
6/21/2021	XX	GW103X47G	135	6.9	12.1	13.16	426.41	439.57		6.7	0.3
9/20/2021	XX	GW103X49B	D	D	D	D	D	439.57	16.1	D	D
6/28/2022	XX	GW103X4BD	29	6.4	11	12.1	427.47	439.57		7.5	0.6
10/17/2022	XX	GW103X4DA	34	6.8	12.9	9.35	430.22	439.57	16.1	2.6	0.4
6/5/2023	XX	GW103X4FB	68	6.8	9.7	10.32	429.25	439.57		10	1.2
10/16/2023	XX	GW103X4J5	77	7.4	11.8	11.21	428.36	439.57	16.1	4.7	2.1
104B											
4/27/2000	XX	104BXX36643	150	8.17	3.5		426.44				
8/1/2000	XX	104BXX36739	137	8.07	5		422.38		32.58	1.2	0.8
10/24/2000	XX	104BXX36823	132	8.22	7		421.04			0.6	0.3
5/8/2001	XX	104BXX37019	150	8.13	7.2		424.71			1	5.5
7/24/2001	XX	104BXX37096	139	8.3	9.8		420.75		32.54	0.8	0.35
10/16/2001	XX	104BXX37180	144	8.14	7.8		418.82			1.1	0.64
5/15/2002	XX	104BXX37391	152	7.89	5.8		424.72			2.1	0.22
7/29/2002	XX	104BXX37466	149	7.77	8.8		421.79		32.52	1	0.73
10/15/2002	XX	104BXX37544	150	7.62	7.2		419.28			1.8	0.3
6/19/2003	XX	104BXX37791	161	8.17	7.3		424.43			0.7	0.2
8/5/2003	XX	104BXX37838	149	7.94	8.7		423.57		32.58	0.8	0.41
10/7/2003	XX	104BXX37901	153.6	8.12	7.5		424.28			1.6	0.3
4/26/2004	XX	104BXX38103	156.2	7.18	5.3		425.12			1.1	0.33
8/9/2004	XX	104BXX38208	144	7.56	8.7		422.148		32.61	1.3	0.4
10/11/2004	XX	104BXX38271	144	8.09	8.2		421.49			0.8	0.44
5/24/2005	XX	GW104B005	143	8.31	6.2	10.81	424.92	435.73		4	0.1
8/1/2005	XX	GW104B01H	142	7.52	8	13.41	422.32	435.73	32.58	0.9	0.6
10/25/2005	XX	GW104B039	142	7.22	7.9	10.16	425.57	435.73		1.3	0.5
5/10/2006	XX	GW104B085	138.9	6.96	6.2		425.2			1.2	0.58
7/24/2006	XX	GW104B06D	141	6.82	8.4		424.44		32.52	1	0.4
10/10/2006	XX	GW104B051	139	7.68	8.1		422.63			0.7	0.6
5/10/2007	XX	GW104B09H	138	6.92	6.8		425.13			1.5	0.7
8/6/2007	XX	GW104B0BA	139	7.52	7.2		421.88		32.58	1	0.3
10/24/2007	XX	GW104B0D2	140	7.14	7.7		422.37			0.7	0.7
5/28/2008	XX	GW104B0FA	142	7.69	6.6		423.98			0.6	0.3
8/11/2008	XX	GW104B0HA	140	7.09	8.4		424.97			0.5	0.4
10/15/2008	XX	GW104B0II	138	7.52	7.9		424.97			0.9	0.7
5/6/2009	XX	GW104B10I	142	6.34	6.2	10.96	424.77	435.73		1	0.6
8/4/2009	XX	GW104B12I	142	6.8	8.3	9.41	426.32	435.73		0.7	0.7

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(104B) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU						
10/19/2009	XX	GW104B146	140	6.65	7.4	12.34	423.39	435.73		1.1	0.4						
5/25/2010	XX	GW104B167	143	6.64	7.5		423.37			0.86	0.19						
8/2/2010	XX	GW104B188	144	7.36	8.1		421.11			0.98	0.55						
10/12/2010	XX	GW104B19G	146	7.68	7.9		421.84			0.68	0.4						
5/16/2011	XX	GW104B1DI	132	7.8	5.9	10.22	425.51	435.73	32.48	1	0.2						
8/9/2011	XX	GW104B1F9	149	7.65	12.1	14.72	421.01	435.73	32.4	1	0.2						
11/3/2011	XX	GW104B1H0	145	7.4	7.4	11.52	424.21	435.73	32.6	1	0.2						
5/14/2012	XX	GW104B1IE	146	7.9	8.2	10.24	425.49	435.73	32.42	1	0.6						
8/14/2012	XX	GW104B207	113	7.8	11.7	14.76	420.97	435.73		2	0.2						
10/31/2012	XX	GW104B221	143	7.4	10.8	10.55	425.18	435.73	32.6	0.8	0						
5/22/2013	XX	GW104B23F	144	7.3	7.7	11.35	424.38	435.73		1	0.8						
7/23/2013	XX	GW104B259	145	7.9	16	11.83	423.9	435.73		0.2	0.2						
10/1/2013	XX	GW104B273	140	7.8	11.7	11.3	424.43	435.73	32.42	1	0.5						
6/4/2014	XX	GW104B28H	143	7.7	9.3	11.55	424.18	435.73		1	0.2						
8/19/2014	XX	GW104B2AB	139	7.8	12.8	12.84	422.89	435.73		0.8	0.2						
11/12/2014	XX	GW104B2C5	145	8	7.9	10.56	425.17	435.73	32.55	1	0.2						
6/3/2015	XX	GW104B2E1	151	8	7.2	10.61	425.12	435.73		0.7	0.2						
9/2/2015	XX	GW104B2FG	131	8	11.6	12.24	423.49	435.73		0.9	0.3						
11/4/2015	XX	GW104B2HA	150	8.2	9.3	10.61	425.12	435.73	32.6	0.5	0.2						
6/14/2016	XX	GW104B310	140	7.8	8.9	11.86	423.87	435.73		0.9	0.4						
9/20/2016	XX	GW104B32E	147	8	10.6	16.25	419.48	435.73		0.7	0.3						
11/8/2016	XX	GW104B348	141	7.9	9	16.26	419.47	435.73	32.6	0.8	0.1						
6/14/2017	XX	GW104B363	137	8.1	9.2	11.99	423.74	435.73		0.8	0.5						
8/30/2017	XX	GW104B37H	153	8.2	8.9	15.98	419.75	435.73		0.8	0.2						
11/15/2017	XX	GW104B39B	150	8	8	11.4	424.33	435.73	32.6	0.4	0.2						
6/19/2018	XX	GW104B3B6	167	8.5	8	12.95	422.78	435.73		0.8	0.4						
8/14/2018	XX	GW104B3DF	171	8.1	9.9	13.38	422.35	435.73		0.6	0.3						
11/27/2018	XX	GW104B3EE	174	8.3	7.4	11.1	424.63	435.73	32.58	0.3	0.5						
6/4/2019	XX	GW104B3G9	140	7.8	8.9	10.97	424.76	435.73		4.6	0.4						
8/14/2019	XX	GW104B3II	140	8.3	9.3	14.02	421.71	435.73		5.5	0.2						
10/22/2019	XX	GW104B3JH	162	7.1	8.9	13.5	422.23	435.73		5	0.3						
6/16/2020	XX	GW104B41C	151	7.8	10.9	12.88	422.85	435.73		3.4	0.4						
8/4/2020	XX	GW104B441	124	7.1	10	15.7	420.03	435.73		2.2	0.3						
10/20/2020	XX	GW104B450	128	7.8	8.5	15.27	420.46	435.73	32.65	1.5	0.3						
6/22/2021	XX	GW104B46F	125	7.1	10.4	14.13	421.6	435.73		1.4	0.1						
9/21/2021	XX	GW104B48A	126	7.5	8.7	15.3	420.43	435.73	32.6	0.5	0.1						
6/28/2022	XX	GW104B4AC	126	7.1	7.8	12.79	422.94	435.73		0.4	0.2						
10/18/2022	XX	GW104B4C9	155	7.8	9.8	10.25	425.48	435.73	32.62	1.9	0.4						
6/6/2023	XX	GW104B4EA	144	7.2	7.4	11.24	424.49	435.73		1	0.4						
10/17/2023	XX	GW104B4I5	153	7.7	9.1	11.15	424.58	435.73	32.6	2.2	0.1						
107A																	
5/3/2000	XX	107AXX36649	1263	6.69	4.4		352.78										
8/10/2000	XX	107AXX36748	987	6.5	7		350.44		22.19	0.51	0.2						
11/9/2000	XX	107AXX36839	807	6.76	9		350.66			0.53	0.3						
5/16/2001	XX	107AXX37027	1083	6.58	7.1		351.59			0.4	0.1						
8/1/2001	XX	107AXX37104	1948	6.41	12.4		349.87		22.31	0.8	0.1						
10/24/2001	XX	107AXX37188	2620	6.63	11		350.19			0.8	0.3						
5/22/2002	XX	107AXX37398	2520	6.77	10.5		352.06			0.7	0.6						
8/2/2002	XX	107AXX37470	2710	6.52	12.4		350.61		22.31	0.4	0.3						

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Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
10/23/2002	XX	107AXX37552	2230	6.79	9.9		350.68			0.5	0.3
6/24/2003	XX	107AXX37796	2220	6.56	10.6		351.52			0.3	0.2
8/13/2003	XX	107AXX37846	2150	6.59	11.6		351.32		22.19	0.5	0.22
10/16/2003	XX	107AXX37910	1967	6.66	10		351.89			0.7	0.34
5/13/2004	XX	107AXX38120	1042	6.82	4.5		351.91			1.2	0.44
8/2/2004	XX	107AXX38201	835	6.89	13		350.94		22.24	0.7	0.22
10/19/2004	XX	107AXX38279	897	6.92	11.6		350.74			0.5	0.49
5/10/2005	XX	GW107A006	1305	6.59	8.6	2.87	353.22	356.09		0.9	0.3
7/27/2005	XX	GW107A01I	1375	6.4	11.6	5.23	350.86	356.09	22.23	1.5	0.3
10/27/2005	XX	GW107A03A	1178	6.5	9.5	2.78	353.31	356.09		0.5	0.4
5/3/2006	XX	GW107A086	697	6.75	6.5		352.57			0.8	0.42
8/1/2006	XX	GW107A06E	597	6.79	12.7		351.44		22.03	0.6	0.5
10/25/2006	XX	GW107A052	562	6.8	10.2		351.91			0.1	0.6
5/8/2007	XX	GW107A09I	526	6.78	6.8		352.89			0.6	0.3
8/7/2007	XX	GW107A0BB	609	6.74	11.2		350.59		22.21	0.85	0.3
10/31/2007	XX	GW107A0D3	843	6.6	10.3		350.71			2	0.5
5/28/2008	XX	GW107A0FB	819	6.56	8.5		351.61			0.4	0.4
8/18/2008	XX	GW107A0HB	699	6.42	12.2		351.82			0.1	0.4
10/23/2008	XX	GW107A0IJ	615	6.52	9		351.82			0.6	0.3
5/12/2009	XX	GW107A10J	503	6.43	8.6	3.58	352.51	356.09		0.58	0.1
8/11/2009	XX	GW107A12J	555	5.98	12.3	3.93	352.16	356.09		0.39	1.5
10/26/2009	XX	GW107A147	616	6.62	8.9	4.44	351.65	356.09		0.1	0.6
6/2/2010	XX	GW107A168	520	6.79	9.5		351.06			0.59	0.27
8/5/2010	XX	GW107A189	600	6.28	12.2		349.97			0.31	0.4
10/18/2010	XX	GW107A19H	961	6.4	10.6		350.97			0.11	0.28
5/18/2011	XX	GW107A1D8	970	6.2	12.2	2.9	353.19	356.09	22.1	1	0
8/9/2011	XX	GW107A1EJ	800	6.33	15.1	5.74	350.35	356.09	22.04	1	0.4
11/2/2011	XX	GW107A1GA	713	6.5	6.1	4.52	351.57	356.09	22.23	1	0.6
5/17/2012	XX	GW107A1I4	813	6.5	10.1	3.28	352.81	356.09	22.04	1	0
8/14/2012	XX	GW107A1JH	890	6.2	17.5	6.04	350.05	356.09		1	0.4
10/31/2012	XX	GW107A21B	1117	6.7	13.1	3.66	352.43	356.09	22.2	1	0
5/21/2013	XX	GW107A235	1301	6.5	10.8	4.44	351.65	356.09		0.8	0.1
7/22/2013	XX	GW107A24J	1080	6.5	15.3	5.2	350.89	356.09		0.8	0.2
10/1/2013	XX	GW107A26D	925	6.6	17.4	5.79	350.3	356.09	22.23	1	0.5
6/4/2014	XX	GW107A287	477	7	10.3	4.4	351.69	356.09		0.8	0.8
8/19/2014	XX	GW107A2A1	787	6.8	15.9	5.53	350.56	356.09		0.6	0.6
11/12/2014	XX	GW107A2BF	999	6.7	8.2	4.5	351.59	356.09	22.02	0.8	0.6
6/3/2015	XX	GW107A2DB	773	6.7	8.1	3.7	352.39	356.09		0.6	0.3
9/2/2015	XX	GW107A2F6	1118	6.6	15.8	4.95	351.14	356.09		0.7	0.3
11/4/2015	XX	GW107A2H0	1246	6.7	9.4	3.92	352.17	356.09	22.04	0.9	0.7
6/15/2016	XX	GW107A30A	655	6.6	10.4	4.66	351.43	356.09		0.5	0.6
9/20/2016	XX	GW107A324	627	6.8	14.6	6.55	349.54	356.09		0.4	0.4
11/8/2016	XX	GW107A33I	816	6.7	11.3	6.04	350.05	356.09	22.22	0.2	0.5
6/14/2017	XX	GW107A35D	1271	6.5	9.5	4.51	351.58	356.09		0.4	3.1
8/29/2017	XX	GW107A377	1543	6.7	12.9	6.35	349.74	356.09		0.5	0.3
11/15/2017	XX	GW107A391	1415	6.7	9.6	4.65	351.44	356.09	22.22	0.6	0.5
6/19/2018	XX	GW107A3AG	896	7	10.1	5.2	350.89	356.09		0.3	1.3
8/16/2018	XX	GW107A3D5	1258	7.2	11.8	5.28	350.81	356.09		0.6	0.5
11/28/2018	XX	GW107A3E4	1038	7.3	6.9	5.28	350.81	356.09	22.22	0.4	0.5
6/5/2019	XX	GW107A3FJ	653	7.2	11.1	3.74	352.35	356.09		0.1 U	0.4

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(107A) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
8/14/2019	XX	GW107A3I8	1000	6.9	13.5	5.43	350.66	356.09		3.5	0.4
10/23/2019	XX	GW107A3J7	914	7.1	9.6	6.86	349.23	356.09		0.5	0.8
6/17/2020	XX	GW107A412	565	7	12.7	6.95	349.14	356.09		0.5	0.6
8/4/2020	XX	GW107A43B	760	6.7	14.7	6.16	349.93	356.09		0.7	0.5
10/22/2020	XX	GW107A44A	1190	7	11	5.19	350.9	356.09	22.22	0.9	0.6
6/22/2021	XX	GW107A465	972	6.9	14.7	5.46	350.63	356.09		0.4	0.2
9/21/2021	XX	GW107A480	1352	6.8	13.2	5.12	350.97	356.09	22.23	0.4	0.8
6/29/2022	XX	GW107A4A2	1714	6.7	11.7	5.82	350.27	356.09		0.6	1.6
10/20/2022	XX	GW107A4BJ	1248	6.9	8.7	3.22	352.87	356.09	22.22	0.5	0.3
6/6/2023	XX	GW107A4E0	1041	6.9	10	4.64	351.45	356.09		0.6	2.2
10/17/2023	XX	GW107A4HF	862	6.6	10.9	4.95	351.14	356.09	22.23	4.5	0.3
113											
4/27/2000	XX	113XX36643	1216	6.73	3.2		393				
8/1/2000	XX	113XX36739	1439	6.43	9		391.58		21.44	0.6	0.7
11/8/2000	XX	113XX36838	1241	6.48	8		391.46			0.54	0.5
5/8/2001	XX	113XX37019	1278	6.4	7.5		392.46			0.6	0.9
7/24/2001	XX	113XX37096	1338	6.4	11.3		391.11		21.47	0.7	1.68
10/16/2001	XX	113XX37180	1348	6.36	9.4		390.77			0.9	0.54
5/15/2002	XX	113XX37391	1279	6.36	5.4		392.67			0.9	0.27
7/31/2002	XX	113XX37468	1504	6.37	11.1		391.73		21.28	0.4	2.67
10/18/2002	XX	113XX37547	1465	6.4	8.9		391.04			0.5	0.5
6/18/2003	XX	113XX37790	1442	6.4	7.5		392.44			0.3	0.75
8/6/2003	XX	113XX37839	1448	6.42	10		392.28		21.44	0.5	1.32
10/6/2003	XX	113XX37900	1453	6.38	9.5		392.49			1.3	0.5
5/12/2004	XX	113XX38119	1411	6.48	6.4		392.44			0.6	0.46
8/19/2004	XX	113XX38218	1396	6.32	9.6		391.94		21.46	2.1	1.62
10/18/2004	XX	113XX38278	1326	6.4	8.9		391.6			0.7	0.87
5/24/2005	XX	GW113X008	1106	6.43	5.7	4.03	392.59	396.62		0.7	0.6
8/17/2005	XX	GW113X020	1279	6.3	6.8	5.26	391.36	396.62	21.46	0.8	1.1
10/13/2005	XX	GW113X03C	1275	6.15	6.1	4.21	392.41	396.62		0.7	0.6
5/15/2006	XX	GW113X088	1201	6.4	6.1		392.64			1.3	0.66
8/7/2006	XX	GW113X06G	1244	6.34	10.7		392.22		21.42	1.2	2.5
10/11/2006	XX	GW113X054	1240	6.38	9.4		391.33			0.2	0.6
5/22/2007	XX	GW113X0A0	1131	6.4	6.2		392.66			0.1	0.4
8/21/2007	XX	GW113X0BD	1224	6.32	8.9		390.9		21.45	0.1	0.9
11/1/2007	XX	GW113X0D5	1182	6.43	9.2		391.97			0.6	0.6
5/28/2008	XX	GW113X0FD	1212	6.33	8.3		392.21			0.1	0.9
8/26/2008	XX	GW113X0HD	1236	6.41	9.9		392.23			0.1	0.6
10/28/2008	XX	GW113X0J1	1209	6.26	9.2		392.23			0.2	0.8
5/18/2009	XX	GW113X111	1112	6.32	6.1	4.12	392.5	396.62		0.1	0.8
8/17/2009	XX	GW113X131	1154	6.08	10.7	4.35	392.27	396.62		0.1	1.3
10/29/2009	XX	GW113X149	1178	6.26	8.3	4.12	392.5	396.62		0.1	1
6/10/2010	XX	GW113X16A	1121	6.24	7.6		391.23			0.1	0.68
8/19/2010	XX	GW113X18B	1139	6.1	10.2		390.15			0.33	0.53
10/26/2010	XX	GW113X19J	1118	6.14	9.5		392.07			0.1	0.47
11/4/2011	XX	GW113X1I3	1105	6.3	7.8	4.19	392.43	396.62	21.5	1	0.7
5/17/2012	XX	GW113X1JG	972	6.4	8.5	4.02	392.6	396.62	21.3	1	0
8/14/2012	XX	GW113X219	1000	6	14.4	4.92	391.7	396.62		3	1.8
10/31/2012	XX	GW113X233	1015	6.5	12.1	3.8	392.82	396.62	21.45	1	0

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(113) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
5/22/2013	XX	GW113X24H	988	6	8.6	4.22	392.4	396.62		1	0.4
7/25/2013	XX	GW113X26B	1001	6.2	11.7	4.43	392.19	396.62		1	0
10/3/2013	XX	GW113X285	985	6.4	11	4.4	392.22	396.62	21.43	1	0.2
6/6/2014	XX	GW113X29J	925	6.4	9.4	4.2	392.42	396.62		1	0.5
8/22/2014	XX	GW113X2BD	936	6.7	12.1	5.01	391.61	396.62		1	0.3
11/14/2014	XX	GW113X2D7	924	6.6	7.7	4.05	392.57	396.62	21.49	1	0.5
6/5/2015	XX	GW113X2F3	1049	6.4	8.7	4.03	392.59	396.62		1.2	0.4
9/2/2015	XX	GW113X2GI	972	6.9	11.2	4.64	391.98	396.62		1	0.2
11/5/2015	XX	GW113X2IC	929	6.1	8.9	4.05	392.57	396.62	21.49	0.7	0.2
6/13/2016	XX	GW113X322	989	6.2	8.5	4.37	392.25	396.62		0.6	0.5
9/19/2016	XX	GW113X33G	950	6.7	12.5	6.44	390.18	396.62		0.6	0.3
11/7/2016	XX	GW113X35A	948	6.5	8.7	6.42	390.2	396.62	21.48	0.6	0.2
6/12/2017	XX	GW113X375	924	6.4	9.8	4.19	392.43	396.62		0.1	4.2
8/28/2017	XX	GW113X38J	1094	6.6	11.2	5.41	391.21	396.62		0.8	0.3
11/13/2017	XX	GW113X3AD	1023	6.3	8.6	4.18	392.44	396.62	21.48	1.5	0.2
6/18/2018	XX	GW113X3C8	1080	6.6	9.2	4.5	392.12	396.62		1.4	0.3
8/13/2018	XX	GW113X3D3	1262	6.4	13.9	4.88	391.74	396.62		0.5	0.5
11/26/2018	XX	GW113X3FG	A	A	A	A	A	396.62		A	A
6/3/2019	XX	GW113X3HB	910	7.1	12.2	4.15	392.47	396.62		9.9	0.5
8/12/2019	XX	GW113X3I6	767	6.9	15.3	4.39	392.23	396.62		3.2	1.2
10/23/2019	XX	GW113X40J	777	7.3	10.4	5.34	391.28	396.62		8.3	0.5
6/15/2020	XX	GW113X42E	683	6.9	11.4	5.4	391.22	396.62		3.2	0.8
8/3/2020	XX	GW113X439	806	6.8	19.9	6.05	390.57	396.62		5	0.5
10/19/2020	XX	GW113X462	998	6.8	11.5	5.36	391.26	396.62	21.5	7.6	1.7
6/21/2021	XX	GW113X47H	932	6.7	16	5.15	391.47	396.62		4.3	1.2
9/20/2021	XX	GW113X49C	961	6.8	15.1	5.57	391.05	396.62	21.3	4.7	1.2
6/28/2022	XX	GW113X4BE	891	6.6	10.8	4.65	391.97	396.62		1.5	0.8
10/17/2022	XX	GW113X4DB	800	6.8	12.6	4.8	391.82	396.62	21.3	3.2	0.8
6/5/2023	XX	GW113X4FC	882	6.8	11	3.75	392.87	396.62		9.2	1.2
10/16/2023	XX	GW113X4J6	847	6.6	11.9	4.58	392.04	396.62	21.5	6	1.5
202AR											
4/27/2000	XX	202ARXX36643	1804	6.65	3.7		413.27				
8/2/2000	XX	202ARXX36740	1767	6.72	7		410.84		84.33	0.47	0.2
10/24/2000	XX	202ARXX36823	1739	6.71	6		409.82			0.4	0.2
5/9/2001	XX	202ARXX37020	1912	6.62	7.2		412.01			0.6	0.3
7/24/2001	XX	202ARXX37096	1785	6.58	10.8		408.7		84.25	0.5	0.2
10/16/2001	XX	202ARXX37180	1929	6.53	9.3		407.89			3.1	0.2
5/16/2002	XX	202ARXX37392	1947	6.61	7.1		413.12			1	0.27
7/31/2002	XX	202ARXX37468	1853	6.57	11.1		410.15		84.22	1.2	0.53
10/16/2002	XX	202ARXX37545	1915	6.63	7.6		408.32			4	0.2
6/17/2003	XX	202ARXX37789	1995	6.59	8		412.37			0.2	1.7
8/6/2003	XX	202ARXX37839	1851	6.61	10.1		411.54		84.07	0.4	0.43
10/8/2003	XX	202ARXX37902	1906	6.62	8.1		412.43			1.7	0.31
4/28/2004	XX	202ARXX38105	1930	6.62	5.4		412.42			2.4	0.22
8/11/2004	XX	202ARXX38210	1806	6.49	9.3		409.4		84.32	2.4	0.26
10/12/2004	XX	202ARXX38272	1786	6.52	8.2		409.05			2	0.41
5/19/2005	XX	GW202A009	1717	6.58	6.6	1.91	412.03	413.94		3.8	0.2
8/4/2005	XX	GW202A021	1680	6.56	5.8	4.22	409.72	413.94	84.25	0.6	0.4
10/25/2005	XX	GW202A03D	1781	6.57	7.8	1.47	412.47	413.94		0.3	0.3

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(202AR)

Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
5/9/2006	XX	GW202A089	1687	6.56	6.4		411.62			1.4	0.49
7/25/2006	XX	GW202A06H	1680	6.52	10.5		411.02		84.05	0.6	0.4
10/19/2006	XX	GW202A055	1686	6.64	8.7		411.36			0.1	0.4
5/10/2007	XX	GW202A0A1	1673	6.53	8.3		411.23			0.2	0.6
8/6/2007	XX	GW202A0BE	1669	6.49	9.6		408.42		84.25	0.1	0.4
10/25/2007	XX	GW202A0D6	1746	6.57	8		410.46			0.4	0.5
5/29/2008	XX	GW202A0FE	1656	6.64	6.7		410.63			0.1	0.4
8/12/2008	XX	GW202A0HE	1713	6.54	10.4		411.72			0.1	0.7
10/16/2008	XX	GW202A0J2	1595	6.54	8.6		411.72			1.4	0.5
5/4/2009	XX	GW202A112	1693	6.46	7	2.64	411.3	413.94		0.3	0.2
8/5/2009	XX	GW202A132	1689	6.06	10.7	2.14	411.8	413.94		0.2	0.5
10/20/2009	XX	GW202A14A	1643	6.34	7.5	3.6	410.34	413.94		0.1	0.4
5/26/2010	XX	GW202A16B	1577	6.33	9.4		409.66			5.56	0.25
8/2/2010	XX	GW202A18C	1628	6.33	10.1		407.83			0.42	0.54
10/12/2010	XX	GW202A1A0	1693	6.44	8.4		410.31			0.42	0.42
5/17/2011	XX	GW202A1DJ	1515	6.5	6.2	2.04	411.9	413.94	84.08	1	0.7
8/10/2011	XX	GW202A1FA	1602	6.43	11.3	5.97	407.97	413.94	84.1	1	0.2
11/3/2011	XX	GW202A1H1	1648	6.5	7.8	2.98	410.96	413.94	84.25	1	0.2
5/16/2012	XX	GW202A1IF	1527	6.5	9.8	2.53	411.41	413.94	84.06	0.6	0
8/15/2012	XX	GW202A208	1524	6.5	12.1	6.35	407.59	413.94		0.4	0.2
10/31/2012	XX	GW202A222	1546	6.7	12.1	2.1	411.84	413.94	84.3	0.4	0
5/20/2013	XX	GW202A23G	1579	6.6	8.8	3.65	410.29	413.94		1	0.3
7/23/2013	XX	GW202A25A	1540	6.5	12.3	5.29	408.65	413.94		1	0.2
10/2/2013	XX	GW202A274	1514	6.7	11.2	4.24	409.7	413.94	84.29	0.3	0.2
6/3/2014	XX	GW202A28I	1496	6.5	11.3	4.3	409.64	413.94		1	1.3
8/19/2014	XX	GW202A2AC	1459	6.8	11.3	5.96	407.98	413.94		0.8	0.1
11/12/2014	XX	GW202A2C6	1437	6.7	7.5	3.11	410.83	413.94	84.18	1	0.2
6/2/2015	XX	GW202A2E2	1654	6.5	7	3.48	410.46	413.94		0.4	0.3
9/2/2015	XX	GW202A2FH	1429	6.5	12.1	5.44	408.5	413.94		0.5	0.05 U
11/3/2015	XX	GW202A2HB	1475	6.5	7.9	3.35	410.59	413.94	84.3	0.1	0.2
6/14/2016	XX	GW202A311	1433	6.4	10.9	4.52	409.42	413.94		0.7	1.5
9/22/2016	XX	GW202A32F	1458	6.5	10.1	8.87	405.07	413.94		0.8	0.5
11/9/2016	XX	GW202A349	1460	6.5	8.6	9.12	404.82	413.94	84.2	0.1	0.1
6/13/2017	XX	GW202A364	1400	6.6	10.3	4.33	409.61	413.94		3	0.8
8/30/2017	XX	GW202A37I	1435	6.4	9.4	7.45	406.49	413.94		0.3	0.8
11/16/2017	XX	GW202A39C	1394	6.8	7.4	7.56	406.38	413.94	84.2	0.6	0.5
6/20/2018	XX	GW202A3B7	1586	6.7	9.6	4.96	408.98	413.94		0.5	0.3
8/14/2018	XX	GW202A3DG	1570	6.6	10.5	5.54	408.4	413.94		0.3	0.1
11/27/2018	XX	GW202A3EF	F	F	F	F	F	413.94		F	F
6/4/2019	XX	GW202A3GA	1418	6.6	9	3.93	410.01	413.94		2.8	1.2
8/13/2019	XX	GW202A3IJ	1403	6.6	11.6	5.72	408.22	413.94		1.6	0.3
10/24/2019	XX	GW202A3JI	1410	6.9	8	4.13	409.81	413.94		0.4	0.2
6/16/2020	XX	GW202A41D	1273	6.6	9	5.25	408.69	413.94		0.5	0.6
8/5/2020	XX	GW202A442	1272	6.5	11	7.5	406.44	413.94		0.4	0.4
10/22/2020	XX	GW202A451	1276	6.8	9.3	4.65	409.29	413.94	84.32	1.5	0.5
6/23/2021	XX	GW202A46G	1276	6.6	8.9	6	407.94	413.94		1.1	0.2
9/23/2021	XX	GW202A48B	1298	6.5	11.4	3.51	410.43	413.94	84.2	0.3	0.3
6/28/2022	XX	GW202A4AD	1426	6.6	9.7	2.62	411.32	413.94		1.9	0.9
10/19/2022	XX	GW202A4CA	1315	6.6	8.7	F1		415.44	81.37	0.3	0.1
6/7/2023	XX	GW202A4EB	1448	6.3	7.8	1.34	414.1	415.44		1.1	0.6

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(202AR) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
10/19/2023	XX	GW202A4I6	1437	6.4	8.4	1.55	413.89	415.44	84.2	4.3	0.3
10/19/2023	XX	GW202A4JE						415.44			
202B & 202BR											
4/27/2000	XX	202BXX36643	929	6.68	3.6		409.98				
8/2/2000	XX	202BXX36740	1566	6.55	9		407.94		12.15	0.4	2.4
10/24/2000	XX	202BXX36823	1910	6.59	8		407.42			0.4	3.9
5/9/2001	XX	202BXX37020	1298	6.45	6.8		409.11			0.4	9
7/25/2001	XX	202BXX37097	1875	6.49	12.3		405.94		12.13	0.6	4.42
10/16/2001	XX	202BXX37180	1548	6.61	11.1		405.25			0.6	1.75
5/16/2002	XX	202BXX37392	1207	6.39	6.2		410.08			1.4	0.76
7/31/2002	XX	202BXX37468	1661	6.42	12.8		407.4		12.13	0.4	3.31
10/16/2002	XX	202BXX37545	1576	6.68	9.4		405.64			0.7	8.1
6/17/2003	XX	202BXX37789	1285	6.53	8.1		409.24			0.3	4.7
8/6/2003	XX	202BXX37839	1394	6.52	12.8		408.58		12.15	0.4	1.21
10/8/2003	XX	202BXX37902	1648	6.48	10.6		409.36			0.7	3.42
4/28/2004	XX	202BXX38105	1200	6.54	5.5		409.25			1.7	1.91
8/11/2004	XX	202BXX38210	1732	6.42	12.1		406.54		12.14	1.1	1.6
10/12/2004	XX	202BXX38272	1828	6.45	10		406.24			0.7	2.61
5/19/2005	XX	GW202B00A	883	6.53	6.2	5.49	408.87	414.36		0.8	6.4
8/4/2005	XX	GW202B022	1300	6.45	8.1	7.42	406.94	414.36	11.37 Z3	1.2	19.1
10/25/2005	XX	GW202B03E	1345	6.5	9.2	5.01	409.35	414.36		0.7	48.9
5/9/2006	XX	GW202B08A	917	6.57	5.4		408.59			0.9	49.2
7/25/2006	XX	GW202B06I	1066	6.42	12.3		408.08		11.24	1.1	35.3
10/19/2006	XX	GW202B056	1399	6.52	10.1		408.49			0.3	35.4
5/10/2007	XX	GW202B0A2	865	6.52	6.6		408.17			0.1	29.1
8/6/2007	XX	GW202B0BF	1377	6.7	12.5		405.83		11.41	6.29	48.7
10/25/2007	XX	GW202B0D7	1214	6.6	9.7		407.76			0.6	7.5
5/29/2008	XX	GW202B0FF	822	6.64	6.9		407.48			0.6	9.4
8/26/2008	XX	GW202B0HF	880	6.48	13		408.6			0.3	12.6
10/16/2008	XX	GW202B0J3	1153	6.4	10.4		408.6			0.8	23.7
5/4/2009	XX	GW202B113	822	6.41	6	6.46	407.9	414.36		0.48	27.4
8/5/2009	XX	GW202B133	864	5.96	13.4	5.92	408.44	414.36		0.41	28.2
10/20/2009	XX	GW202B14B	1255	6.18	8.9	7.1	407.26	414.36		0.1	64.7
5/26/2010	XX	GW202B16C	912	6.56	9.4		406.55			0.19	11.6
8/2/2010	XX	GW202B18D	1260	6.33	12.8		404.85			0.66	3.88
10/12/2010	XX	GW202B1A1	867	6.5	10.7		407.29			0.98	3.31
5/17/2011	XX	GW202B1E0	650	6.5	5.5	5.62	408.74	414.36	11.25	1	4.1
8/10/2011	XX	GW202B1FB	1290	6.37	13.6	9.16	405.2	414.36	11.25	1	3
11/3/2011	XX	GW202B1H2	886	6.5	9.3	6.65	407.71	414.36	11.5	1	1.2
5/16/2012	XX	GW202B1IG	710	6.5	8.8	6.1	408.26	414.36	11.27	0.4	6
8/15/2012	XX	GW202B209	1125	6.4	15.4	9.5	404.86	414.36		0.6	0.6
10/31/2012	XX	GW202B223	807	6.7	12.8	5.56	408.8	414.36	11.53	0.6	0
5/20/2013	XX	GW202B23H	751	6.6	8.5	7.02	407.34	414.36		4	11.1
7/23/2013	XX	GW202B25B	853	6.4	13.4	8.76	405.6	414.36		2	2.9
10/2/2013	XX	GW202B275	973	6.7	13.8	7.31	407.05	414.36	11.48	0.8	0.2
6/3/2014	XX	GW202B28J	842	6.6	10.6	7.92	406.44	414.36		2	5.3
8/19/2014	XX	GW202B2AD	1162	6.7	12.9	9.15	405.21	414.36		0.8	0.3
11/12/2014	XX	GW202B2C7	1162	6.6	8	6.6	407.76	414.36	11.42	2	0.2
6/2/2015	XX	GW202B2E3	793	6.6	7.8	6.65	407.71	414.36		0.3	0.1

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(202B & 202BR)			Specific Conductance	pH	Temperature	Water Level Depth	Water Level Elevation	Water Level Reference Point	Well Depth	Dissolved Oxygen	Turbidity (field)						
Date	Type	Sample ID	µmhos/cm @25°C	STU	Deg C	Feet	Feet	Feet	Feet	mg/L	NTU						
9/2/2015	XX	GW202B2FI	1209	6.5	16.1	8.64	405.72	414.36		0.9	0.2						
11/3/2015	XX	GW202B2HC	1028	6.5	8.8	6.6	407.76	414.36	11.5	0.4	0.1						
6/14/2016	XX	GW202B312	778	6.3	9	8.13	406.23	414.36		0.2	11.3						
9/22/2016	XX	GW202B32G	I	I	I	I	I	414.36		I	I						
11/9/2016	XX	GW202B34A	I	I	I	11.03	403.33	414.36	11.52	I	I						
6/13/2017	XX	GW202B365	847	6.6	13.1	7.92	406.44	414.36		1	7.4						
8/30/2017	XX	GW202B37J	I	I	I	I	I	414.36		I	I						
11/16/2017	XX	GW202B39D	1108	6.6	8	7.4	406.96	414.36	11.52	0.6	0.3						
6/20/2018	XX	GW202B3B8	840	6.7	14.3	8.6	405.76	414.36		1.2	2.5						
8/14/2018	XX	GW202B3DH	713	6.6	17.2	9.1	405.26	414.36		1.6	2.4						
11/27/2018	XX	GW202B3EG	1369	7	5.4	7.26	407.1	414.36	11.52	0.2	0.5						
6/4/2019	XX	GW202B3GB	604	6.7	9.7	7.59	406.77	414.36		2.4	2.3						
8/13/2019	XX	GW202B3J0	949	6.6	15.5	9.31	405.05	414.36		3.5	0.8						
10/24/2019	XX	GW202B3JJ	917	6.9	9	7.56	406.8	414.36		0.6	0.3						
6/16/2020	XX	GW202B41E	!	!	!	!	!	414.36		!	!						
8/5/2020	XX	GW202B443	!	!	!	!	!	414.36		!	!						
10/22/2020	XX	GW202B452	!	!	!	!	!	414.36		!	!						
6/23/2021	XX	GW202B46H	!	!	!	!	!	414.36		!	!						
9/23/2021	XX	GW202B48C	1431	6.4	13.1	6.16			14.6	0.7	1.2						
6/28/2022	XX	GW202B4AE	929	6.6	10.4	5.5				2.3	1.8						
10/19/2022	XX	GW202B4CB	979	6.6	11.5	2.5	412.88	415.38	14.75	0.3	0.8						
6/7/2023	XX	GW202B4EC	664	6.4	8.5	4.13	411.25	415.38		3.1	0.5						
10/19/2023	XX	GW202B4I7	707	6.3	11.1	4.4	410.98	415.38	11.52	2.9	0.6						
10/19/2023	XX	GW202B4JF						415.38									
205A																	
4/27/2000	XX	205AXX36643	553	7.16	4		414.67										
8/2/2000	XX	205AXX36740	692	7.06	9		411.86		34.92	0.57	0.3						
10/25/2000	XX	205AXX36824	541	7.1	6		411.33			0.7	0.2						
5/9/2001	XX	205AXX37020	660	7.02	7.8		413.35			0.8	0.2						
7/25/2001	XX	205AXX37097	601	7.04	11		409.62		34.89	1	0.1						
10/17/2001	XX	205AXX37181	570	7.08	9.6		410.25			2.9	0.18						
5/15/2002	XX	205AXX37391	906	6.92	6.4		414.43			0.9	0.17						
8/1/2002	XX	205AXX37469	764	6.88	10.6		411.26		35.71	0.8	0.29						
10/16/2002	XX	205AXX37545	758	6.88	8.2		410.36			0.6	0.2						
6/19/2003	XX	205AXX37791	994	6.94	8.5		413.62			0.4	0.5						
8/20/2003	XX	205AXX37853	758	6.97	10.7		412.11		34.96	0.5	0.36						
10/9/2003	XX	205AXX37903	746	7	10		413.66			0.8	0.29						
4/27/2004	XX	205AXX38104	852	7.06	5.2		413.89			2.3	0.25						
8/12/2004	XX	205AXX38211	713	6.8	11.6		411.35		34.94	1	0.35						
10/14/2004	XX	205AXX38274	686	6.88	8.2		411.07			1.1	0.19						
5/17/2005	XX	GW205A00B	901	7	6.5	5.62	414.45	420.07		0.7	0.2						
8/4/2005	XX	GW205A023	966	6.97	6.8	8.21	411.86	420.07	34.88	1	0.4						
10/27/2005	XX	GW205A03F	737	6.92	8.2	5.22	414.85	420.07		1.1	0.5						
5/9/2006	XX	GW205A08B	818	7	6.9		413.72			0.8	0.51						
7/25/2006	XX	GW205A06J	1013	6.92	11.1		413.02		34.7	0.6	0.5						
10/23/2006	XX	GW205A057	683	7.15	8.7		414.27			0.1	0.3						
5/14/2007	XX	GW205A0A3	928	6.84	6.1		412.16			0.1	0.5						
8/16/2007	XX	GW205A0BG	857	7.01	9		411.02		34.87	0.7	0.7						
10/25/2007	XX	GW205A0D8	758	7.13	9.1		413.17			0.2	0.5						

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(205A) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
5/29/2008	XX	GW205A0FG	971	7.23	6.8		412.81			0.1	0.4
8/12/2008	XX	GW205A0HG	989	6.97	11		414.05			0.1	0.9
10/16/2008	XX	GW205A0J4	861	6.94	9.5		414.05			0.2	0.7
5/4/2009	XX	GW205A114	909	6.9	7.3	6.3	413.77	420.07		0.4	0.4
8/5/2009	XX	GW205A134	938	6.56	12.3	5.47	414.6	420.07		0.5	0.9
10/20/2009	XX	GW205A14C	801	6.85	8.3	7.15	412.92	420.07		0.1	1
5/26/2010	XX	GW205A16D	842	6.98	9.7		411.94			0.63	0.28
8/3/2010	XX	GW205A18E	749	6.74	10.3		410.29			0.4	1.49
10/13/2010	XX	GW205A1A2	616	6.95	9.5		412.82			0.42	0.87
5/17/2011	XX	GW205A1E1	680	7	6.3	5.38	414.69	420.07	34.71	0.8	2.9
8/9/2011	XX	GW205A1FC	827	6.9	13.8	9.1	410.97	420.07	34.72	2	1.5
11/3/2011	XX	GW205A1H3	724	6.9	10.1	6.7	413.37	420.07	35.91	2	0.3
5/16/2012	XX	GW205A1IH	588	7.1	11.1	5.71	414.36	420.07	34.7	1	0
8/16/2012	XX	GW205A20A	643	7	13.7	10.86	409.21	420.07		2	0.8
10/30/2012	XX	GW205A224	575	7.1	12.7	6.61	413.46	420.07	34.89	1	0
5/20/2013	XX	GW205A23I	561	6.9	8.8	7.5	412.57	420.07		1	0.5
7/23/2013	XX	GW205A25C	572	7.3	10.3	8.5	411.57	420.07		1	0.7
10/2/2013	XX	GW205A276	516	7.5	12.9	7.75	412.32	420.07	34.97	1	0.3
6/3/2014	XX	GW205A290	510	7.1	10.1	7.23	412.84	420.07		2	0.3
8/19/2014	XX	GW205A2AE	512	7.2	11.6	9.05	411.02	420.07		0.8	0.2
11/12/2014	XX	GW205A2C8	494	7.3	8.2	6.05	414.02	420.07	34.82	2	0.5
6/2/2015	XX	GW205A2E4	544	7.3	6.6	6.2	413.87	420.07		0.4	0.3
9/2/2015	XX	GW205A2FJ	474	7.7	11.6	7.92	412.15	420.07		0.5	0.8
11/3/2015	XX	GW205A2HD	472	7.1	8.6	5.98	414.09	420.07	34.85	8.6	0.8
6/14/2016	XX	GW205A313	534	7.3	8.5	7.45	412.62	420.07		0.5	1.5
9/21/2016	XX	GW205A32H	548	7.6	9.8	11.25	408.82	420.07		0.5	0.4
11/9/2016	XX	GW205A34B	489	7.2	9.5	10.1	409.97	420.07	34.83	0.6	0.2
6/13/2017	XX	GW205A366	508	7.4	10.8	7.01	413.06	420.07		0.9	1.6
8/30/2017	XX	GW205A380	508	6.9	9.5	10	410.07	420.07		1	0.5
11/16/2017	XX	GW205A39E	488	7.8	7.8	6.43	413.64	420.07	34.83	0.3	0.5
6/19/2018	XX	GW205A3B9	551	7.5	8.9	8.11	411.96	420.07		0.8	1.6
8/14/2018	XX	GW205A3DI	542	7.2	10.5	7.74	412.33	420.07		0.5	0.3
11/27/2018	XX	GW205A3EH	497	7.7	7.6	6.15	413.92	420.07	34.81	0.5	0.8
6/4/2019	XX	GW205A3GC	484	7.5	7.7	6.2	413.87	420.07		2.1	1.1
8/13/2019	XX	GW205A3J1	482	7.3	10.7	9.3	410.77	420.07		4.5	0.8
10/23/2019	XX	GW205A400	454	7.6	8.9	8.1	411.97	420.07		0.6	0.6
6/16/2020	XX	GW205A41F	411	7.3	10	8.21	411.86	420.07		1	0.8
8/5/2020	XX	GW205A444	430	7.3	13.7	10.6	409.47	420.07		1.2	0.6
10/20/2020	XX	GW205A453	417	7.1	9.3	6.63	413.44	420.07	34.77	3.1	0.6
6/23/2021	XX	GW205A46I	409	7	8.7	9.13	410.94	420.07		1.2	0.6
9/22/2021	XX	GW205A48D	403	7.1	11.5	7.4	412.67	420.07	34.51	0.6	0.3
6/28/2022	XX	GW205A4AF	429	7.4	10.2	8.15	411.92	420.07		0.5	0.5
10/18/2022	XX	GW205A4CC	381	7	10.7	5.95	414.12	420.07	34.49	0.4	0.5
6/7/2023	XX	GW205A4ED	440	7.2	8.2	6.78	413.29	420.07		2.2	0.8
10/18/2023	XX	GW205A4I8	479	7.2	9.2	7.2	412.87	420.07	34.49	0.5	0.8
205B											
4/27/2000	XX	205BXX36643	378	7.16	3.3		415.25				
8/2/2000	XX	205BXX36740	328	7.08	8		412.14		17.75	0.45	0.5
10/25/2000	XX	205BXX36824	386	7.03	8		411.77			0.6	0.2

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Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
5/9/2001	XX	205BXX37020	796	6.89	8		413.75			0.5	0.4
7/25/2001	XX	205BXX37097	461	6.88	11.4		409.64		17.79	0.8	0.66
10/17/2001	XX	205BXX37181	697	6.74	10.9		410.62			1.8	0.48
5/15/2002	XX	205BXX37391	968	7.01	5.7		415			0.9	0.22
8/1/2002	XX	205BXX37469	865	6.49	10.1		411.42		18.58	0.4	0.4
10/16/2002	XX	205BXX37545	1144	6.44	9.4		410.68			1	0.5
6/19/2003	XX	205BXX37791	1066	6.85	8.1		413.91			0.5	0.4
8/19/2003	XX	205BXX37852	597	6.62	11.1		412.51		17.76	0.4	4.24
10/9/2003	XX	205BXX37903	1274	6.75	10.4		414.01			1.1	0.43
4/27/2004	XX	205BXX38104	876	7.03	5.9		414.32			2.1	0.2
8/12/2004	XX	205BXX38211	395	6.73	10.5		411.5		17.79	1.7	0.52
10/14/2004	XX	205BXX38274	460	6.54	9.7		411.15			0.4	0.72
5/17/2005	XX	GW205B00C	894	6.94	5.6	4.64	414.69	419.33		1.1	0.2
8/4/2005	XX	GW205B024	335	7.05	6.8	7.48	411.85	419.33	17.75	0.7	1.1
10/27/2005	XX	GW205B03G	922	6.82	9.4	4.21	415.12	419.33		0.6	0.5
5/9/2006	XX	GW205B08C	670	7.08	5.8		414.05			1.4	0.67
7/25/2006	XX	GW205B070	302	7.16	11		412.96		17.58	1.7	0.7
10/19/2006	XX	GW205B058	212	7.25	10.4		413.83			0.1	0.8
5/14/2007	XX	GW205B0A4	600	7.06	5.4		413.12			0.4	0.5
8/16/2007	XX	GW205B0BH	633	7.1	9.9		410.86		17.75	0.5	1.3
10/25/2007	XX	GW205B0D9	389	7.26	9.9		413.39			0.5	0.6
5/27/2008	XX	GW205B0FH	599	7.42	6.2		412.66			0.1	0.6
8/12/2008	XX	GW205B0HH	614	7.13	11.1		414.33			0.3	0.8
10/16/2008	XX	GW205B0J5	339	7.35	10.2		414.33			0.6	0.5
5/4/2009	XX	GW205B115	525	7.15	6.4	5.63	413.7	419.33		0.4	0.5
8/5/2009	XX	GW205B135	563	6.82	12	4.75	414.58	419.33		0.2	0.5
10/20/2009	XX	GW205B14D	340	7.35	8.9	6.43	412.9	419.33		0.1	0.7
5/26/2010	XX	GW205B16E	411	7.23	10.1		411.83			0.56	0.4
8/3/2010	XX	GW205B18F	472	7.05	11.2		409.93			0.5	0.74
10/13/2010	XX	GW205B1A3	352	7.03	10.2		413.03			0.42	0.25
5/17/2011	XX	GW205B1E2	473	7.2	6	4.65	414.68	419.33	17.56	0.6	0.6
8/9/2011	XX	GW205B1FD	225	7	15.7	8.64	410.69	419.33	17.57	2	1.1
11/3/2011	XX	GW205B1H4	277	6.9	11.2	5.93	413.4	419.33	17.76	1	0.3
5/16/2012	XX	GW205B1II	345	7.4	10.9	4.81	414.52	419.33	17.55	1	0.3
8/16/2012	XX	GW205B20B	247	7	14.5	9.67	409.66	419.33		2	1.5
10/30/2012	XX	GW205B225	417	7.1	12.8	5.56	413.77	419.33	17.78	0.6	0
5/20/2013	XX	GW205B23J	257	7.4	9.5	6.78	412.55	419.33		1	0.5
7/23/2013	XX	GW205B25D	281	7.4	12.6	8.28	411.05	419.33		1	0.8
10/2/2013	XX	GW205B277	260	7.5	13.7	6.95	412.38	419.33	17.76	1	0.3
6/3/2014	XX	GW205B291	408	7.1	11	6.95	412.38	419.33		1	0.4
8/19/2014	XX	GW205B2AF	324	7.1	11.8	8.81	410.52	419.33		1	0.2
11/12/2014	XX	GW205B2C9	330	7.2	8.9	5.36	413.97	419.33	17.72	1	0.2
6/2/2015	XX	GW205B2E5	259	7.3	6.1	5.53	413.8	419.33		1	0.2
9/2/2015	XX	GW205B2G0	192	7.1	13.6	7.47	411.86	419.33		0.2	0.1
11/3/2015	XX	GW205B2HE	298	7.3	9.3	5.31	414.02	419.33	17.75	2	0.1
6/14/2016	XX	GW205B314	228	7.4	8.3	7	412.33	419.33		0.5	1.5
9/21/2016	XX	GW205B32I	201	7.2	12.3	10.96	408.37	419.33		0.3	0.3
11/9/2016	XX	GW205B34C	178	7	10.1	9.75	409.58	419.33	17.76	0.4	0.1
6/13/2017	XX	GW205B367	305	7.4	10.4	6.85	412.48	419.33		0.5	1.1
8/30/2017	XX	GW205B381	203	7.2	10.9	10.01	409.32	419.33		1	0.2

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(205B) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
11/16/2017	XX	GW205B39F	389	7.6	9.1	5.95	413.38	419.33	17.76	0.4	0.4
6/19/2018	XX	GW205B3BA	288	7.4	8.8	8.01	411.32	419.33		1.5	2.1
8/14/2018	XX	GW205B3DJ	256	7.1	12.6	7.66	411.67	419.33		0.9	0.3
11/27/2018	XX	GW205B3EI	439	8	7.2	5.58	413.75	419.33	17.76	3.6	0.5
6/4/2019	XX	GW205B3GD	467	7.4	7.8	5.96	413.37	419.33		2.1	0.3
8/13/2019	XX	GW205B3J2	190	7.2	13.1	8.78	410.55	419.33		4.4	0.5
10/23/2019	XX	GW205B401	369	7.9	9.7	7.83	411.5	419.33		0.5	0.3
6/16/2020	XX	GW205B41G	232	7.4	8.9	8.02	411.31	419.33		0.5	0.2
8/5/2020	XX	GW205B445	204	7	14.1	10.28	409.05	419.33		0.9	0.2
10/20/2020	XX	GW205B454	185	7.5	10.5	6.02	413.31	419.33	17.8	1	0.4
6/23/2021	XX	GW205B46J	228	7.2	8.7	8.92	410.41	419.33		0.8	0.2
9/22/2021	XX	GW205B48E	247	6.9	12.8	7.92	411.41	419.33	18.93	0.3	0.1
6/28/2022	XX	GW205B4AG	240	7.2	9.6	8.1	411.23	419.33		0.7	0.4
10/18/2022	XX	GW205B4CD	342	6.6	11.4	5.03	414.3	419.33	18.94	0.2	0.3
6/7/2023	XX	GW205B4EE	284	7.3	7.8	5.99	413.34	419.33		1.2	0.4
10/18/2023	XX	GW205B4I9	278	7.1	11.1	6.62	412.71	419.33	18.92	0.8	0.1
206A											
4/27/2000	XX	206AXX36643	1291	6.17	3		404.16				
8/2/2000	XX	206AXX36740	2590	6.83	6		397.58		31.23	0.45	0.4
10/25/2000	XX	206AXX36824	3130	6.84	7		395.14			0.4	0.8
5/8/2001	XX	206AXX37019	2350	6.69	8		401.83			0.5	0.6
7/25/2001	XX	206AXX37097	2910	6.71	9.2		395.73		31.21	0.5	0.39
10/17/2001	XX	206AXX37181	3480	6.7	9.8		393.13			0.8	1.37
5/16/2002	XX	206AXX37392	1802	6.71	6.4		401.65			1.3	0.62
8/1/2002	XX	206AXX37469	2230	6.66	9.6		397.81		31.04	0.5	1
10/17/2002	XX	206AXX37546	3440	6.81	8.2		394.71			5	1.7
6/19/2003	XX	206AXX37791	2380	6.7	7.5		400.49			0.3	1.3
8/18/2003	XX	206AXX37851	2350	6.76	8.4		398.37		31.24	0.6	0.64
10/13/2003	XX	206AXX37907	2510	6.8	9		399.09			0.9	0.34
4/29/2004	XX	206AXX38106	2390	6.75	5.6		400.6			2.7	0.96
8/16/2004	XX	206AXX38215	2940	6.65	8.5		397.39		31.21	1	1.34
10/12/2004	XX	206AXX38272	2650	6.81	8		397.08			2.2	1.66
5/17/2005	XX	GW206A00D	1950	6.66	6.4	13.48	401.83	415.31		1.6	0.4
8/15/2005	XX	GW206A025	2580	6.66	5.2	18.1	397.21	415.31	31.22	0.7	1.1
10/24/2005	XX	GW206A03H	2270	6.69	5	13.35	401.96	415.31		1.3	0.4
5/11/2006	XX	GW206A08D	2160	6.68	7		400.46			2	0.84
7/26/2006	XX	GW206A071	2200	6.68	9.5		398.96		31.06	1.5	1.2
10/23/2006	XX	GW206A059	2250	6.69	8.8		400.1			0.5	1
5/14/2007	XX	GW206A0A5	2000	6.6	7		400.55			0.3	0.7
8/16/2007	XX	GW206A0BI	2600	6.7	8.6		396.58		31.22	0.2	1.3
10/29/2007	XX	GW206A0DA	2670	6.71	7.2		398.48			2.8	0.6
5/27/2008	XX	GW206A0FI	1938	6.73	6.6		399.1			0.1	1
8/13/2008	XX	GW206A0HI	1621	6.62	9.1		400.77			0.1	0.6
10/20/2008	XX	GW206A0J6	2090	6.49	7.3		400.77			0.4	0.7
5/5/2009	XX	GW206A116	1884	6.62	6	14.65	400.66	415.31		0.2	0.7
8/6/2009	XX	GW206A136	1531	6.04	10.2	12.71	402.6	415.31		1	1.5
10/21/2009	XX	GW206A14E	2230	6.43	8.2	17.36	397.95	415.31		0.1	0.9
5/27/2010	XX	GW206A16F	1284	6.43	7.5		397.82			1.03	0.35
8/3/2010	XX	GW206A18G	2180	6.55	10.1		396.77			0.53	0.94

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(206A) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
10/13/2010	XX	GW206A1A4	1941	6.63	8.7		397.62			0.28	0.94
5/17/2011	XX	GW206A1E3	1422	6.6	6.3	11.39	403.92	415.31	31.07	0.6	0.5
8/9/2011	XX	GW206A1FE	2569	6.49	13.3	18.47	396.84	415.31	31.08	1	0.6
11/3/2011	XX	GW206A1H5	2004	6.6	9.4	15.34	399.97	415.31	31.24	1	0.3
5/16/2012	XX	GW206A1IJ	1570	6.7	10.5	12.96	402.35	415.31	31.06	0.4	1.2
8/15/2012	XX	GW206A20C	2144	6.3	16.1	18.32	396.99	415.31		1	0.3
10/30/2012	XX	GW206A226	630	6.5	12.2	15.26	400.05	415.31	31.26	1	0
5/20/2013	XX	GW206A240	1734	6.7	9.3	16.5	398.81	415.31		0.6	0.4
7/23/2013	XX	GW206A25E	1073	6.5	14	16.94	398.37	415.31		1	0.7
10/2/2013	XX	GW206A278	2060	6.9	13.6	16.85	398.46	415.31	31.27	0.4	0.6
6/3/2014	XX	GW206A292	811	6.1	10.4	15.43	399.88	415.31		0.6	0.8
8/20/2014	XX	GW206A2AG	1880	6.9	10.6	18.53	396.78	415.31		1	0.4
11/11/2014	XX	GW206A2CA	210	6.5	8.7	14.8	400.51	415.31	31.2	0.8	0.5
6/2/2015	XX	GW206A2E6	1845	6.6	5.8	14.35	400.96	415.31		0.7	0.2
9/2/2015	XX	GW206A2G1	2167	6.6	13	18.41	396.9	415.31		1.6	0.3
11/3/2015	XX	GW206A2HF	358	6.4	7.9	14.48	400.83	415.31	31.25	0.5	0.2
6/15/2016	XX	GW206A315	1858	6.5	10.1	17.31	398	415.31		0.4	1.1
9/21/2016	XX	GW206A32J	2428	6.6	10.5	21.75	393.56	415.31		2.2	0.3
11/9/2016	XX	GW206A34D	2645	6.6	8.4	22.3	393.01	415.31	31.24	0.3	0.2
6/13/2017	XX	GW206A368	1659	6.6	10.6	14.99	400.32	415.31		2.1	2.1
8/30/2017	XX	GW206A382	2540	6.7	8.3	18.6	396.71	415.31		1.8	0.2
11/15/2017	XX	GW206A39G	2570	6.6	7.7	16.16	399.15	415.31	31.24	0.7	0.4
6/19/2018	XX	GW206A3BB	2159	6.7	8.2	16.75	398.56	415.31		0.3	1.1
8/14/2018	XX	GW206A3E0	2688	6.7	10	18.28	397.03	415.31		0.4	0.5
11/27/2018	XX	GW206A3EJ	1731	6.7	7.6	14.75	400.56	415.31	31.24	0.2	0.5
6/4/2019	XX	GW206A3GE	470	6.7	8.4	13.2	402.11	415.31		2.1	0.5
8/13/2019	XX	GW206A3J3	2125	6.7	12.1	17.72	397.59	415.31		5.1	0.5
10/23/2019	XX	GW206A402	2490	6.9	8.2	13.75	401.56	415.31		0.5	0.4
6/16/2020	XX	GW206A41H	1335	6.6	8.2	16.73	398.58	415.31		1.1	0.3
8/5/2020	XX	GW206A446	1593	6.5	13.9	19.18	396.13	415.31		0.7	0.2
10/20/2020	XX	GW206A455	2270	6.7	9.1	21.25	394.06	415.31	31.3	1.3	0.3
6/23/2021	XX	GW206A470	1881	6.8	7.9	17.29	398.02	415.31		3.2	0.2
9/22/2021	XX	GW206A48F	2272	6.6	10.3	20.23	395.08	415.31	31.68	0.6	0.1
6/28/2022	XX	GW206A4AH	1503	6.5	8.7	17.2	398.11	415.31		0.3	0.2
10/18/2022	XX	GW206A4CE	1202	6.4	9.7	15.81	399.5	415.31	31.69	3.6	0.3
6/7/2023	XX	GW206A4EF	1063	6.4	7.7	16.7	398.61	415.31		5	0.6
10/17/2023	XX	GW206A4IA	1118	6.3	9.2	16.7	398.61	415.31	31.68	5.1	0.5
206B											
4/27/2000	XX	206BXX36643	75	6.83	3.6		405.17				
8/2/2000	XX	206BXX36740	D	D	D				18.69		
10/25/2000	XX	206BXX36824	D	D	D						
5/8/2001	XX	206BXX37019	96.1	5.26	9.2		402.21			9.7	4
7/25/2001	XX	206BXX37097	D	D	D				18.66	D	D
10/17/2001	XX	206BXX37181	D	D	D					D	D
5/16/2002	XX	206BXX37392	157	6.35	6		401.91			4.5	2.33
7/29/2002	XX	206BXX37466	D	D	D				18.69	D	D
10/15/2002	XX	206BXX37544	D	D	D					D	D
6/17/2003	XX	206BXX37789	207	6.27	7.2		400.7			4	2.7
8/18/2003	XX	206BXX37851	171.6	6.12	9.7		399.01		18.67	4.3	2.58

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Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
10/13/2003	XX	206BXX37907	116.7	6.19	10.2		399.6			8.6	1.88
4/29/2004	XX	206BXX38106	194.4	6.18	5		400.96			3.9	1.94
8/16/2004	XX	206BXX38215	D	D	D				18.68	D	D
10/12/2004	XX	206BXX38272	D	D	D					D	D
5/17/2005	XX	GW206B00E	167	6.11	6.2	13.04	402.23	415.27		5.2	1.47
8/15/2005	XX	GW206B026	D	D	D	D			18.68	D	D
10/24/2005	XX	GW206B03I	84.8	6.25	6.8	12.38	402.89	415.27		9.8	1.2
5/11/2006	XX	GW206B08E	134.9	6.65	6.1		400.82			6.6	2.17
7/26/2006	XX	GW206B072	174	6.13	10.5		399.22		18.51	4.6	7.3
10/23/2006	XX	GW206B05A	102	6.32	10.1		401.36			8.3	7.4
5/14/2007	XX	GW206B0A6	173	6.41	7.3		400.85			5	3.4
8/16/2007	XX	GW206B0BJ	D	D	D		D		18.64	D	D
10/29/2007	XX	GW206B0DB	D	D	D		D			D	D
5/27/2008	XX	GW206B0FJ	D	D	D		D			D	D
8/13/2008	XX	GW206B0HJ	182	6.01	10.6		401.13			4	2.5
10/20/2008	XX	GW206B0J7	D	D	D		D			D	D
5/5/2009	XX	GW206B117	185	6.06	5.7	14.36	400.91	415.27		3	1.4
8/6/2009	XX	GW206B137	127	5.46	11.4	11.84	403.43	415.27		5.9	1.5
10/21/2009	XX	GW206B14F	199	6.33	9.3	16.65	398.62	415.27		4	2
5/27/2010	XX	GW206B16G	D	D	D		398.45			D	D
8/3/2010	XX	GW206B18H	D	D	D					D	D
10/13/2010	XX	GW206B1A5	104	6.4	10.2		398.98			7.97	3.81
5/17/2011	XX	GW206B1E4	61	6.2	5.8	9.75	405.52	415.27	18.54	6	1.3
8/9/2011	XX	GW206B1FF	D	D	D	17.95	397.32	415.27	18.52	D	D
11/4/2011	XX	GW206B1H6	182	6.2	8.7	15.21	400.06	415.27	18.71	2	0.5
5/16/2012	XX	GW206B1J0	98	6.2	9.7	12.29	402.98	415.27	18.48	5	0.3
8/15/2012	XX	GW206B20D	I	I	I	17.72	397.55	415.27		I	I
10/30/2012	XX	GW206B227	143	6.2	12.5	14.85	400.42	415.27	18.72	5	0
5/20/2013	XX	GW206B241	178	6.9	7.4	16.2	399.07	415.27		5	1.1
7/24/2013	XX	GW206B25F	196	6.2	14.1	16.31	398.96	415.27		5	0.5
10/2/2013	XX	GW206B279	165	6.6	14.4	16.24	399.03	415.27	18.74	5	0.3
6/3/2014	XX	GW206B293	189	7.2	10.9	15.15	400.12	415.27		4	0.8
8/20/2014	XX	GW206B2AH	D	D	D	D	D	415.27		D	D
11/11/2014	XX	GW206B2CB	91	6.4	9.2	13.36	401.91	415.27	18.66	2	0.3
6/2/2015	XX	GW206B2E7	120	7.1	5.4	13.7	401.57	415.27		7.9	0.05 U
9/2/2015	XX	GW206B2G2	I	I	I	I		415.27		I	I
11/3/2015	XX	GW206B2HG	90	6.4	9.1	13.6	401.67	415.27	18.71	8	0.3
6/15/2016	XX	GW206B316	166	7	8.4	16.8	398.47	415.27		5	12.2
9/21/2016	XX	GW206B330	D	D	D	D	D	D		D	D
11/9/2016	XX	GW206B34E	D	D	D	D	D	D	18.7	D	D
6/13/2017	XX	GW206B369	176	7.1	9.9	15.15	400.12	415.27		7.1	1.9
8/30/2017	XX	GW206B383	I	I	I	I	I	415.27		I	I
11/15/2017	XX	GW206B39H	260	7.3	8.6	15.95	399.32	415.27	18.7	6.8	0.8
6/19/2018	XX	GW206B3BC	260	7.2	7.8	16.6	398.67	415.27		3.5	6.5
8/14/2018	XX	GW206B3E1	I	I	I	I	I	415.27		I	I
11/27/2018	XX	GW206B3F0	106	7.7	7.5	14.45	400.82	415.27	18.7	8.1	0.8
6/4/2019	XX	GW206B3GF	146	7.2	7.3	12.74	402.53	415.27		10.6	0.8
8/13/2019	XX	GW206B3J4	191	6.8	11.8	17.1	398.17	415.27		10.7	2.5
10/23/2019	XX	GW206B403	D	D	D	D		415.27		D	D
6/16/2020	XX	GW206B41I	179	6.6	8.8	16.42	398.85	415.27		5.1	1.6

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(206B) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
8/5/2020	XX	GW206B447	I	I	I	I	I	415.27		I	I
10/22/2020	XX	GW206B456	D	D	D	D	D	415.27	18.76	D	D
6/23/2021	XX	GW206B471	215	7	7.5	16.82	398.45	415.27		6.8	0.6
9/22/2021	XX	GW206B48G	D	D	D	D		415.27	18.7	D	D
6/28/2022	XX	GW206B4AI	127	6.4	9.8	16.72	398.55	415.27		5.1	1.6
10/18/2022	XX	GW206B4CF	130	6.5	11.2	14.61	400.66	415.27	18.7	4.6	2.2
6/7/2023	XX	GW206B4EG	322	6.6	7	16.46	398.81	415.27		6.6	1.8
10/17/2023	XX	GW206B4IB	100	6.2	10.4	16.73	398.54	415.27	18.7	3.8	2.6
301											
5/3/2000	XX	301XX36649	348	7.07	3.9		347.49				
8/9/2000	XX	301XX36747	338	6.55	8		346.65		17.46	0.38	1.5
11/8/2000	XX	301XX36838	362	6.9	8		347.04			3.02	0.4
5/16/2001	XX	301XX37027	434	6.59	5.6		347.31			0.6	0.2
7/31/2001	XX	301XX37103	416	6.53	11.6		345.5		17.42	0.7	0.4
10/23/2001	XX	301XX37187	494	6.72	9.7		346.53			0.8	0.2
5/21/2002	XX	301XX37397	505	6.68	6.6		347.51			0.9	0.1
8/2/2002	XX	301XX37470	526	6.34	11.5		346.48		17.42	0.2	0.3
10/23/2002	XX	301XX37552	554	6.6	9.7		346.96			0.5	0.3
6/24/2003	XX	301XX37796	603	6.52	7.5		347.03			0.3	0.2
8/12/2003	XX	301XX37845	596	6.34	11.6		347.12		17.48	0.3	0.87
10/16/2003	XX	301XX37910	641	6.47	10		347.68			0.5	0.1
5/5/2004	XX	301XX38112	663	6.56	4.5		347.79			0.8	0.33
8/9/2004	XX	301XX38208	634	6.28	10.3		346.67		17.44	1.1	0.52
10/20/2004	XX	301XX38280	666	6.53	9.3		346.93			0.7	0.39
5/11/2005	XX	GW301X00F	672	6.47	5.7	3.54	347.8	351.34		0.5	0.3
7/27/2005	XX	GW301X027	701	6.48	10.5	4.9	346.44	351.34	17.44	2	0.5
11/7/2005	XX	GW301X03J	755	6.47	9.4	3.46	347.88	351.34		0.5	0.4
5/1/2006	XX	GW301X08F	792	6.65	4.5		346.99			0.6	0.41
7/31/2006	XX	GW301X073	841	6.43	12		347.03		17.26	0.3	0.7
10/26/2006	XX	GW301X05B	881	6.57	9.1		347.74			0.1	0.4
5/9/2007	XX	GW301X0A7	868	6.59	5.3		347.5			0.2	0.5
8/9/2007	XX	GW301X0C0	990	6.53	10.4		346.31		17.46	0.2	0.6
10/30/2007	XX	GW301X0DC	1185	6.56	9.1		347.29			0.6	0.6
6/3/2008	XX	GW301X0G0	1226	6.49	6.2		347.4			0.1	0.1
8/14/2008	XX	GW301X0I0	1245	6.32	10.6		347.79			0.1	0.7
10/21/2008	XX	GW301X0J8	1249	6.37	9.1		347.79			0.1	0.5
5/11/2009	XX	GW301X118	1256	6.32	5.7	3.7	347.64	351.34		0.4	0.5
8/10/2009	XX	GW301X138	1272	5.98	10.8	4.05	347.29	351.34		0.1	0.7
10/22/2009	XX	GW301X14G	1354	6.38	8.5	4.36	346.98	351.34		0.1	0.4
6/1/2010	XX	GW301X16H	1319	6.47	7.4		346.53			0.1	0.6
8/5/2010	XX	GW301X18I	1369	6.29	12.2		345.33			0.18	0.43
10/18/2010	XX	GW301X1A6	1433	6.22	9.6		347.28			0.1	0.14
5/18/2011	XX	GW301X1D9	1265	6.3	6.3	3.55	347.79	351.34	17.35	0.8	0
8/9/2011	XX	GW301X1F0	1534	6.21	13.5	5.11	346.23	351.34	17.3	2	0.3
11/2/2011	XX	GW301X1GB	1353	6.4	9.1	3.88	347.46	351.34	17.48	2	0.2
5/15/2012	XX	GW301X1I5	1321	6.4	8.5	3.61	347.73	351.34	17.27	1	0
8/14/2012	XX	GW301X1JI	980	5.9	14.5	5.52	345.82	351.34		1	0.9
10/30/2012	XX	GW301X21C	1470	6.6	11.5	3.83	347.51	351.34	17.5	1	0
5/22/2013	XX	GW301X236	1594	6.4	6.3	3.95	347.39	351.34		1	0.6

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(301) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
7/25/2013	XX	GW301X250	1600	6	11.8	4.66	346.68	351.34		2	0.6
10/1/2013	XX	GW301X26E	1464	6.6	11.6	4.51	346.83	351.34	17.48	1	0.4
6/4/2014	XX	GW301X288	1590	6.6	7.8	4.4	346.94	351.34		1	0.3
8/20/2014	XX	GW301X2A2	1693	6.8	12.4	4.95	346.39	351.34		1	0.2
11/11/2014	XX	GW301X2BG	1715	6.8	6.2	3.75	347.59	351.34	17.45	1	0.2
6/3/2015	XX	GW301X2DC	1883	6.3	6.4	3.75	347.59	351.34		1	0.05 U
9/1/2015	XX	GW301X2F7	1750	6.4	12.1	4.52	346.82	351.34		1	0.05 U
11/4/2015	XX	GW301X2H1	1739	6.4	8	3.76	347.58	351.34	17.46	0.7	0.2
6/15/2016	XX	GW301X30B	1785	6.3	9.5	4.26	347.08	351.34		0.4	0.6
9/20/2016	XX	GW301X325	1990	6.3	12.6	5.41	345.93	351.34		1.6	0.2
11/10/2016	XX	GW301X33J	1992	6.6	8	4.57	346.77	351.34	17.48	0.3	0.1
6/14/2017	XX	GW301X35E	1820	6.4	7.7	4.5	346.84	351.34		3	0.7
8/29/2017	XX	GW301X378	1891	6.5	9.8	5.89	345.45	351.34		0.2	0.3
11/14/2017	XX	GW301X392	1882	6.4	8.8	4.1	347.24	351.34	17.48	1.7	0.3
6/19/2018	XX	GW301X3AH	2041	6.5	8.5	4.8	346.54	351.34		0.2	0.7
8/14/2018	XX	GW301X3D6	2114	6.4	12.5	4.79	346.55	351.34		2.9	0.2
11/28/2018	XX	GW301X3E5	2156	6.7	7.5	3.76	347.58	351.34	17.48	0.6	0.3
6/5/2019	XX	GW301X3G0	1896	6.6	6.8	4.19	347.15	351.34		1.1	0.2
8/13/2019	XX	GW301X3I9	1867	6.6	11	4.85	346.49	351.34		2.5	0.5
10/23/2019	XX	GW301X3J8	1803	6.8	9.3	4.28	347.06	351.34		0.3	0.2
6/16/2020	XX	GW301X413	1587	6.5	7.8	4.98	346.36	351.34		0.5	0.1
8/4/2020	XX	GW301X43C	1561	6.5	12.3	6.35	344.99	351.34		0.9	0.2
10/21/2020	XX	GW301X44B	1612	6.7	9.1	4.14	347.2	351.34	17.52	0.9	0.3
6/22/2021	XX	GW301X466	1501	6.5	11.6	5.26	346.08	351.34		0.6	0.2
9/22/2021	XX	GW301X481	1581	6.6	11.8	4.52	346.82	351.34	17.9	0.3	0.2
6/29/2022	XX	GW301X4A3	1747	6.5	16.1	5	346.34	351.34		0.4	1.6
10/19/2022	XX	GW301X4C0	1629	6.8	11.3	3.15	348.19	351.34	17.89	0.8	0.1
6/6/2023	XX	GW301X4E1	1833	6.3	8.4	3.92	347.42	351.34		5.7	0.4
10/18/2023	XX	GW301X4HG	1975	6.3	10.4	4.23	347.11	351.34	17.9	0.1	0.3
302B											
5/3/2000	XX	302BXX36649	345	6.15	5		348.95				
8/9/2000	XX	302BXX36747	121	6.14	6		346.58		28.04	0.37	0.4
11/8/2000	XX	302BXX36838	405	6.04	8		347.59			0.6	0.1
5/16/2001	XX	302BXX37027	625	6.08	6.1		347.76			0.5	0.1
7/31/2001	XX	302BXX37103	436	5.97	10.6		345.39		28.12	0.9	0.2
10/23/2001	XX	302BXX37187	470	5.8	9.6		347.08			1.4	0.3
5/21/2002	XX	302BXX37397	623	6.13	6.9		348.71			1.5	0.1
8/7/2002	XX	302BXX37475	602	6.08	10.2		346.34		28.12	0.5	0.2
10/23/2002	XX	302BXX37552	655	6.18	8.7		347.82			0.5	0.8
6/23/2003	XX	302BXX37795	912	6.04	8.5		347.68			0.4	0.3
8/12/2003	XX	302BXX37845	862	6.25	10.8		348.1		28.16	0.5	0.44
10/20/2003	XX	302BXX37914	970	6.26	8.8		348.74			0.6	0.29
5/4/2004	XX	302BXX38111	1055	6.21	5.7		348.91			1.3	0.25
8/5/2004	XX	302BXX38204	838	6.13	11.2		347.35		28.1	1.2	0.15
10/20/2004	XX	302BXX38280	898	6.13	8.9		347.33			1	0.19
5/11/2005	XX	GW302B00G	943	6.07	8.1	4.98	349.18	354.16		0.7	0.2
7/27/2005	XX	GW302B028	906	6.24	10	7.69	346.47	354.16	28.09	1.1	0.3
11/7/2005	XX	GW302B040	1010	6.14	10.1	5.2	348.96	354.16		1.2	0.4
5/1/2006	XX	GW302B08G	1067	6.23	5.6		348.42			0.6	0.38

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Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
7/31/2006	XX	GW302B074	1119	6.13	10.2		347.79		27.91	1.2	0.5
10/25/2006	XX	GW302B05C	1000	6.31	9.1		349.01			0.1	0.3
5/9/2007	XX	GW302B0A8	994	6.23	6.1		348.73			0.3	0.3
8/9/2007	XX	GW302B0C1	936	6.28	8.9		346.47		28.12	0.5	0.4
10/30/2007	XX	GW302B0DD	1029	6.37	8.2		348.18			1	0.5
6/2/2008	XX	GW302B0G1	1087	6.13	6.7		347.77			0.1	0.3
8/14/2008	XX	GW302B0I1	1150	6.03	10.5		349.51			0.1	0.4
10/21/2008	XX	GW302B0J9	1084	6.16	8.5		349.51			0.3	0.4
5/11/2009	XX	GW302B119	1149	6.02	6.7	5.04	349.12	354.16		0.8	0.3
8/10/2009	XX	GW302B139	1111	5.77	10.8	5.82	348.34	354.16		0.3	0.4
10/22/2009	XX	GW302B14H	1097	6.01	8.4	6.5	347.66	354.16		0.1	0.5
6/1/2010	XX	GW302B16I	1134	6.45	7.4		346.41			0.61	0.19
8/4/2010	XX	GW302B18J	1113	6.4	11.1		345.45			0.45	0.37
10/14/2010	XX	GW302B1A7	1164	6.28	9.3		348.08			0.16	0.34
5/18/2011	XX	GW302B1DA	1019	6.3	9.8	4.62	349.54	354.16	28.01	1	0
8/8/2011	XX	GW302B1F1	1096	6.2	14.8	7.77	346.39	354.16	27.95	1	0
11/1/2011	XX	GW302B1GC	1262	8.9	8.9	5.66	348.5	354.16	28.12	1	0.2
5/15/2012	XX	GW302B1I6	1341	6.3	11.1	4.86	349.3	354.16	27.9	0.6	0.2
8/16/2012	XX	GW302B1JJ	1219	6.3	14.2	8.54	345.62	354.16		2	0.3
10/30/2012	XX	GW302B21D	1282	6.4	13.2	5.55	348.61	354.16	28.14	0.8	0
5/21/2013	XX	GW302B237	1445	6.4	8.8	6.2	347.96	354.16		2	0.5
7/25/2013	XX	GW302B251	1483	6.2	11	7.09	347.07	354.16		2	0.3
10/1/2013	XX	GW302B26F	1464	6.7	13.4	6.9	347.26	354.16	28.15	0.8	0.3
6/3/2014	XX	GW302B289	1384	6.4	10.2	6.72	347.44	354.16		2	0.4
8/20/2014	XX	GW302B2A3	1347	6.9	13	7.51	346.65	354.16		1	0.6
11/11/2014	XX	GW302B2BH	1314	6.6	6.1	5.4	348.76	354.16	28.05	1	0.2
6/3/2015	XX	GW302B2DD	1582	6.5	6.4	5.32	348.84	354.16		0.6	0.3
9/1/2015	XX	GW302B2F8	1416	6.5	11.2	6.89	347.27	354.16		1.2	0.3
11/4/2015	XX	GW302B2H2	1381	6.5	8.4	5.42	348.74	354.16	28.12	1	0.5
6/15/2016	XX	GW302B30C	1563	6.3	9	6.59	347.57	354.16		0.6	0.8
9/21/2016	XX	GW302B326	1479	6.5	12.1	8.2	345.96	354.16		0.7	0.6
11/8/2016	XX	GW302B340	1349	6.6	5.8	6.91	347.25	354.16	28.1	1.2	0.2
6/13/2017	XX	GW302B35F	1419	6.5	13.2	6.69	347.47	354.16		4	1.8
8/29/2017	XX	GW302B379	1503	6.5	9.8	8.8	345.36	354.16		0.6	0.4
11/14/2017	XX	GW302B393	1419	6.7	7.6	6.13	348.03	354.16	28.14	1.4	0.5
6/19/2018	XX	GW302B3AI	1680	6.7	10.4	7.73	346.43	354.16		1.4	0.8
8/14/2018	XX	GW302B3D7	1657	6.5	9.6	7.03	347.13	354.16		1.2	0.6
11/28/2018	XX	GW302B3E6	1709	6.9	7.5	5.7	348.46	354.16	28.14	1.4	0.5
6/5/2019	XX	GW302B3G1	1591	6.6	8.5	6.04	348.12	354.16		12.5	0.4
8/13/2019	XX	GW302B3IA	1653	6.6	14.3	7.46	346.7	354.16		6	0.8
10/23/2019	XX	GW302B3J9	1560	6.7	8.6	6.72	347.44	354.16		0.5	0.5
6/17/2020	XX	GW302B414	1518	6	9.9	7.61	346.55	354.16		0.8	0.8
8/5/2020	XX	GW302B43D	1476	6.5	13.5	8.66	345.5	354.16		0.8	0.6
10/21/2020	XX	GW302B44C	1401	6.7	7.9	5.52	348.64	354.16	28.18	2.3	0.8
6/22/2021	XX	GW302B467	1574	6.5	11.6	8.03	346.13	354.16		0.7	0.4
9/22/2021	XX	GW302B482	1582	6.5	12.2	6.69	347.47	354.16	27.45	0.9	0.8
6/29/2022	XX	GW302B4A4	1663	6.7	9.2	7.2	346.96	354.16		0.3	0.8
10/19/2022	XX	GW302B4C1	1653	6.5	11.4	4.26	349.9	354.16	27.48	1.2	0.6
6/7/2023	XX	GW302B4E2	1818	6.3	7.8	5.7	348.46	354.16		6.7	0.8
10/18/2023	XX	GW302B4HH	1715	6.5	8.3	6.11	348.05	354.16	27.45	7.7	0.4

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(302C)

Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
302C											
5/3/2000	XX	302CXX36649	292	5.91	4.5		347.84				
8/9/2000	XX	302CXX36747	362	5.9	8		345.52		14.21	0.39	0.7
11/8/2000	XX	302CXX36838	402	6.07	8		346.58			0.46	0.2
5/16/2001	XX	302CXX37027	507	5.85	5.8		346.81			0.5	0.2
7/31/2001	XX	302CXX37103	453	5.93	10.6		344.12		14.23	0.8	0.3
10/23/2001	XX	302CXX37187	504	5.93	10.1		345.88			0.9	0.2
5/21/2002	XX	302CXX37397	453	5.92	6.7		347.54			2.3	0.1
8/7/2002	XX	302CXX37475	754	5.92	10.6		345.13		14.23	0.4	1.2
10/23/2002	XX	302CXX37552	796	6.16	9.4		346.75			1.3	0.3
6/23/2003	XX	302CXX37795	796	5.9	8.4		346.66			0.4	0.9
8/12/2003	XX	302CXX37845	1000	5.99	12.2		346.92		14.19	0.6	0.23
10/20/2003	XX	302CXX37914	801	5.88	10.9		347.51			0.8	0.29
5/4/2004	XX	302CXX38111	898	6.03	5.2		348.13			1.1	0.28
8/5/2004	XX	302CXX38204	868	6.05	11.2		346.16		14.23	1	0.24
10/20/2004	XX	302CXX38280	823	6.02	10.3		346.11			0.9	0.19
5/11/2005	XX	GW302C00H	812	5.95	6.8	5.16	348.05	353.21		0.6	0.3
7/27/2005	XX	GW302C029	967	6.08	10.9	7.94	345.27	353.21	14.25	2.7	0.5
11/7/2005	XX	GW302C041	954	5.96	10.3	5.39	347.82	353.21		0.7	0.3
5/1/2006	XX	GW302C08H	1023	6.07	5.3		347.27			0.9	0.3
7/31/2006	XX	GW302C075	1108	6.15	11.6		346.61		14.04	1.6	0.2
10/25/2006	XX	GW302C05D	918	6.15	10.2		347.83			0.1	0.4
5/9/2007	XX	GW302C0A9	935	6.17	5.8		347.59			0.1	0.4
8/9/2007	XX	GW302C0C2	974	6.25	10.2		345.26		14.22	0.4	0.5
10/30/2007	XX	GW302C0DE	938	6.33	10		347.02			0.9	0.5
6/2/2008	XX	GW302C0G2	1150	6.34	6.5		346.57			0.1	0.2
8/14/2008	XX	GW302C0I2	1088	6.05	11.2		348.39			0.1	0.5
10/21/2008	XX	GW302C0JA	1022	6.2	9.8		348.39			0.5	0.4
5/11/2009	XX	GW302C11A	1093	6.13	6	5.21	348	353.21		0.9	0.3
8/10/2009	XX	GW302C13A	1124	5.71	11.8	6.04	347.17	353.21		0.4	0.3
10/22/2009	XX	GW302C14I	967	6.41	9.3	6.72	346.49	353.21		0.1	0.4
6/1/2010	XX	GWXXXX17F	1137	6.66	7.7		345.23			0.1	0.36
8/4/2010	XX	GW302C190	1011	6.36	11.8		344.27			0.47	0.61
10/14/2010	XX	GW302C1A8	1137	6.3	10.5		346.93			0.1	0.35
5/18/2011	XX	GW302C1DB	609	6.2	8.8	4.78	348.43	353.21	14.1	1	0
8/8/2011	XX	GW302C1F2	1200	6.16	12.2	8.03	345.18	353.21	14.03	1	0
11/1/2011	XX	GW302C1GD	1233	6.3	10.1	5.7	347.51	353.21	14.25	1	0.2
5/15/2012	XX	GW302C1I7	1040	6.3	9.6	5.05	348.16	353.21	14	1	0
8/16/2012	XX	GW302C200	1304	6	13	8.68	344.53	353.21		1	0.4
10/30/2012	XX	GW302C21E	1271	6.6	12.1	5.82	347.39	353.21	14.22	1	0
5/21/2013	XX	GW302C238	1486	6.4	7.3	6.37	346.84	353.21		1	0.3
7/25/2013	XX	GW302C252	1504	6.3	11.9	7.19	346.02	353.21		1	0.3
10/1/2013	XX	GW302C26G	1294	6.6	11.3	6.6	346.61	353.21	14.24	0.8	0.2
6/3/2014	XX	GW302C28A	1401	6.1	8.7	6.74	346.47	353.21		0.3	0.3
8/20/2014	XX	GW302C2A4	1134	6.8	12.4	7.6	345.61	353.21		1	0.4
11/11/2014	XX	GW302C2BI	1327	6.5	7.9	5.4	347.81	353.21	14.18	0.8	0.2
6/3/2015	XX	GW302C2DE	1563	6.4	6.3	5.33	347.88	353.21		0.4	0.2
9/1/2015	XX	GW302C2F9	1200	6.4	12.9	6.91	346.3	353.21		0.5	0.3
11/4/2015	XX	GW302C2H3	1349	6.5	8.8	5.45	347.76	353.21	14.22	1	0.5

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(302C) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
6/15/2016	XX	GW302C30D	1565	6.3	8.8	6.7	346.51	353.21		0.2	0.3
9/21/2016	XX	GW302C327	1253	6.4	13.2	8.2	345.01	353.21		0.6	0.4
11/8/2016	XX	GW302C341	1323	6.4	8.3	6.93	346.28	353.21	14.18	0.2	0.1
6/13/2017	XX	GW302C35G	1520	6.4	10.4	6.94	346.27	353.21		0.6	1.2
8/29/2017	XX	GW302C37A	1311	6.4	11.3	8.91	344.3	353.21		0.4	0.1
11/14/2017	XX	GW302C394	1440	6.4	9	6.15	347.06	353.21	14.22	1.2	0.3
6/19/2018	XX	GW302C3AJ	1689	6.5	8.6	7.75	345.46	353.21		0.1	0.3
8/14/2018	XX	GW302C3D8	1491	6.5	13.8	7.1	346.11	353.21		2.5	0.2
11/28/2018	XX	GW302C3E7	1793	7.4	7.1	5.7	347.51	353.21	14.22	0.4	0.3
6/5/2019	XX	GW302C3G2	1483	6.5	7.4	6.31	346.9	353.21		6.6	0.5
8/13/2019	XX	GW302C3IB	1518	6.5	13.8	7.43	345.78	353.21		4.5	0.3
10/23/2019	XX	GW302C3JA	1305	6.7	9.7	6.86	346.35	353.21		0.4	0.2
6/17/2020	XX	GW302C415	1507	6.5	9.5	7.7	345.51	353.21		0.6	0.2
8/5/2020	XX	GW302C43E	1309	6.4	12.5	8.69	344.52	353.21		0.5	0.2
10/21/2020	XX	GW302C44D	1465	6.7	9.3	5.58	347.63	353.21	14.26	1.5	0.4
6/22/2021	XX	GW302C468	1675	6.4	10.8	8.03	345.18	353.21		0.2	0.4
9/22/2021	XX	GW302C483	1491	6.8	12.5	6.62	346.59	353.21	14.85	0.4	0.3
6/29/2022	XX	GW302C4A5	1644	6.8	9.1	7.33	345.88	353.21		0.3	0.6
10/19/2022	XX	GW302C4C2	1550	6.5	11.9	4.4	348.81	353.21	14.85	0.2	0.2
6/7/2023	XX	GW302C4E3	1807	6.3	7.2	5.81	347.4	353.21		7.4	0.5
10/18/2023	XX	GW302C4HI	1729	6.3	11	5.81	347.4	353.21	14.85	0.3	0.2
303A											
4/27/2000	XX	303AXX36643	1482	6.81	5.5		379.15				
8/2/2000	XX	303AXX36740	1354	6.65	8		375.57		43.58	0.51	2
10/25/2000	XX	303AXX36824	2070	6.62	9		374			0.5	0.8
5/9/2001	XX	303AXX37020	2650	6.57	9.4		377.37			0.5	0.3
7/25/2001	XX	303AXX37097	1808	6.56	12		373.91		43.63	0.6	0.82
10/17/2001	XX	303AXX37181	2460	6.55	12.1		372.54			0.8	0.46
5/16/2002	XX	303AXX37392	1837	6.79	7.6		377.36			1.4	1.58
8/1/2002	XX	303AXX37469	1560	6.48	11.2		374.75		43.57	0.5	0.65
10/17/2002	XX	303AXX37546	1998	6.56	10.1		373.48			1.9	0.2
6/23/2003	XX	303AXX37795	1473	6.69	8.2		376.6			0.3	0.5
8/19/2003	XX	303AXX37852	1611	6.57	9.2		375.49		43.61	0.4	0.63
10/14/2003	XX	303AXX37908	2040	6.58	8.8		376.34			0.5	0.67
5/3/2004	XX	303AXX38110	1737	6.59	7.7		377.08			1.2	0.42
8/17/2004	XX	303AXX38216	1929	6.39	9.7		375.24		43.56	0.6	1.21
10/19/2004	XX	303AXX38279	2260	6.56	8.4		374.61			0.9	0.31
5/18/2005	XX	GW303A00I	1610	6.65	7.3	11.68	377.97	389.65		0.9	0.5
8/15/2005	XX	GW303A02A	1093	6.64	6.6	14.77	374.88	389.65	43.57	0.5	0.3
11/3/2005	XX	GW303A042	1842	6.47	9	11.86	377.79	389.65		1.2	0.5
5/11/2006	XX	GW303A08I	1086	6.42	7.8		377.17			0.8	0.51
7/26/2006	XX	GW303A076	1065	6.48	10.5		376.84		43.45	1.2	0.6
10/24/2006	XX	GW303A05E	1410	6.42	9		376.96			0.1	0.6
5/15/2007	XX	GW303A0AA	1382	6.51	7.3		377.08			0.6	0.6
8/15/2007	XX	GW303A0C3	1111	6.54	9.2		374.67		43.62	0.22	0.5
10/29/2007	XX	GW303A0DF	1704	6.57	8.5		375.54			4.9	0.7
6/2/2008	XX	GW303A0G3	1195	6.68	7.4		376.6			0.1	0.3
8/13/2008	XX	GW303A0I3	993	6.57	10.4		377.44			0.1	0.6
10/20/2008	XX	GW303A0JB	1034	6.42	7.5		377.44			0.5	0.8

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(303A) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
5/5/2009	XX	GW303A11B	1296	6.5	7.4	12.24	377.41	389.65		0.47	0.2
8/6/2009	XX	GW303A13B	994	6.14	10.6	11.4	378.25	389.65		0.13	0.7
10/21/2009	XX	GW303A14J	926	6.64	9.1	14.41	375.24	389.65		0.1	0.9
5/27/2010	XX	GW303A170	919	6.67	8.5		375.48			0.59	0.27
8/4/2010	XX	GW303A191	1037	6.29	10.6		374.33			0.55	0.64
10/14/2010	XX	GW303A1A9	1536	6.46	8		374.62			0.28	0.54
5/17/2011	XX	GW303A1E5	850	6.4	7.4	10.85	378.8	389.65	43.55	0.6	1.1
8/9/2011	XX	GW303A1FG	724	6.38	13.1	15.22	374.43	389.65	36.11	1	0.2
11/3/2011	XX	GW303A1H7	1024	6.3	9.8	12.88	376.77	389.65	43.6	1	1.4
5/17/2012	XX	GW303A1J1	911	6.4	8.7	11.58	378.07	389.65	43.45	0.4	0
8/15/2012	XX	GW303A20E	856	6.1	15.8	15.08	374.57	389.65		1	0.3
11/1/2012	XX	GW303A228	1120	6.6	9.4	11.05	378.6	389.65	43.62	0.6	0.4
5/21/2013	XX	GW303A242	875	6.6	8.4	13.48	376.17	389.65		1	0.4
7/24/2013	XX	GW303A25G	800	6.3	16	13.89	375.76	389.65		1	0.4
10/2/2013	XX	GW303A27A	818	6.9	10.8	14.28	375.37	389.65	43.85	0.6	1
6/3/2014	XX	GW303A294	846	6	9.6	13.01	376.64	389.65		1	0.3
8/20/2014	XX	GW303A2AI	811	7	12.8	15.24	374.41	389.65		1	0.3
11/12/2014	XX	GW303A2CC	1007	6.5	7.8	12.49	377.16	389.65	43.55	1	0.2
6/3/2015	XX	GW303A2E8	834	6.5	6.7	12.02	377.63	389.65		0.7	0.2
9/1/2015	XX	GW303A2G3	651	6.3	10.1	14.89	374.76	389.65		0.3	0.05 U
11/3/2015	XX	GW303A2HH	877	6.6	8.1	12.26	377.39	389.65	43.64	0.2	0.3
6/15/2016	XX	GW303A317	559	6.4	9	14.08	375.57	389.65		0.2	1.1
9/20/2016	XX	GW303A331	726	6.3	10.7	16.81	372.84	389.65		0.4	0.3
11/8/2016	XX	GW303A34F	936	6.5	8.5	17.58	372.07	389.65	43.55	0.3	0.2
6/13/2017	XX	GW303A36A	656	6.5	9.8	12.68	376.97	389.65		0.1	0.7
8/30/2017	XX	GW303A384	1143	6.9	8.5	15.55	374.1	389.65		0.2	0.2
11/15/2017	XX	GW303A39I	1028	6.7	7.4	13.25	376.4	389.65	43.55	0.9	0.3
6/20/2018	XX	GW303A3BD	1276	6.8	8.4	13.93	375.72	389.65		0.1	0.3
8/15/2018	XX	GW303A3E2	1285	6.7	10.1	14.9	374.75	389.65		0.2	0.2
11/27/2018	XX	GW303A3F1	1291	6.7	7.8	12.46	377.19	389.65	43.54	0.1	0.2
6/4/2019	XX	GW303A3GG	830	6.7	7.7	11.76	377.89	389.65		0.1	0.3
8/14/2019	XX	GW303A3J5	556	6.6	9.7	14.73	374.92	389.65		3.9	0.2
10/22/2019	XX	GW303A404	771	6.7	7.7	15.9	373.75	389.65		3.5	0.2
6/16/2020	XX	GW303A41J	622	6.9	7.3	13.96	375.69	389.65		1.2	0.2
8/4/2020	XX	GW303A448	584	6.5	10	15.78	373.87	389.65		0.5	0.2
10/20/2020	XX	GW303A457	827	6.8	9	16.07	373.58	389.65	43.62	1.3	0.3
6/22/2021	XX	GW303A472	596	6.3	10	14.51	375.14	389.65		0.5	0.2
9/21/2021	XX	GW303A48H	90	7	9.4	15.76	373.89	389.65	43.62	0.4	0.1
6/28/2022	XX	GW303A4AJ	548	7.2	8.8	14.34	375.31	389.65		2.6	0.2
10/18/2022	XX	GW303A4CG	802	7	10	13.22	376.43	389.65	43.6	3	0.4
6/6/2023	XX	GW303A4EH	780	6.2	8.7	13.59	376.06	389.65		4.1	0.4
10/17/2023	XX	GW303A4IC	847	6.2	8.7	13.8	375.85	389.65	43.62	7.1	0.3
303B											
4/27/2000	XX	303BXX36643	808	6.59	5		381				
8/2/2000	XX	303BXX36740	1355	6.47	9		376.68		26.5	0.31	0.2
10/25/2000	XX	303BXX36824	2470	6.61	9		374.7			0.5	0.5
5/9/2001	XX	303BXX37020	1878	6.59	6.8		379.1			0.5	0.9
7/25/2001	XX	303BXX37097	1905	6.46	11		374.77		26.47	0.6	0.23
10/17/2001	XX	303BXX37181	2630	6.62	12.5		373.2			1.2	0.18

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(303B)

Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
5/16/2002	XX	303BXX37392	1226	6.72	6.5		378.69			0.8	0.29
8/2/2002	XX	303BXX37470	1131	6.42	11.2		376.07		26.5	0.9	0.38
10/17/2002	XX	303BXX37546	2200	6.64	10.4		374.21			1.1	0.3
6/23/2003	XX	303BXX37795	1084	6.61	8.1		377.83			0.3	0.6
8/19/2003	XX	303BXX37852	1601	6.46	10.9		376.86		26.5	0.4	0.53
10/14/2003	XX	303BXX37908	2190	6.59	11.5		377.66			1.7	0.41
5/3/2004	XX	303BXX38110	1378	6.61	7		378.66			2	0.52
8/17/2004	XX	303BXX38216	1941	6.53	11.6		376.55		26.51	0.8	0.27
10/19/2004	XX	303BXX38279	2100	6.63	10.6		375.8			0.8	0.24
5/18/2005	XX	GW303B00J	990	6.7	6.6	9.94	379.68	389.62		0.7	0.6
8/15/2005	XX	GW303B02B	902	6.4	7.8	13.46	376.16	389.62	26.45	0.6	0.2
11/3/2005	XX	GW303B043	1604	6.5	10.2	10.11	379.51	389.62		0.6	0.5
5/11/2006	XX	GW303B08J	986	6.4	6.4		378.74			0.7	0.25
7/26/2006	XX	GW303B077	869	6.46	12.4		378.1		26.31	1.5	0.6
10/24/2006	XX	GW303B05F	1489	6.4	10.7		378.31			0.1	0.4
5/15/2007	XX	GW303B0AB	855	6.6	6.1		378.57			0.3	0.4
8/15/2007	XX	GW303B0C4	1116	6.41	9.7		375.75		26.5	0.5	0.3
10/29/2007	XX	GW303B0DG	1832	6.61	9.8		376.76			1.7	0.6
6/3/2008	XX	GW303B0G4	772	6.79	7.1		377.91			0.1	0.4
8/13/2008	XX	GW303B0I4	729	6.44	11.3		378.87			0.3	0.4
10/20/2008	XX	GW303B0JC	990	6.41	9.9		378.87			0.5	0.6
5/5/2009	XX	GW303B11C	844	6.47	6.2	10.73	378.89	389.62		0.5	0.4
8/6/2009	XX	GW303B13C	655	6.11	11.2	9.8	379.82	389.62		0.5	0.3
10/21/2009	XX	GW303B150	859	6.29	10.8	13.23	376.39	389.62		0.2	0.5
5/27/2010	XX	GW303B171	611	6.6	7.4		376.67			0.67	0.19
8/4/2010	XX	GW303B192	1061	6.43	10.8		375.3			0.59	0.27
10/14/2010	XX	GW303B1AA	1350	6.28	9.7		375.73			0.55	0.42
5/17/2011	XX	GW303B1E6	500	6.4	7.3	8.79	380.83	389.62	26.4	0.8	0.7
8/9/2011	XX	GW303B1FH	631	6.06	17	13.95	375.67	389.62	26.3	1	0.2
11/3/2011	XX	GW303B1H8	937	6.4	10.7	11.3	378.32	389.62	26.5	1	0.1
5/17/2012	XX	GW303B1J2	685	6.4	8.9	9.95	379.67	389.62	26.3	1	0
8/15/2012	XX	GW303B20F	711	5.9	17.9	13.98	375.64	389.62		1	0.7
11/1/2012	XX	GW303B229	1205	6.7	10.7	9.35	380.27	389.62	26.5	0.8	0.4
5/21/2013	XX	GW303B243	570	6.5	7.5	12.08	377.54	389.62		0.8	0.3
7/24/2013	XX	GW303B25H	536	6.3	15.8	12.59	377.03	389.62		1	0.2
10/2/2013	XX	GW303B27B	707	6.7	12.7	12.64	376.98	389.62	26.5	0.6	0.4
6/3/2014	XX	GW303B295	589	6.2	8.4	11.6	378.02	389.62		1	0.3
8/20/2014	XX	GW303B2AJ	723	6.7	12.6	14.29	375.33	389.62		1	0.3
11/12/2014	XX	GW303B2CD	1143	6.5	9.1	10.85	378.77	389.62	21.05	1	0.3
6/3/2015	XX	GW303B2E9	632	6.5	6.2	10.25	379.37	389.62		1	0.1
9/1/2015	XX	GW303B2G4	559	6.3	11	13.55	376.07	389.62		0.8	0.05 U
11/3/2015	XX	GW303B2HI	718	6.5	9.3	10.64	378.98	389.62	26.5	0.6	0.2
6/15/2016	XX	GW303B318	383	6.2	8.7	12.68	376.94	389.62		0.5	0.3
9/20/2016	XX	GW303B332	851	6.3	12	15.83	373.79	389.62		1.1	0.3
11/8/2016	XX	GW303B34G	1069	6.3	9.8	16.9	372.72	389.62	26.49	0.3	0.2
6/13/2017	XX	GW303B36B	413	6.4	8.4	11.11	378.51	389.62		0.2	1.1
8/30/2017	XX	GW303B385	491	6.4	10.3	14.2	375.42	389.62		0.5	0.1
11/15/2017	XX	GW303B39J	1023	6.4	8.8	11.69	377.93	389.62	26.49	0.9	0.3
6/20/2018	XX	GW303B3BE	477	6.6	7.8	12.5	377.12	389.62		0.3	0.3
8/15/2018	XX	GW303B3E3	586	6.1	10.6	13.4	376.22	389.62		1.7	0.2

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(303B) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
11/27/2018	XX	GW303B3F2	1279	6.8	8.5	10.64	378.98	389.62	26.47	1.3	0.3
6/4/2019	XX	GW303B3GH	456	6.7	6.7	9.45	380.17	389.62		2.4	0.2
8/14/2019	XX	GW303B3J6	423	6.4	10.2	13.34	376.28	389.62		4.2	0.3
10/22/2019	XX	GW303B405	800	6.4	9.1	14.9	374.72	389.62		4.2	0.3
6/16/2020	XX	GW303B420	455	6.6	6.8	12.42	377.2	389.62		0.9	0.2
8/4/2020	XX	GW303B449	562	6.3	10.2	14.74	374.88	389.62		0.7	0.2
10/20/2020	XX	GW303B458	933	6.5	9.6	15.45	374.17	389.62	26.58	1.6	0.2
6/22/2021	XX	GW303B473	445	6.2	9.6	13	376.62	389.62		0.6	0.2
9/21/2021	XX	GW303B48I	848	6.3	10.8	14.96	374.66	389.62	26.48	0.4	0.2
6/28/2022	XX	GW303B4B0	390	6.5	8.4	12.8	376.82	389.62		0.7	0.1
10/18/2022	XX	GW303B4CH	734	6.7	11.2	13.12	376.5	389.62	26.48	1.4	0.4
6/6/2023	XX	GW303B4EI	578	6.2	7.9	12.08	377.54	389.62		5.6	0.3
10/17/2023	XX	GW303B4ID	739	6.1	10.5	12.4	377.22	389.62	26.48	5.1	0.1
304A											
5/3/2000	XX	304AXX36649	380	7.62	5.4		345.36				
8/9/2000	XX	304AXX36747	314	7.86	11		343.2		23.92	0.86	0.6
11/9/2000	XX	304AXX36839	358	7.91	13		344.4			0.68	0.2
5/16/2001	XX	304AXX37027	383	7.94	7.4		345.02			0.5	0.1
7/31/2001	XX	304AXX37103	310	7.71	14.5		341.82		23.92	0.7	0.2
10/23/2001	XX	304AXX37187	394	7.83	11.9		343.28			0.6	0.1
5/21/2002	XX	304AXX37397	387	7.48	9.7		345.31			0.8	0.2
7/30/2002	XX	304AXX37467	378	7.71	13.1		343.36		23.92	1.4	0.4
10/22/2002	XX	304AXX37551	473	7.5	10.5		345.05			0.8	0.2
6/24/2003	XX	304AXX37796	409	7.5	11.8		344.65			0.5	0.6
8/7/2003	XX	304AXX37840	383	7.45	13.8		344.67		23.91	0.5	0.34
10/21/2003	XX	304AXX37915	454	7.75	9.8		345.39			1	0.59
5/10/2004	XX	304AXX38117	447	7.6	7.1		345.13			0.8	0.31
7/28/2004	XX	304AXX38196	420	7.71	10		344.71		23.94	0.9	0.55
10/21/2004	XX	304AXX38281	456	7.82	10.3		344.27			0.7	0.2
5/10/2005	XX	GW304A010	450	7.35	6.9	4.46	345.86	350.32		0.6	0.3
7/28/2005	XX	GW304A02C	374	7.62	10.5	6.82	343.5	350.32	23.66	2.1	0.8
11/8/2005	XX	GW304A044	440	7.62	10.2	4.67	345.65	350.32		6.1	0.3
5/3/2006	XX	GW304A090	333	7.4	6		345.95			4.3	1.59
8/1/2006	XX	GW304A078	428	7.38	13.3		344.75		23.61	3.2	38
10/26/2006	XX	GW304A05G	374	7.43	10.3		345.47			2.5	4.7
5/8/2007	XX	GW304A0AC	343	7.04	6.2		345.37			0.7	0.7
8/7/2007	XX	GW304A0C5	338	7.47	11		343.07		23.35	1.3	0.7
10/31/2007	XX	GW304A0DH	402	7.2	9.5		344.9			1.5	0.8
6/3/2008	XX	GW304A0G5	367	7.64	7.4		345.12			0.2	0.3
8/18/2008	XX	GW304A0I5	367	7.29	12		345.05			0.7	0.5
10/23/2008	XX	GW304A0JD	343	7.38	9.2		345.05			1.1	0.4
5/12/2009	XX	GW304A11D	341	7.29	6.6	4.81	345.51	350.32		1.2	0.3
8/11/2009	XX	GW304A13D	340	7.16	12.9	4.74	345.58	350.32		0.6	0.8
10/26/2009	XX	GW304A151	350	6.77	9.4	4.57	345.75	350.32		0.2	0.6
6/2/2010	XX	GW304A172	316	7.05	8.8		343.96			1.1	0.38
8/5/2010	XX	GW304A193	315	7.37	13.5		341.61			0.89	0.65
10/18/2010	XX	GW304A1AB	341	7.36	10.5		345.29			0.81	0.42
5/19/2011	XX	GW304A1DC	296	7.8	10.1	4.46	345.86	350.32	21.2	2	0.2
8/8/2011	XX	GW304A1F3	266	7.66	14.1	7.67	342.65	350.32	21.13	1	0

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(304A) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
11/2/2011	XX	GW304A1GE	314	7.5	10.3	5.04	345.28	350.32	21.35	2	0.5
5/15/2012	XX	GW304A1I8	339	8.5	9.4	4.61	345.71	350.32	20.28	3	0.2
8/15/2012	XX	GW304A201	259	6.9	17.3	8.49	341.83	350.32		1	0.7
10/31/2012	XX	GW304A21F	300	7.5	13.6	3.85	346.47	350.32	21.32	1	0
5/21/2013	XX	GW304A239	301	7.8	9.3	5.12	345.2	350.32		2	0.1
7/25/2013	XX	GW304A253	273	6.6	13.6	6.57	343.75	350.32		2	0.3
10/2/2013	XX	GW304A26H	279	8.2	14.2	5.76	344.56	350.32	21.34	1	0.9
6/4/2014	XX	GW304A28B	270	7.8	10.1	4.91	345.41	350.32		1	0.4
8/20/2014	XX	GW304A2A5	260	7.9	14.2	6.98	343.34	350.32		2	1.2
11/12/2014	XX	GW304A2BJ	231	6.7	8.6	4.98	345.34	350.32	21.28	1	0.8
6/3/2015	XX	GW304A2DF	282	7.9	7.2	4.58	345.74	350.32		1.9	1
9/2/2015	XX	GW304A2FA	240	8	12.9	6.3	344.02	350.32		0.6	0.5
11/4/2015	XX	GW304A2H4	272	7.6	10.7	4.89	345.43	350.32	21.32	1.7	1
6/16/2016	XX	GW304A30E	252	7.8	10.2	5.84	344.48	350.32		1.6	1.7
9/21/2016	XX	GW304A328	265	7.9	13.1	9.35	340.97	350.32		1.8	0.5
11/8/2016	XX	GW304A342	246	7.4	9.9	7.43	342.89	350.32	21.34	1.8	0.8
6/14/2017	XX	GW304A35H	247	7.9	10.1	5.82	344.5	350.32		1.6	3
8/29/2017	XX	GW304A37B	248	7.8	10.8	8.98	341.34	350.32		2.6	0.5
11/14/2017	XX	GW304A395	243	7.2	9.3	10.8	339.52	350.32	21.34	2	0.4
6/21/2018	XX	GW304A3B0	263	8.1	8.5	7.03	343.29	350.32		1.6	5.1
8/15/2018	XX	GW304A3D9	285	8.1	15.5	7	343.32	350.32		1.9	0.6
11/30/2018	XX	GW304A3E8	277	8.8	7.8	4.81	345.51	350.32	21.34	8.5	0.8
6/5/2019	XX	GW304A3G3	241	8.2	9.8	5.28	345.04	350.32		4	0.5
8/14/2019	XX	GW304A3IC	233	8.1	11.7	7.71	342.61	350.32		3.6	0.6
10/24/2019	XX	GW304A3JB	275	7.9	10.3	4.6	345.72	350.32		0.3	0.8
6/17/2020	XX	GW304A416	211	6.9	10.8	6.85	343.47	350.32		0.7	0.5
8/5/2020	XX	GW304A43F	212	7.5	14.4	9.03	341.29	350.32		1	0.6
10/22/2020	XX	GW304A44E	282	7.5	11	5.19	345.13	350.32	21.38	1.7	0.9
6/22/2021	XX	GW304A469	255	7.2	13.6	7.6	342.72	350.32		1.4	0.6
9/22/2021	XX	GW304A484	267	7	13.9	6.15	344.17	350.32	24.95	1.3	0.3
6/29/2022	XX	GW304A4A6	274	7.5	10.1	6.66	343.66	350.32		0.7	0.4
10/18/2022	XX	GW304A4C3	233	7.3	11.7	4.3	346.02	350.32	29.95	0.6	0.5
6/6/2023	XX	GW304A4E4	296	7.5	9.5	4.6	345.72	350.32		2.1	0.4
10/17/2023	XX	GW304A4HJ	273	7.5	11.8	9.21	341.11	350.32	24.94	2.7	0.3
304B											
5/3/2000	XX	304BXX36649	58	6.35	4.9		344.82				
8/9/2000	XX	304BXX36747	191	6.78	18		342.59		10.79	4.41	1.1
11/9/2000	XX	304BXX36839	222	6.64	9		343.84			4.72	0.9
5/16/2001	XX	304BXX37027	303	6.57	7.8		344.38			4.2	0.3
7/31/2001	XX	304BXX37103	D	D	D				10.77	D	D
10/23/2001	XX	304BXX37187	341	6.45	12.8		342.67			1.7	1.2
5/21/2002	XX	304BXX37397	208	6.54	9.8		344.74			9.1	0.9
7/30/2002	XX	304BXX37467	331	6.48	14.2		342.7		10.77	4.6	0.8
10/22/2002	XX	304BXX37551	327	6.48	11.7		344.53			3.6	1.2
6/24/2003	XX	304BXX37796	314	6.55	12.3		343.94			5.5	0.7
8/7/2003	XX	304BXX37840	259	6.37	15.2		344.03		10.81	4.5	1.01
10/21/2003	XX	304BXX37915	268	6.54	10.7		344.8			4.8	2.09
5/10/2004	XX	304BXX38117	226	6.9	7.6		344.38			7.3	0.79
7/28/2004	XX	304BXX38196	224	6.6	11.1		344.04		10.75	5	0.57

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Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
10/21/2004	XX	304BXX38281	219	6.69	11.4		343.57			3.4	0.37
5/10/2005	XX	GW304B011	152	6.89	7.5	4.35	345.2	349.55		8	1.1
7/28/2005	XX	GW304B02D	297	6.54	12.9	6.84	342.71	349.55	10.76	6	0.6
11/8/2005	XX	GW304B045	236	6.65	10.2	4.55	345	349.55		6.3	0.4
5/3/2006	XX	GW304B091	152.6	7.08	5.3		345.37			8.2	0.78
8/1/2006	XX	GW304B079	218	6.49	14.4		343.94		10.65	5.7	0.4
10/26/2006	XX	GW304B05H	212	6.7	11.1		344.76			5.2	0.4
5/8/2007	XX	GW304B0AD	186	6.93	5.8		344.51			7.2	0.5
8/7/2007	XX	GW304B0C6	245	6.65	13.2		342.18		10.76	4.8	0.7
10/31/2007	XX	GW304B0DI	238	6.49	10.9		344.11			5.5	1.2
6/5/2008	XX	GW304B0G6	144	6.42	8.2		344.29			7.2	0.4
8/18/2008	XX	GW304B0I6	111	5.86	13.7		344.14			3.3	0.8
10/23/2008	XX	GW304B0JE	131	6.36	10.4		344.14			2.6	2.2
5/12/2009	XX	GW304B11E	72.3	6.12	6.8	4.91	344.64	349.55		3.5	2
8/11/2009	XX	GW304B13E	184	5.46	14.4	4.81	344.74	349.55		4.3	1
10/26/2009	XX	GW304B152	119	6.85	9.2	4.57	344.98	349.55		3	17.5
6/2/2010	XX	GW304B173	117	7.19	9.9		343			5.27	0.84
8/5/2010	XX	GW304B194	152.7	6.47	15.3		340.73			4.17	8.21
10/18/2010	XX	GW304B1AC	129	5.79	11.2		344.51			2.91	4.29
5/19/2011	XX	GW304B1DD	63	6.4	8.7	4.5	345.05	349.55	10.63	5	2.1
8/8/2011	XX	GW304B1F4	127	6.34	14.6	7.81	341.74	349.55	10.63	5	0
11/2/2011	XX	GW304B1GF	130	6.2	10.3	5.15	344.4	349.55	10.84	2	0.5
5/15/2012	XX	GW304B1I9	71	6	9.4	4.5	345.05	349.55	10.93	4	0.6
8/15/2012	XX	GW304B202	223	5.8	17.2	8.65	340.9	349.55		4	1.9
10/31/2012	XX	GW304B21G	144	6.2	12.5	3.9	345.65	349.55	10.85	5	0
5/21/2013	XX	GW304B23A	127	7.2	8.1	5.27	344.28	349.55		5	0.3
7/25/2013	XX	GW304B254	138	5.8	16.8	6.75	342.8	349.55		5	1
10/2/2013	XX	GW304B26I	127	6.9	14.7	5.92	343.63	349.55	10.85	4	1.2
6/4/2014	XX	GW304B28C	112	7.5	10.8	6.12	343.43	349.55		5	0.6
8/20/2014	XX	GW304B2A6	114	7	14.9	6.96	342.59	349.55		5	0.3
11/12/2014	XX	GW304B2C0	61	6.3	8.3	5.1	344.45	349.55	10.75	4	0.4
6/3/2015	XX	GW304B2DG	44	6.6	9	4.65	344.9	349.55		2.3	0.2
9/2/2015	XX	GW304B2FB	103	6.6	15.6	6.45	343.1	349.55		5	0.05 U
11/4/2015	XX	GW304B2H5	80	6.5	10	4.92	344.63	349.55	10.85	4.6	2.4
6/16/2016	XX	GW304B30F	92	6.6	10.9	6.3	343.25	349.55		5.7	3.7
9/21/2016	XX	GW304B329	106	6.6	17.6	9.46	340.09	349.55		4.8	0.5
11/8/2016	XX	GW304B343	151	7.1	9.8	7.45	342.1	349.55	10.82	2.6	0.2
6/14/2017	XX	GW304B35I	108	6.7	10	6.1	343.45	349.55		8.3	1.2
8/29/2017	XX	GW304B37C	82	6.9	13.5	9.09	340.46	349.55		7	0.2
11/14/2017	XX	GW304B396	110	6.7	9.4	5.59	343.96	349.55	10.82	4	0.3
6/21/2018	XX	GW304B3B1	119	7.1	10.3	7.26	342.29	349.55		6	6.2
8/15/2018	XX	GW304B3DA	134	5.7	15.1	7.15	342.4	349.55		5.3	0.5
11/30/2018	XX	GW304B3E9	55	8	5.5	4.9	344.65	349.55	10.83	1.3	0.3
6/5/2019	XX	GW304B3G4	104	7	10.3	5.53	344.02	349.55		13.5	0.2
8/14/2019	XX	GW304B3ID	124	7.2	14.5	7.88	341.67	349.55		9.5	0.4
10/24/2019	XX	GW304B3JC	98	7.5	10.8	4.45	345.1	349.55		4.4	0.2
6/17/2020	XX	GW304B417	103	6.7	12.4	7.02	342.53	349.55		6.5	0.4
8/5/2020	XX	GW304B43G	116	6.6	15.8	9.18	340.37	349.55		4.6	0.2
10/22/2020	XX	GW304B44F	41	6.9	11.1	5.14	344.41	349.55	10.88	2.7	0.5
6/22/2021	XX	GW304B46A	146	6.4	14.1	7.65	341.9	349.55		5.2	0.3

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9/22/2021	XX	GW304B485	211	6.6	15.1	5.72	343.83	349.55	11.87	0.9	0.2
6/29/2022	XX	GW304B4A7	205	6.7	11.7	6.86	342.69	349.55		4.1	0.7
10/18/2022	XX	GW304B4C4	67	7.2	12.5	4.22	345.33	349.55	11.87	2.1	0.2
6/6/2023	XX	GW304B4E5	87	6.4	10.6	4.62	344.93	349.55		2.3	0.5
10/17/2023	XX	GW304B4I0	134	6.6	12.9	5.03	344.52	349.55	11.87	5.6	0.3
401A											
5/3/2000	XX	401AXX36649	204	7.72	7		369.36				
8/10/2000	XX	401AXX36748	190	7.7	8		366.27		43.58	1.13	0.5
11/9/2000	XX	401AXX36839	196	7.89	8		366.4			0.67	1.6
5/17/2001	XX	401AXX37028	225	7.91	6.6		367.93			4.2	0.9
8/1/2001	XX	401AXX37104	216	7.73	10.1		365.2		43.58	2.1	0.3
10/24/2001	XX	401AXX37188	226	7.88	10.7		365.33			0.7	0.9
5/22/2002	XX	401AXX37398	216	7.84	8.7		368.22			5.4	1.4
7/30/2002	XX	401AXX37467	235	7.68	11		366.13		43.58	2.7	0.6
10/22/2002	XX	401AXX37551	240	7.84	9.4		366.19			2.2	0.4
6/25/2003	XX	401AXX37797	243	7.82	9.6		367.57			1.7	1.6
8/11/2003	XX	401AXX37844	236	7.83	11.1		367.14		43.57	2.6	0.25
10/21/2003	XX	401AXX37915	246	7.59	8.5		368.16			1.1	2.33
5/10/2004	XX	401AXX38117	249	7.84	8.3		368.16			5.8	0.29
7/29/2004	XX	401AXX38197	226	7.17	10.1		366.55		43.61	5.2	0.47
10/21/2004	XX	401AXX38281	230	7.87	10		366.15			2.9	0.4
5/9/2005	XX	GW401A012	226	7.98	7.3	5.69	369.79	375.48		7.4	0.3
7/28/2005	XX	GW401A02E	226	7.79	10.7	8.88	366.6	375.48	43.65	5.3	1.6
11/8/2005	XX	GW401A046	229	7.58	9.9	7.05	368.43	375.48		1.9	0.3
5/4/2006	XX	GW401A092	227	7.53	7.8		367.93			7.4	0.63
8/2/2006	XX	GW401A07A	234	7.66	11.4		367.33		43.34	5.6	1
10/30/2006	XX	GW401A05I	236	8.1	8.9		368.24			2.3	0.6
5/7/2007	XX	GW401A0AE	235	7.48	7.4		369.12			7.1	0.5
8/14/2007	XX	GW401A0C7	239	8.04	10.2		365.8		43.62	5.3	0.5
11/5/2007	XX	GW401A0DJ	245	7.84	8.7		367.38			3.7	1.1
6/5/2008	XX	GW401A0G7	240	7.6	7.7		367.52			6.2	0.2
8/20/2008	XX	GW401A0I7	246	7.48	10.9		368.11			4.1	0.7
10/27/2008	XX	GW401A0JF	241	7.58	9.3		368.11			2.7	1.1
5/13/2009	XX	GW401A11F	247	7.27	7.6	6.81	368.67	375.48		3	0.3
8/13/2009	XX	GW401A13F	252	7.17	10.6	7.31	368.17	375.48		4	0.9
10/28/2009	XX	GW401A153	259	7.32	8.3	7.9	367.58	375.48		3.3	0.6
6/3/2010	XX	GW401A174	251	7.8	8.3		366.53			5.59	0.34
8/17/2010	XX	GW401A195	259	7.94	11		364.57			4.55	0.54
10/19/2010	XX	GW401A1AD	265	7.48	8.6		366.51			2.52	0.26
5/16/2011	XX	GW401A1DE	337	7	6.6	6.36	369.12	375.48	43.6	6	0.2
8/8/2011	XX	GW401A1F5	241	7.62	12.3	9.52	365.96	375.48	43.5	4	0.2
11/1/2011	XX	GW401A1GG	253	7.4	9.94	7.67	367.81	375.48	43.66	2	0.4
5/14/2012	XX	GW401A1IA	265	8	8.7	6.56	368.92	375.48	43.5	5	0.3
8/14/2012	XX	GW401A203	182	6.4	12	9.66	365.82	375.48		3	1.3
11/1/2012	XX	GW401A21H	295	7.8	10.4	6.85	368.63	375.48	43.65	2	0.5
5/21/2013	XX	GW401A23B	312	8	8.3	8.1	367.38	375.48		5	0.8
7/22/2013	XX	GW401A255	270	7.9	10.9	8.51	366.97	375.48		5	0.9
9/30/2013	XX	GW401A26J	255	8.2	15	8.23	367.25	375.48	43.65	3	1.1
6/4/2014	XX	GW401A28D	266	7.7	11.2	7.65	367.83	375.48		5	0.2

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(401A) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
8/19/2014	XX	GW401A2A7	266	7.8	12.6	9.68	365.8	375.48		5	0.5
11/11/2014	XX	GW401A2C1	259	7.3	8.3	7.28	368.2	375.48	43.61	3	0.8
6/2/2015	XX	GW401A2DH	291	8	6.9	6.95	368.53	375.48		5.2	0.2
9/1/2015	XX	GW401A2FC	255	7.9	10.6	8.2	367.28	375.48		4.2	0.8
11/3/2015	XX	GW401A2H6	278	8	8.8	7.35	368.13	375.48		5.4	5
6/14/2016	XX	GW401A30G	269	7.8	8.3	8.54	366.94	375.48		6.1	1.1
9/20/2016	XX	GW401A32A	359	7.7	10.4	10.81	364.67	375.48		3.6	0.8
11/9/2016	XX	GW401A344	274	8	8.9	10.4	365.08	375.48	43.65	2.3	0.4
6/14/2017	XX	GW401A35J	258	8	8.9	7.68	367.8	375.48		5.5	3
8/29/2017	XX	GW401A37D	276	7.9	9.2	10.25	365.23	375.48		4.2	0.6
11/14/2017	XX	GW401A397	263	7.7	8.6	7.52	367.96	375.48	43.65	3.7	0.4
6/20/2018	XX	GW401A3B2	292	8.1	9.2	8.65	366.83	375.48		5.1	0.8
8/15/2018	XX	GW401A3DB	298	8.1	10.2	8.85	366.63	375.48		3.8	0.8
11/30/2018	XX	GW401A3EA	292	8	4.5	7.16	368.32	375.48	43.65	3.5	0.5
6/5/2019	XX	GW401A3G5	370	7.8	8.2	6.76	368.72	375.48		10.9	0.5
8/14/2019	XX	GW401A3IE	270	8.1	10	9.1	366.38	375.48		10.5	0.6
10/22/2019	XX	GW401A3JD	272	7.9	10.9	8.99	366.49	375.48		4.6	0.6
6/17/2020	XX	GW401A418	247	8	9.6	8.59	366.89	375.48		4.1	0.6
8/4/2020	XX	GW401A43H	246	7.4	9.8	10.22	365.26	375.48		5.5	0.5
10/21/2020	XX	GW401A44G	253	7.9	8.4	8.74	366.74	375.48	43.68	2.6	0.8
6/23/2021	XX	GW401A46B	250	7.5	12.3	8.85	366.63	375.48		5.2	0.3
9/21/2021	XX	GW401A486	256	7.6	12.7	8.82	366.66	375.48	43.65	3.6	0.4
6/28/2022	XX	GW401A4A8	515	7.8	13.4	8.95	366.53	375.48		7.5	3.6
10/19/2022	XX	GW401A4C5	283	7.1	12.8	6.75	368.73	375.48	43.65	1.4	0.8
6/7/2023	XX	GW401A4E6	298	6.8	10.5	9.27	366.21	375.48		5.9	0.8
10/18/2023	XX	GW401A4I1	285	7.1	11.4	8.44	367.04	375.48	43.65	3.3	0.4
401B											
5/3/2000	XX	401BXX36649	343	7.86	4.9		366.33				
8/10/2000	XX	401BXX36748	323	8.03	5		363.28		25.92	0.51	0.2
11/9/2000	XX	401BXX36839	310	8.16	8		363.38			0.98	1.2
5/17/2001	XX	401BXX37028	350	8.2	6.6		364.97			1.2	20.3
8/1/2001	XX	401BXX37104	333	7.94	12		362.17		25.89	0.8	0.2
10/24/2001	XX	401BXX37188	347	8.07	10.8		362.32			0.9	11.9
5/22/2002	XX	401BXX37398	330	7.92	9.1		365.18			0.9	4.4
7/30/2002	XX	401BXX37467	360	8.06	10.4		363.28		25.89	1.5	1.5
10/22/2002	XX	401BXX37551	365	8.11	9.8		363.35			0.5	0.6
6/25/2003	XX	401BXX37797	368	8.06	8.7		364.54			0.4	1
8/11/2003	XX	401BXX37844	361	8.01	12.1		364.48		25.93	0.2	1
10/21/2003	XX	401BXX37915	383	8.26	8.4		365.25			0.4	0.85
5/10/2004	XX	401BXX38117	385	8.03	8.2		365.17			0.9	0.34
7/29/2004	XX	401BXX38197	345	7.98	10.8		363.93		23.95	1.6	0.42
10/21/2004	XX	401BXX38281	360	8.07	10.7		363.22			1.1	0.36
5/9/2005	XX	GW401B013	346	8.04	6.8	6.05	366.88	372.93		0.5	0.4
7/28/2005	XX	GW401B02F	346	7.95	10.3	9.27	363.66	372.93	25.92	1.1	1
11/8/2005	XX	GW401B047	356	7.9	10.7	7.45	365.48	372.93		1.6	1
5/4/2006	XX	GW401B093	345	7.76	7.9		365.28			1.9	0.58
8/2/2006	XX	GW401B07B	354	7.81	13.7		364.44		25.74	0.5	1.4
10/30/2006	XX	GW401B05J	362	7.98	9.7		365.68			0.1	0.6
5/7/2007	XX	GW401B0AF	358	7.75	7.4		366.02			0.1	0.6

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(401B) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
8/14/2007	XX	GW401B0C8	361	8.05	11.1		362.73		25.89	0.1	0.6
11/5/2007	XX	GW401B0E0	377	8.16	9.2		365.04			0.7	1.3
6/5/2008	XX	GW401B0G8	359	7.95	8.7		364.56			0.2	0.2
8/20/2008	XX	GW401B0I8	364	7.82	11.5		365.09			0.1	0.4
10/27/2008	XX	GW401B0JG	360	7.81	9.8		365.09			0.1	0.7
5/13/2009	XX	GW401B11G	360	7.62	7.5	7.21	365.72	372.93		0.2	0.4
8/13/2009	XX	GW401B13G	370	7.52	10.7	7.82	365.11	372.93		0.1	0.8
10/28/2009	XX	GW401B154	380	7.83	8.9	8.11	364.82	372.93		0.1	0.6
6/3/2010	XX	GW401B175	364	7.8	8.2		363.52			0.12	0.37
8/17/2010	XX	GW401B196	377	8.07	12.1		361.37			0.35	0.37
10/19/2010	XX	GW401B1AE	386	7.62	10.5		363.64			0.25	0.48
5/16/2011	XX	GW401B1DF	335	7.8	6.3	6.25	366.68	372.93	25.81	0.8	0
8/8/2011	XX	GW401B1F6	350	7.87	14.7	10.02	362.91	372.93	25.75	1	0.4
11/1/2011	XX	GW401B1GH	359	7.5	10.46	7.98	364.95	372.93	25.94	1	0.4
5/14/2012	XX	GW401B1IB	375	7.9	8.9	6.9	366.03	372.93	25.76	0.3	0.1
8/14/2012	XX	GW401B204	291	7.3	16.5	10.17	362.76	372.93		1	0.5
11/1/2012	XX	GW401B21I	403	7.6	10.6	8.1	364.83	372.93	25.93	0.4	7.3
5/21/2013	XX	GW401B23C	377	7.9	8.1	8.48	364.45	372.93		0.8	1.5
7/22/2013	XX	GW401B256	381	7.9	11.5	8.95	363.98	372.93		0.8	0.6
9/30/2013	XX	GW401B270	377	7	12.3	8.65	364.28	372.93	26.05	1	0.4
6/4/2014	XX	GW401B28E	375	7.7	11.6	8.15	364.78	372.93		1	0.3
8/19/2014	XX	GW401B2A8	377	7.9	11.9	10	362.93	372.93		0.6	0.5
11/11/2014	XX	GW401B2C2	366	7.2	9.2	7.57	365.36	372.93	25.9	1	0.4
6/2/2015	XX	GW401B2DI	397	7.9	6.6	7.34	365.59	372.93		0.5	0.2
9/1/2015	XX	GW401B2FD	366	7.9	11.8	8.6	364.33	372.93		0.3	0.8
11/3/2015	XX	GW401B2H7	438	8	9.3	7.65	365.28	372.93	25.93	2	6.6
6/14/2016	XX	GW401B30H	386	7.8	8.7	8.95	363.98	372.93		0.3	8.3
9/20/2016	XX	GW401B32B	390	7.8	11.3	11.43	361.5	372.93		0.4	0.6
11/9/2016	XX	GW401B345	395	7.9	9.7	10.85	362.08	372.93	25.92	0.3	0.2
6/14/2017	XX	GW401B360	373	8	8.5	8.18	364.75	372.93		0.8	2.3
8/29/2017	XX	GW401B37E	392	7.9	10.3	10.9	362.03	372.93		0.3	0.2
11/14/2017	XX	GW401B398	380	7.8	8.9	7.9	365.03	372.93	25.92	5.6	0.4
6/20/2018	XX	GW401B3B3	428	8.1	8.6	9.16	363.77	372.93		0.2	0.5
8/15/2018	XX	GW401B3DC	420	7.7	11.2	9.26	363.67	372.93		0.2	0.3
11/30/2018	XX	GW401B3EB	416	7.9	8.3	7.55	365.38	372.93	25.92	1.2	0.3
6/5/2019	XX	GW401B3G6	394	8	10	7.28	365.65	372.93		2.4	0.6
8/14/2019	XX	GW401B3IF	394	8	10.5	9.4	363.53	372.93		4.4	0.6
10/22/2019	XX	GW401B3JE	393	8	10	9.38	363.55	372.93		0.7	0.5
6/17/2020	XX	GW401B419	355	7.9	11.6	9.08	363.85	372.93		2.4	0.8
8/4/2020	XX	GW401B43I	358	7.6	12.2	10.79	362.14	372.93		0.7	0.3
10/21/2020	XX	GW401B44H	357	7.9	8.8	8.85	364.08	372.93	25.98	0.8	0.7
6/23/2021	XX	GW401B46C	358	7.5	12.6	9.36	363.57	372.93		0.7	0.3
9/21/2021	XX	GW401B487	362	7.6	13.2	9.15	363.78	372.93	25.9	0.2	0.6
6/28/2022	XX	GW401B4A9	450	8	14.6	9.35	363.58	372.93		1.9	10.5
10/19/2022	XX	GW401B4C6	360	7.3	12	6.8	366.13	372.93	25.92	1.2	0.3
6/7/2023	XX	GW401B4E7	394	7.7	9.8	8.21	364.72	372.93		0.8	1.1
10/18/2023	XX	GW401B4I2	402	7.6	11.4	8.9	364.03	372.93	25.92	1.5	0.6
402A											
5/3/2000	XX	402AXX36649	210	8.03	4.7		401.66				

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Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
8/10/2000	XX	402AXX36748	198	8.03	9		401.12		62.81	0.55	0.3
11/9/2000	XX	402AXX36839	194	8.14	8		401.22			0.66	0.3
5/17/2001	XX	402AXX37028	224	8.24	7.2		401.25			0.4	0.1
8/1/2001	XX	402AXX37104	215	7.97	16.2		399.76		62.8	1.4	0.5
10/24/2001	XX	402AXX37188	221	8.08	10.9		400.66			0.8	0.5
5/22/2002	XX	402AXX37398	213	7.97	9		401.35			0.7	0.3
7/30/2002	XX	402AXX37467	228	7.95	12.2		400.79		62.8	0.9	0.9
10/22/2002	XX	402AXX37551	233	8.18	9.4		401.02			0.7	0.2
6/25/2003	XX	402AXX37797	242	7.6	10.1		401.1			0.4	0.7
8/11/2003	XX	402AXX37844	232	7.86	13.6		401.52		62.78	0.3	0.35
10/22/2003	XX	402AXX37916	239	8.2	6.8		401.92			0.7	0.57
5/11/2004	XX	402AXX38118	249	7.41	6.6		401.52			1.7	0.51
7/29/2004	XX	402AXX38197	227	7.57	11.8		401.18		62.82	2.2	0.11
10/26/2004	XX	402AXX38286	234	7.74	9.2		401.04			1	0.23
5/9/2005	XX	GW402A014	230	7.6	6	4.05	402.05	406.1		2.1	0.2
8/1/2005	XX	GW402A02G	229	7.64	10.1	5.3	400.8	406.1	62.84	3.4	0.7
11/9/2005	XX	GW402A048	235	7.91	8.3	4.58	401.52	406.1		1.8	0.4
5/4/2006	XX	GW402A094	229	7.77	7.6		401.91			2.8	0.4
8/2/2006	XX	GW402A07C	232	7.61	14.8		401.49		62.63	4.8	0.6
10/30/2006	XX	GW402A060	243	8.06	9		402			0.4	0.8
5/7/2007	XX	GW402A0AG	242	7.79	7.1		401.76			0.6	0.3
8/14/2007	XX	GW402A0C9	237	7.91	10.4		400.76		62.74	4.1	0.6
11/5/2007	XX	GW402A0E1	257	8.02	8.4		401.62			2	0.6
6/5/2008	XX	GW402A0G9	247	8.01	8.2		401.45			1.8	0.3
8/20/2008	XX	GW402A0I9	258	7.7	11.2		401.49			1	0.5
10/27/2008	XX	GW402A0JH	259	7.84	9.4		401.49			0.6	0.5
5/13/2009	XX	GW402A11H	264	7.67	7.1	4.35	401.75	406.1		0.5	0.3
8/13/2009	XX	GW402A13H	262	7.38	12.1	4.66	401.44	406.1		1.2	0.7
10/28/2009	XX	GW402A155	278	8	8.3	4.5	401.6	406.1		0.5	0.5
6/3/2010	XX	GW402A176	273	8.07	8.8		401.19			2.04	0.21
8/17/2010	XX	GW402A197	274	7.76	11.7		399.69			1.49	0.57
10/19/2010	XX	GW402A1AF	297	7.74	9.4		401.32			1.26	0.18
5/16/2011	XX	GW402A1DG	281	8	6.7	4.13	401.97	406.1	62.78	1	3.6
8/8/2011	XX	GW402A1F7	273	7.84	13.4	5.19	400.91	406.1	62.63	1	0
11/1/2011	XX	GW402A1GI	276	7.7	9.8	4.5	401.6	406.1	62.83	1	0.5
5/16/2012	XX	GW402A1IC	328	7.8	10.9	4.05	402.05	406.1	62.6	0.6	0
8/15/2012	XX	GW402A205	367	8	16.4	5.84	400.26	406.1		1	0
10/31/2012	XX	GW402A21J	315	7.4	12.4	4.15	401.95	406.1	62.83	1	0
5/20/2013	XX	GW402A23D	303	7.9	8.9	4.6	401.5	406.1		5	0.2
7/22/2013	XX	GW402A257	318	7.8	15.8	5.41	400.69	406.1		2	0.3
9/30/2013	XX	GW402A271	309	8.3	12.7	4.65	401.45	406.1	62.8	1	1.1
6/4/2014	XX	GW402A28F	347	7.9	11.8	4.8	401.3	406.1		1	0.4
8/19/2014	XX	GW402A2A9	331	7.9	11.8	5.2	400.9	406.1		1	0.5
11/11/2014	XX	GW402A2C3	313	7.1	7.2	4.37	401.73	406.1	62.75	1	0.3
6/4/2015	XX	GW402A2DJ	381	7.8	8.1	4.3	401.8	406.1		2.6	0.6
9/1/2015	XX	GW402A2FE	323	7.8	12	4.79	401.31	406.1		0.3	0.8
11/3/2015	XX	GW402A2H8	347	7.9	8.9	4.38	401.72	406.1	62.82	3.6	1
6/14/2016	XX	GW402A30I	353	7.6	8.7	4.75	401.35	406.1		1.5	2.2
9/20/2016	XX	GW402A32C	368	7.8	12.2	6.08	400.02	406.1		1.2	0.5
11/9/2016	XX	GW402A346	386	7.8	8.9	5.32	400.78	406.1	62.78	1.1	0.4

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(402A) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
6/14/2017	XX	GW402A361	343	8	8.9	4.8	401.3	406.1		0.3	1.7
8/29/2017	XX	GW402A37F	379	7.9	10.2	6.3	399.8	406.1		2.5	0.6
11/15/2017	XX	GW402A399	343	7.7	8	4.72	401.38	406.1	62.76	1.5	0.4
6/20/2018	XX	GW402A3B4	418	8.1	9.3	4.95	401.15	406.1		0.1	0.6
8/15/2018	XX	GW402A3DD	407	7.6	12.8	4.92	401.18	406.1		1.6	0.3
11/28/2018	XX	GW402A3EC	439	8.1	7.6	4.28	401.82	406.1	62.75	0.4	0.6
6/5/2019	XX	GW402A3G7	410	7.7	9.4	4.33	401.77	406.1		0.4	0.8
8/13/2019	XX	GW402A3IG	385	7.9	10.9	5.18	400.92	406.1		6.8	0.8
10/22/2019	XX	GW402A3JF	376	7.8	10.1	4.51	401.59	406.1		3	0.3
6/17/2020	XX	GW402A41A	333	8	11.7	5.32	400.78	406.1		4.3	0.6
8/4/2020	XX	GW402A43J	346	7.3	12.6	5.97	400.13	406.1		3.2	0.6
10/21/2020	XX	GW402A44I	375	7.9	8.5	4.75	401.35	406.1	62.8	3.8	0.6
6/23/2021	XX	GW402A46D	388	7.5	9.5	5.83	400.27	406.1		1.3	0.3
9/21/2021	XX	GW402A488	378	7.3	11.1	4.92	401.18	406.1	62.88	1.5	0.4
6/28/2022	XX	GW402A4AA	445	7.9	13	5.6	400.5	406.1		1.6	3.5
10/19/2022	XX	GW402A4C7	435	7.2	11.7	3.95	402.15	406.1	62.97	1.5	0.5
6/7/2023	XX	GW402A4E8	460	7.6	8.8	4.37	401.73	406.1		2.1	0.6
10/17/2023	XX	GW402A4I3	451	7.4	9.6	4.59	401.51	406.1	62.95	2.7	0.4
402B											
5/3/2000	XX	402BXX36649	1422	6.88	4		399.32				
8/10/2000	XX	402BXX36748	2130	6.72	7		398.69		22.81	0.39	0.1
11/9/2000	XX	402BXX36839	1913	6.86	8		398.82			0.6	0.3
5/17/2001	XX	402BXX37028	2180	6.9	6.8		398.86			0.5	0.1
8/1/2001	XX	402BXX37104	2040	6.69	13.2		397.37		22.87	1.2	0.1
10/24/2001	XX	402BXX37188	2030	6.79	10.8		398.79			6.1	0.1
5/22/2002	XX	402BXX37398	1858	6.82	9.4		399.08			0.7	0.1
8/7/2002	XX	402BXX37475	2030	6.72	11.1		398.05		22.87	0.4	0.2
10/24/2002	XX	402BXX37553	1996	6.92	9.6		398.87			1.1	0.2
6/25/2003	XX	402BXX37797	1968	6.83	8.9		398.53			0.3	0.2
8/11/2003	XX	402BXX37844	1905	6.83	11.6		399.21		22.77	0.4	0.14
10/22/2003	XX	402BXX37916	1858	6.89	7.6		399.74			0.6	0.3
5/11/2004	XX	402BXX38118	1828	6.91	5.9		399.06			1.7	0.19
8/2/2004	XX	402BXX38201	1631	6.73	10.4		398.63		22.78	1.5	0.2
10/26/2004	XX	402BXX38286	1670	6.83	10		398.62			1	0.19
5/9/2005	XX	GW402B015	1175	6.96	5.6	6.63	399.81	406.44		0.3	0.1
8/1/2005	XX	GW402B02H	1520	6.72	9.4	8.18	398.26	406.44	22.81	0.4	0.3
11/9/2005	XX	GW402B049	1514	6.89	9.4	7.32	399.12	406.44		0.5	0.3
5/5/2006	XX	GW402B095	1349	6.98	6.3		399.67			0.3	0.44
8/2/2006	XX	GW402B07D	1465	6.94	12.2		398.97		22.58	1.1	0.7
10/30/2006	XX	GW402B061	1368	6.96	10.1		399.75			0.1	0.5
5/7/2007	XX	GW402B0AH	1344	6.98	6.1		399.33			0.1	1
8/14/2007	XX	GW402B0CA	1384	7.02	10.2		398.27		22.78	0.2	0.4
11/5/2007	XX	GW402B0E2	1183	7.03	9.6		399.72			1.2	0.5
6/11/2008	XX	GW402B0GA	1330	6.93	7		399.09			0.2	0.2
8/20/2008	XX	GW402B0IA	1341	6.91	10.8		398.76			0.3	0.7
10/27/2008	XX	GW402B0JI	1293	6.91	10.4		398.76			0.4	0.6
5/13/2009	XX	GW402B11I	1280	6.98	6.2	7.05	399.39	406.44		0.4	0.4
8/13/2009	XX	GW402B13I	1282	6.77	10.6	4.47	401.97	406.44		0.2	0.6
10/28/2009	XX	GW402B156	1290	7.02	9.4	7.05	399.39	406.44		0.1	0.2

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(402B) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
6/3/2010	XX	GW402B177	1233	7.13	7.4		398.78			0.1	0.81
8/17/2010	XX	GW402B198	1259	6.89	11.2		397.37			0.1	0.42
10/19/2010	XX	GW402B1AG	1293	6.82	10.2		399.13			0.19	0.22
5/16/2011	XX	GW402B1DH	1000	6.9	6	6.4	400.04	406.44	22.58	1	1
8/8/2011	XX	GW402B1F8	1138	6.6	13.7	7.93	398.51	406.44	22.6	1	0
11/1/2011	XX	GW402B1GJ	1166	6.8	10.4	7.22	399.22	406.44	22.78	1	0.2
5/16/2012	XX	GW402B1ID	1001	6.9	9.4	6.72	399.72	406.44	22.59	0.6	0.4
8/15/2012	XX	GW402B206	1168	6.9	13.3	8.33	398.11	406.44		1	0
10/31/2012	XX	GW402B220	1118	7	12.2	6.39	400.05	406.44	22.8	0.4	0
5/20/2013	XX	GW402B23E	1151	6.9	7.3	7.35	399.09	406.44		0.8	0.5
7/22/2013	XX	GW402B258	1183	6.5	14.2	8.44	398	406.44		1	0.2
9/30/2013	XX	GW402B272	1140	7	12.4	7.6	398.84	406.44	22.8	0.6	0.3
6/4/2014	XX	GW402B28G	1146	6.9	11.2	7.78	398.66	406.44		1	0.1
8/19/2014	XX	GW402B2AA	1117	7.3	13.4	7.85	398.59	406.44		0.6	0.4
11/11/2014	XX	GW402B2C4	1084	6.7	8.6	7.02	399.42	406.44	22.73	1	0.4
6/4/2015	XX	GW402B2E0	1183	6.9	7.1	7.01	399.43	406.44		0.3	0.2
9/1/2015	XX	GW402B2FF	1092	6.9	11.7	7.6	398.84	406.44		0.3	0.05 U
11/3/2015	XX	GW402B2H9	1110	7	9.6	7.83	398.61	406.44	22.8	0.8	1
6/14/2016	XX	GW402B30J	1117	6.7	7.8	7.49	398.95	406.44		0.2	0.5
9/20/2016	XX	GW402B32D	1120	6.8	11.5	8.78	397.66	406.44		0.2	0.3
11/9/2016	XX	GW402B347	1118	7	9.5	7.74	398.7	406.44	22.8	0.2	0.3
6/14/2017	XX	GW402B362	1033	6.9	7.5	7.78	398.66	406.44		0.2	2.8
8/29/2017	XX	GW402B37G	1070	6.9	9.8	9.25	397.19	406.44		0.1	0.2
11/15/2017	XX	GW402B39A	1066	6.9	9.1	7.41	399.03	406.44	22.8	0.3	0.3
6/20/2018	XX	GW402B3B5	1160	7.1	7.9	7.92	398.52	406.44		0.2	0.6
8/15/2018	XX	GW402B3DE	1165	6.8	10.4	7.9	398.54	406.44		0.1	0.6
11/28/2018	XX	GW402B3ED	997	7.3	8.4	7.22	399.22	406.44	22.8	0.4	0.6
6/5/2019	XX	GW402B3G8	1007	7	7.5	7.33	399.11	406.44		0.4	0.5
8/13/2019	XX	GW402B3IH	1016	7.1	10.8	7.68	398.76	406.44		1.6	0.8
10/22/2019	XX	GW402B3JG	1000	7	10	7.53	398.91	406.44		1.9	0.6
6/17/2020	XX	GW402B41B	894	6.9	11.9	8.2	398.24	406.44		0.8	0.5
8/4/2020	XX	GW402B440	880	7.2	11.6	8.65	397.79	406.44		2.2	0.4
10/21/2020	XX	GW402B44J	895	7.1	9.3	7.12	399.32	406.44	22.81	0.9	0.6
6/23/2021	XX	GW402B46E	878	6.9	8.8	8.54	397.9	406.44		0.9	0.5
9/21/2021	XX	GW402B489	894	6.8	11.2	7.5	398.94	406.44	22.75	0.5	0.8
6/28/2022	XX	GW402B4AB	985	6.9	11.1	8.86	397.58	406.44		2.4	5.9
10/19/2022	XX	GW402B4C8	880	6.8	11.1	6.2	400.24	406.44	23	0.3	0.6
6/7/2023	XX	GW402B4E9	939	6.7	8.3	7.36	399.08	406.44		1.5	1.8
10/17/2023	XX	GW402B4I4	954	6.6	10.3	7.31	399.13	406.44	23.02	5.1	0.3
LDS											
6/10/2008	XX	LDSXX39597	911	7.44	14.2						
8/19/2008	XX	LDSXX39687	981	6.87	16.2						
10/22/2008	XX	LDSXX39736	1058	6.83	9.8						
5/7/2009	XX	LDSXX39940	1558	7.38	9.1						5.9
8/12/2009	XX	LDSXX40037	1454	6.83	16.3						
10/27/2009	XX	LDSXX40113	1498	6.57	7.9						
6/7/2010	XX	GWXXXX1B8	1684	7.39	17.5						
8/18/2010	XX	GWXXXX1B9	1773	7.62	18.4						
10/21/2010	XX	GWXXXX1BA	1580	6.81	10.8						

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(LDS) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU						
5/18/2011	XX	LTXXXX1EF	887	7	13.9					0.8	1.8						
8/10/2011	XX	LTXXXX1G6	1046	6.96	17.2					1	1.4						
11/2/2011	XX	LTXXXX1HH	1018	6.8	10.4					1	0.9						
5/14/2012	XX	LTXXXX1JB	1528	7	13.4					0.6	0.7						
8/14/2012	XX	LTXXXX214	1125	6.9	19.2					2	0						
10/30/2012	XX	LTXXXX22I	1356	6.9	13.4					2	1.8						
5/21/2013	XX	LTXXXX24C	1371	7.1	16.9					6	3.5						
7/25/2013	XX	LTXXXX266	1383	6.9	21.4					3	5						
10/1/2013	XX	LTXXXX280	1346	7.1	20.8					1	0.8						
6/5/2014	XX	LTXXXX29E	1664	7.2	13.7					1	3.1						
8/21/2014	XX	LTXXXX2B8	915	7.8	18.6					2	1.8						
11/13/2014	XX	LTXXXX2D2	975	6.9	7					1	1.8						
6/4/2015	XX	LTXXXX2EI	1018	7	13.6					1.8	2.2						
9/3/2015	XX	LTXXXX2GD	918	7.1	23					1.1	2.2						
11/5/2015	XX	LTXXXX2I7	914	7	9.4					2.1	2.8						
6/16/2016	XX	LTXXXX31H	1014	6.8	19.8					1.3	1						
9/22/2016	XX	LTXXXX33B	1053	7.5	18					0.5	2.6						
11/10/2016	XX	LTXXXX355	995	7.1	8.8					1.4	0.8						
6/15/2017	XX	LTXXXX370	1304	7	17.7					0.7	1.1						
8/31/2017	XX	LTXXXX38E	1140	7.1	18.5					1.5	1.3						
11/16/2017	XX	LTXXXX3A8	1078	6.9	7.1					2	2.7						
6/21/2018	XX	LTXXXX3C3	1352	7	19.3					0.3	2.1						
8/16/2018	XX	LTXXXX3CI	1282	6.7	21.4					0.5	1.8						
11/29/2018	XX	LTXXXX3FB	1689	6.9	7.1					2.9	0.6						
6/6/2019	XX	LTXXXX3H6	1497	7.1	20.3					3.4	0.6						
8/15/2019	XX	LTXXXX3I1	1408	7.1	23.9					2.5	1.6						
10/24/2019	XX	LTXXXX40E	1162	7.2	11.8					0.5	0.8						
6/18/2020	XX	LTXXXX429	1415	7.3	22.3					2.5	0.8						
8/6/2020	XX	LTXXXX434	1099	7	22					1.7	0.9						
10/22/2020	XX	LTXXXX45H	1193	7.1	11.5					2.2	0.8						
6/24/2021	XX	LTXXXX47C	922	6.8	23					0.7	8.5						
9/23/2021	XX	LTXXXX497	916	6.6	19.4					1.4	0.3						
6/30/2022	XX	LTXXXX4B9	909	6.7	23.9					1.4	0.8						
10/20/2022	XX	LTXXXX4D6	D	D	D					D	D						
6/8/2023	XX	LTXXXX4F7	D	D	D					D	D						
10/19/2023	XX	LTXXXX4J1	D	D	D					D	D						
LP																	
5/3/2000	XX	LPXX36649	2068	6.88	7.7												
8/9/2000	XX	LPXX36747	2940	7.47	18												
11/8/2000	XX	LPXX36838	3330	7.75	10.1												
5/16/2001	XX	LPXX37027	3610	7.63	12												
7/31/2001	XX	LPXX37103	4760	7.11	20.2												
10/23/2001	XX	LPXX37187	4560	7.35	11.3												
5/21/2002	XX	LPXX37397	2590	7.1	12.2												
8/6/2002	XX	LPXX37474	3760	7.44	20.6												
10/24/2002	XX	LPXX37553	3250	7.57	8.3												
6/26/2003	XX	LPXX37798	2320	7.43	24.9												
8/13/2003	XX	LPXX37846	2190	7.36	23.4												
10/22/2003	XX	LPXX37916	1751	7.52	7.4												

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(LP)

Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
5/6/2004	XX	LPXX38113	1805	6.76	10.8						
7/27/2004	XX	LPXX38195	2250	7.49	16.9						
10/25/2004	XX	LPXX38285	2680	7.67	10.1						
5/12/2005	XX	LTLPXX002	1791	7.34	11.5						
7/25/2005	XX	LTLPXX01E	2500	7.59	20.6						
11/9/2005	XX	LTLPXX036	2500	7.59	20.6						
5/2/2006	XX	LTLPXX082	1941	6.83	9.6						
8/3/2006	XX	LTLPXX06A	1638	7.25	22.4						
10/18/2006	XX	LTLPXX04I	2050	7.53	10.6						
5/21/2007	XX	LTLPXX09E	1718	6.8	9						
8/8/2007	XX	LTLPXX0B7	A	A	A					A	A
11/6/2007	XX	LTLPXX0CJ	1772	7.06	7.1						
5/27/2008	XX	LTLPXX0F7	1806	7.58	20.4						
8/19/2008	XX	LTLPXX0H7	1755	7.38	20						
10/22/2008	XX	LTLPXX0IF	2070	7.59	6.3						
5/7/2009	XX	LTLPXX10F	2070	7.09	10.4						
8/12/2009	XX	LTLPXX12F	2320	6.88	18						
10/27/2009	XX	LTLPXX143	1570	6.46	7.9						
6/7/2010	XX	LTLPXX164	2090	7.12	16.4						D3
8/18/2010	XX	LTLPXX185	3120	7.84	20.8						D3
10/21/2010	XX	LTLPXX19D	2290	6.98	9.9						D3
5/18/2011	XX	LTXXXX1ED	1055	6.8	10.7					8	74.3
8/10/2011	XX	LTXXXX1G4	2200	8.46	18.8					10	55.6
11/2/2011	XX	LTXXXX1HF	1904	7	9.6					5	45.4
5/14/2012	XX	LTXXXX1J9	1182	6.9	18.2					5	62.4
8/15/2012	XX	LTXXXX212	1828	8.3	24.4					8	63.6
10/30/2012	XX	LTXXXX22G	1405	7.4	13.4					6	4.2
5/21/2013	XX	LTXXXX24A	1560	7.7	16					6	20
7/25/2013	XX	LTXXXX264	1379	7.8	23					6	26.5
10/1/2013	XX	LTXXXX27I	1600	7.4	24.9					6	6.5
6/5/2014	XX	LTXXXX29C	1648	7.7	15.7					4	5.8
8/21/2014	XX	LTXXXX2B6	2730	7.7	18.2					6	8.2
11/13/2014	XX	LTXXXX2D0	1210	7	6.6					4	8.4
6/4/2015	XX	LTXXXX2EG	1202	7.1	15.1					6.8	13.8
9/3/2015	XX	LTXXXX2GB	1600	8	26.8					8.4	18.6
11/5/2015	XX	LTXXXX2I5	1172	7.2	9.2					5.8	12.8
6/16/2016	XX	LTXXXX31F	1806	7.7	20.5					6.6	23.1
9/22/2016	XX	LTXXXX339	2171	8.2	20.6					10.7	5.8
11/10/2016	XX	LTXXXX353	2346	7.6	6.3					7.4	6.8
6/15/2017	XX	LTXXXX36I	1650	7.8	20.6					6.9	12.2
8/31/2017	XX	LTXXXX38C	2829	7.7	18.1					6.9	8.4
11/16/2017	XX	LTXXXX3A6	1170	7.7	4.1					8.5	6.7
6/21/2018	XX	LTXXXX3C1	2070	7.9	23.2					9.6	14.5
8/16/2018	XX	LTXXXX3CG	1677	7.9	25.5					13.9	4.6
11/29/2018	XX	LTXXXX3F9	630	7.7	1.7					2.4	0.8
6/6/2019	XX	LTXXXX3H4	1182	7.4	23.4					12.4	12.6
8/15/2019	XX	LTXXXX3HJ	1875	7.9	25.2					6.6	6.7
10/24/2019	XX	LTXXXX40C	1549	7.7	11					5.4	2.6
6/18/2020	XX	LTXXXX427	1511	7.7	28.7					5.2	3.1
8/6/2020	XX	LTXXXX432	1733	8.1	24					3.7	5.6

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(LP) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU						
10/22/2020	XX	LTXXXX45F	1073	7.3	10.7					5.6	2.1						
6/24/2021	XX	LTXXXX47A	1625	7.7	21.3					1.8	5.6						
10/5/2021	XX	LTXXXX49J	1110	7.6	22.4					9.1	17						
6/30/2022	XX	LTXXXX4B7	1041	7.2	19.5					6.6	4.9						
10/20/2022	XX	LTXXXX4DG	559	6.7	15.5					2.2	2.6						
6/8/2023	XX	LTXXXX4F5	1394	7.4	16.3					8.7	4.6						
10/19/2023	XX	LTXXXX4JB	1388	7.1	13					5.8	3.9						
LPD2																	
5/19/2005	XX	LTLPD2003	246	7.31	10.8					9.6	5.4						
8/2/2005	XX	LTLPD201F	642	6.67	16.6					10.3	18.5						
10/26/2005	XX	LTLPD2037	292	7.64	8.4					4.3	11.8						
5/10/2006	XX	LTLPD2083	204	6.87	12.8					7	3.68						
7/24/2006	XX	LTLPD206B	199	6.99	21.6					7.5	9						
10/10/2006	XX	LTLPD204J	582	8.29	10					12.3	25.8						
5/21/2007	XX	LTLPD209F	200	7.23	9.7					8.4	2.2						
8/6/2007	XX	LTLPD20B8	597	7.19	20.6					6.46	39						
10/24/2007	XX	LTLPD20D0	200	7.37	11.7					9.6	4.8						
5/28/2008	XX	LTLPD20F8	280	6.96	13.7					7.9	5.4						
8/11/2008	XX	LTLPD20H8	236	7.08	18.4					3	2.5						
10/15/2008	XX	LTLPD20IG	243	7.11	9.7					3.8	5.1						
5/6/2009	XX	LTLPD210G	202	6.72	11.7					6.8	3.4						
8/4/2009	XX	LTLPD212G	177	6.6	19.6					5.45	2.4						
10/19/2009	XX	LTLPD2144	198	6.67	4.6					6.1	4.7						
5/25/2010	XX	LTLPD2165	344	6.97	19.4					4.25	6.53						
8/2/2010	XX	LTLPD2186	479	6.91	16.8						54						
10/12/2010	XX	LTLPD219E	232	7.13	9.1					6.61	5.61						
5/18/2011	XX	LTXXXX1EE	94	7.8	9.9					6	1.2						
8/10/2011	XX	LTXXXX1G5	588	7.49	19					1	25.8						
11/2/2011	XX	LTXXXX1HG	413	6.3	8.8					3	55.3						
5/14/2012	XX	LTXXXX1JA	143	6.8	12.9					5	1.4						
8/14/2012	XX	LTXXXX213	503	7.3	21.1					3	22.3						
10/30/2012	XX	LTXXXX22H	729	6.7	14.6					6	0						
5/21/2013	XX	LTXXXX24B	112	6.7	15.1					5	3.1						
7/25/2013	XX	LTXXXX265	220	7.6	19.1					5	5.3						
10/1/2013	XX	LTXXXX27J	265	6.9	20.4					3	2.1						
6/5/2014	XX	LTXXXX29D	181	6.9	16.5					1	2.8						
8/21/2014	XX	LTXXXX2B7	461	7.9	16.9					5	5.7						
11/13/2014	XX	LTXXXX2D1	314	7	2.8					1	4.6						
6/4/2015	XX	LTXXXX2EH	133	7.6	11.9					5.7	2.6						
9/3/2015	XX	LTXXXX2GC	249	8.2	20.5					4.9	1.9						
11/5/2015	XX	LTXXXX2I6	334	6.6	8.6					6.4	4.8						
6/16/2016	XX	LTXXXX31G	517	6.5	16.7					5.9	17.6						
9/22/2016	XX	LTXXXX33A	D	D	D					D	D						
11/10/2016	XX	LTXXXX354	D	D	D					D	D						
6/15/2017	XX	LTXXXX36J	162	7.4	16.9					4.9	7.9						
8/31/2017	XX	LTXXXX38D	523	8	14.9					2	8.2						
11/16/2017	XX	LTXXXX3A7	285	6.8	3.7					3.4	5.6						
6/21/2018	XX	LTXXXX3C2	352	7	18.4					4.6	8.1						
8/16/2018	XX	LTXXXX3CH	300	7.5	20.5					2.9	1.3						

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(LPD2) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU						
11/29/2018	XX	LTXXXX3FA	299	7.5	1.8					2.8	1.2						
6/6/2019	XX	LTXXXX3H5	123	7.8	19.3					8.5	0.8						
8/15/2019	XX	LTXXXX3I0	451	7.5	18.1					0.5	2.6						
10/24/2019	XX	LTXXXX40D	231	7.6	11.5					2.3	2.1						
6/18/2020	XX	LTXXXX428	343	7	21.4					3.2	1.6						
8/6/2020	XX	LTXXXX433	476	7.5	21.9					4.2	3.6						
10/22/2020	XX	LTXXXX45G	172	6.6	10.1					6.5	1.3						
6/24/2021	XX	LTXXXX47B	402	6.7	16.3					5.8	1.8						
9/23/2021	XX	LTXXXX496	142	7	18.3					6.8	1.8						
6/30/2022	XX	LTXXXX4B8	375	7.3	18.8					2.1	3.6						
10/20/2022	XX	LTXXXX4D5	119	7.7	10.2					1.8	0.8						
6/8/2023	XX	LTXXXX4F6	307	6.8	13.9					3.9	2.2						
10/19/2023	XX	LTXXXX4J0	281	6.8	12.3					3.5	4.1						
ND																	
5/3/2000	XX	NDXX36649	D	D	D												
8/9/2000	XX	NDXX36747	D	D	D												
11/8/2000	XX	NDXX36838	D	D	D												
5/16/2001	XX	NDXX37027	D	D	D					D	D						
7/31/2001	XX	NDXX37103	D	D	D					D	D						
10/23/2001	XX	NDXX37187	D	D	D					D	D						
5/21/2002	XX	NDXX37397	D	D	D					D	D						
7/30/2002	XX	NDXX37467	D	D	D					D	D						
10/22/2002	XX	NDXX37551	D	D	D					D	D						
6/23/2003	XX	NDXX37795	D	D	D					D	D						
8/13/2003	XX	NDXX37846	D	D	D					D	D						
10/20/2003	XX	NDXX37914	D	D	D					D	D						
5/6/2004	XX	NDXX38113	D	D	D					D	D						
7/27/2004	XX	NDXX38195	D	D	D					D	D						
10/25/2004	XX	NDXX38285	D	D	D					D	D						
5/12/2005	XX	SWNDXX016	D	D	D					D	D						
7/25/2005	XX	SWNDXX02I	D	D	D					D	D						
11/10/2005	XX	SWNDXX04A	162	8.58	2.8					14.5	16.5						
5/2/2006	XX	SWNDXX096	138.5	6.86	11.5					12.7	158						
8/3/2006	XX	SWNDXX07E	D	D	D					D	D						
10/18/2006	XX	SWNDXX062	D	D	D					D	D						
5/21/2007	XX	SWNDXX0AI	D	D	D		D			D	D						
8/8/2007	XX	SWNDXX0CB	D	D	D					D	D						
11/6/2007	XX	SWNDXX0E3	D	D	D					D	D						
6/11/2008	XX	SWNDXX0GB	264	7.57	19.9					7.6	9.4						
8/19/2008	XX	SWNDXX0IB	D	D	D		D			D	D						
10/22/2008	XX	SWNDXX0JJ	D	D	D					D	D						
5/18/2009	XX	SWNDXX11J	D	D	D					D	D						
8/17/2009	XX	SWNDXX13J	D	D	D					D	D						
10/29/2009	XX	SWNDXX157	D	D	D					D	D						
6/7/2010	XX	SWNDXX178	259	8.27	21.4					7.01	1.76						
8/18/2010	XX	SWNDXX199	D	D	D					D	D						
10/21/2010	XX	SWNDXX1AH	D	D	D					D	D						
5/18/2011	XX	SWXXXX1E9	186	7.5	9.4					6	0.4						
8/10/2011	XX	SWXXXX1G0	D	D	D					D	D						

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(ND) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU						
11/2/2011	XX	SWXXXX1HB	D	D	D					D	D						
5/14/2012	XX	SWXXXX1J5	D	D	D					D	D						
8/14/2012	XX	SWXXXX20I	F6	F6	F6					F6	F6						
10/29/2012	XX	SWXXXX22C	D	D	D					D	D						
5/21/2013	XX	SWXXXX246	D	D	D					D	D						
7/24/2013	XX	SWXXXX260	D	D	D					D	D						
10/1/2013	XX	SWXXXX27E	D	D	D					D	D						
6/5/2014	XX	SWXXXX298	D	D	D					D	D						
8/21/2014	XX	SWXXXX2B2	D	D	D					D	D						
11/13/2014	XX	SWXXXX2CG	D	D	D					D	D						
6/4/2015	XX	SWXXXX2EC	D	D	D					D	D						
9/3/2015	XX	SWXXXX2G7	D	D	D					D	D						
11/5/2015	XX	SWXXXX2I1	I	I	I					I	I						
6/16/2016	XX	SWXXXX31B	D	D	D					D	D						
9/22/2016	XX	SWXXXX335	D	D	D					D	D						
11/10/2016	XX	SWXXXX34J	D	D	D					D	D						
6/15/2017	XX	SWXXXX36E	D	D	D					D	D						
8/31/2017	XX	SWXXXX388	D	D	D					D	D						
11/16/2017	XX	SWXXXX3A2	D	D	D					D	D						
6/21/2018	XX	SWXXXX3BH	D	D	D					D	D						
8/16/2018	XX	SWXXXX3CC	D	D	D					D	D						
11/29/2018	XX	SWXXXX3F5	D	D	D					D	D						
6/6/2019	XX	SWXXXX3H0	D	D	D					D	D						
8/15/2019	XX	SWXXXX3HF	D	D	D					D	D						
10/24/2019	XX	SWXXXX408	I	I	I					I	I						
6/18/2020	XX	SWXXXX423	D	D	D					D	D						
8/6/2020	XX	SWXXXX42I	D	D	D					D	D						
10/22/2020	XX	SWXXXX45B	D	D	D					D	D						
6/24/2021	XX	SWXXXX476	D	D	D					D	D						
9/23/2021	XX	SWXXXX491	D	D	D					D	D						
6/30/2022	XX	SWXXXX4B3	D	D	D					D	D						
10/20/2022	XX	SWXXXX4D0	D	D	D					D	D						
6/8/2023	XX	SWXXXX4F1	830	7.7	13.8					9.2	1.6						
10/19/2023	XX	SWXXXX4IG	D	D	D					D	D						
PBFR																	
5/14/2012	XX	SWXXXX1J4	108	6.8	11.4					6	0.1						
8/14/2012	XX	SWXXXX20H	99	7.1	20.1					5	11.6						
10/29/2012	XX	SWXXXX22B	133	6.9	12.4					5	5.9						
5/21/2013	XX	SWXXXX245	50	7.3	13.8					6	1						
7/24/2013	XX	SWXXXX25J	57	6.3	22.8					5	1.8						
10/1/2013	XX	SWXXXX27D	70	6.4	13.7					5	1.2						
6/5/2014	XX	SWXXXX297	45	7.2	19.7					5	0.9						
8/21/2014	XX	SWXXXX2B1	49	7.5	19.8					6	2.1						
11/13/2014	XX	SWXXXX2CF	78	7.1	4.3					5	1.2						
6/4/2015	XX	SWXXXX2EB	112	7.5	12.3					6.9	1.5						
9/3/2015	XX	SWXXXX2G6	74	7.9	21.5					4	1.7						
11/5/2015	XX	SWXXXX2I0	55	7.6	6.3					9.2	1.1						
6/16/2016	XX	SWXXXX31A	54	7.9	17.2					5.6	2.3						
9/22/2016	XX	SWXXXX334	70	8.2	17.1					4.7	1.7						

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(PBFR) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU						
11/10/2016	XX	SWXXXX34I	109	8.6	4.4					9.3	1.1						
6/15/2017	XX	SWXXXX36D	65	8.2	18					5.4	1.4						
8/31/2017	XX	SWXXXX387	84	8.4	17.8					5.6	2.7						
11/16/2017	XX	SWXXXX3A1	89	7.6	1.2					9.7	5.4						
6/21/2018	XX	SWXXXX3BG	60	8.2	20.8					5	1.3						
8/16/2018	XX	SWXXXX3CB	67	7.1	23.1					3.7	1.1						
11/29/2018	XX	SWXXXX3F4	332	7.6	1.9					9.1	1.1						
6/6/2019	XX	SWXXXX3GJ	156	7.3	21.5					5.8	0.6						
8/15/2019	XX	SWXXXX3HE	61	8	21.7					8.1	0.8						
10/24/2019	XD	SWDP3X40G	378	3.8	11.6					7.1	0.8						
6/18/2020	XX	SWXXXX422	53	7.6	26.4					5	1.1						
8/6/2020	XX	SWXXXX42H	56	8.3	22.9					6.1	1.2						
10/22/2020	XX	SWXXXX45A	105	7.9	10					11.3	0.8						
6/24/2021	XX	SWXXXX475	53	7.6	17.6					7.3	0.8						
9/23/2021	XX	SWXXXX490	54	6.4	20					4.7	0.7						
6/30/2022	XX	SWXXXX4B2	53	6.8	21.8					3.5	1.4						
10/20/2022	XX	SWXXXX4CJ	86	6.9	11.1					4.1	1.8						
6/8/2023	XX	SWXXXX4F0	86	7.3	15.7					6.3	0.6						
10/19/2023	XX	SWXXXX4IF	112	7.1	14					7.3	0.6						
PBFB																	
5/3/2000	XX	PBFBXX36649	50	6.61	12.2												
8/9/2000	XX	PBFBXX36747	56	6.35	21												
11/8/2000	XX	PBFBXX36838	44	7.29	9.7												
5/16/2001	XX	PBFBXX37027	37	6.75	10.5					8.4	1.7						
7/31/2001	XX	PBFBXX37103	47	7.38	28.7					7.3	2.8						
10/24/2001	XX	PBFBXX37188	147	6.96	12					5.5	2.5						
5/21/2002	XX	PBFBXX37397	322	7.13	14					9.1	0.5						
8/6/2002	XX	PBFBXX37474	63.5	7.03	21.3					2.9	2.7						
10/24/2002	XX	PBFBXX37553	70	6.42	4.8					3.7	0.7						
6/26/2003	XX	PBFBXX37798	48	6.81	23.2					7.43	1.8						
8/13/2003	XX	PBFBXX37846	48.7	7.03	25.3					4.8	2.04						
10/23/2003	XX	PBFBXX37917	40.3	6.92	4.6					3.9	1.86						
5/6/2004	XX	PBFBXX38113	53.2	7.23	12.2					4.4	1.94						
7/27/2004	XX	PBFBXX38195	49.6	7.48	15.8					6	3.33						
10/25/2004	XX	PBFBXX38285	48.3	8.84	7.1					5.6	4.48						
5/12/2005	XX	SWPBFB018	53	8.36	14.3					5.3	2						
7/25/2005	XX	SWPBFB030	60	8.51	18.8					4.2	3.4						
11/10/2005	XX	SWPBFB04C	38	9.02	5.7					4.2	1.8						
5/2/2006	XX	SWPBFB098	36.9	7.53	9.4					8.4	2.8						
8/3/2006	XX	SWPBFB07G	52	8.63	22.4					2.6	2.4						
10/18/2006	XX	SWPBFB064	40	8.61	8.7					8.2	3						
5/21/2007	XX	SWPBFB0B0	29	8.05	9.8					7.6	1.4						
8/8/2007	XX	SWPBFB0CD	55.2	6.62	20.2					5	2.6						
11/6/2007	XX	SWPBFB0E5	30.8	8.04	5.4					6.3	1.2						
6/11/2008	XX	SWPBFB0GD	27	7.1	14.2					5.9	7.6						
8/19/2008	XX	SWPBFB0ID	50	6.52	21					4.4	1.7						
10/22/2008	XX	SWPBFB101	48	6.96	4.5					7.8	1.8						
5/7/2009	XX	SWPBFB121	51.5	6.78	10.3					5.4	2.9						
8/12/2009	XX	SWPBFB141	54.2	6.8	15.7					2.3	3.6						

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(PBFB) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU						
10/27/2009	XX	SWPBFB159	35.5	6.39	4.1					6.3	1.6						
6/7/2010	XX	SWPBFB17A	36	7.21	13.1					4.38	3.73						
8/18/2010	XX	SWPBFB19B	60.5	7.63	17.8						2.1						
10/21/2010	XX	SWPBFB1AJ	35.9	7.29	6.3					6.8	0.75						
5/18/2011	XX	SWXXXX1E7	33	7.8	12.9					8	1.2						
8/10/2011	XX	SWXXXX1FI	48	7.32	20.6					5	2.43						
11/2/2011	XX	SWXXXX1H9	45	7.2	6					8	19.8						
5/14/2012	XX	SWXXXX1J3	49	6.8	18.9					10	1.1						
8/14/2012	XX	SWXXXX20G	58	6.9	24.5					5	7						
10/29/2012	XX	SWXXXX22A	51	6.6	12.9					6	4						
5/21/2013	XX	SWXXXX244	48	7.1	15.3					6	1.5						
7/24/2013	XX	SWXXXX25I	63	5.8	24.8					6	2.2						
10/1/2013	XX	SWXXXX27C	110	7.1	22.4					5	1.1						
6/5/2014	XX	SWXXXX296	60	7	16.7					5	0.8						
8/21/2014	XX	SWXXXX2B0	50	7.8	18.8					4	2.6						
11/13/2014	XX	SWXXXX2CE	46	7.5	3.3					5	0.6						
6/4/2015	XX	SWXXXX2EA	46	8	13.7					7.1	2.1						
9/3/2015	XX	SWXXXX2G5	44	7.8	23.3					5.1	2.7						
11/5/2015	XX	SWXXXX2HJ	39	7.7	7					9.1	1.3						
6/16/2016	XX	SWXXXX319	69	8.2	17.3					5.9	2.7						
9/22/2016	XX	SWXXXX333	48	8	19.1					5.2	1.2						
11/10/2016	XX	SWXXXX34H	50	8.6	5.2					8.8	0.4						
6/15/2017	XX	SWXXXX36C	45	8	19.2					6.2	1.1						
8/31/2017	XX	SWXXXX386	58	8.1	19.3					6	1.2						
11/16/2017	XX	SWXXXX3A0	68	7.8	2.4					10.9	0.8						
6/21/2018	XX	SWXXXX3BF	49	7.6	22					4.9	1.3						
8/16/2018	XX	SWXXXX3CA	61	7.7	23.9					4.3	1.8						
11/29/2018	XX	SWXXXX3F3	71	8.1	1.2					11.4	0.8						
6/6/2019	XX	SWXXXX3GI	43	7.9	23.4					7.5	0.6						
8/15/2019	XX	SWXXXX3HD	48	7.9	22.8					9.1	1.1						
10/24/2019	XX	SWXXXX406	M7	7.7	11					7.6	1.3						
6/18/2020	XX	SWXXXX421	42	7	28.1					5	1.1						
8/6/2020	XX	SWXXXX42G	42	7.4	24.4					5.3	1.1						
10/22/2020	XX	SWXXXX459	48	7	10.4					9.1	0.9						
6/24/2021	XX	SWXXXX474	51	7.4	16.2					5.1	1.2						
9/23/2021	XX	SWXXXX48J	5.7	6.2	19.5					3.5	0.6						
6/30/2022	XX	SWXXXX4B1	65	7.8	20.8					4.4	0.8						
10/20/2022	XX	SWXXXX4CI	35	7.3	11.5					3.5	0.8						
6/8/2023	XX	SWXXXX4EJ	54	7.9	14.9					7.5	0.8						
10/19/2023	XX	SWXXXX4IE	69	7.1	13.2					7.8	0.8						
SPO																	
5/3/2000	XX	SPOXX36649	D	D	D												
8/9/2000	XX	SPOXX36747	D	D	D												
11/8/2000	XX	SPOXX36838	D	D	D												
5/16/2001	XX	SPOXX37027	D	D	D					D	D						
7/31/2001	XX	SPOXX37103	D	D	D					D	D						
10/23/2001	XX	SPOXX37187	D	D	D					D	D						
5/21/2002	XX	SPOXX37397	D	D	D					D	D						
7/30/2002	XX	SPOXX37467	D	D	D					D	D						

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(SPO)

Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU
10/22/2002	XX	SPOXX37551	D	D	D					D	D
6/23/2003	XX	SPOXX37795	D	D	D					D	D
8/13/2003	XX	SPOXX37846	D	D	D					D	D
10/20/2003	XX	SPOXX37914	D	D	D					D	D
5/6/2004	XX	SPOXX38113	174.3	6.69	8.2					7.1	4.49
7/27/2004	XX	SPOXX38195	D	D	D					D	D
10/25/2004	XX	SPOXX38285	D	D	D					D	D
5/12/2005	XX	SWSPOX01A	D	D	D					D	D
7/25/2005	XX	SWSPOX032	D	D	D					D	D
11/10/2005	XX	SWSPOX04E	196	8.71	3.6					5	1.1
5/2/2006	XX	SWSPOX09A	195.3	6.55	8.1					8.7	4.21
8/3/2006	XX	SWSPOX07I	174	7.34	21.1					2.3	8.7
10/18/2006	XX	SWSPOX066	121	8.36	8.5					5.6	5.9
5/21/2007	XX	SWSPOX0B2	146	7.07	10.6					10	2.9
8/9/2007	XX	SWSPOX0CF	D	D	D					D	D
11/6/2007	XX	SWSPOX0E7	87	8.15	2.7					9.6	4.4
6/11/2008	XX	SWSPOX0GF	72	5.83	17.9					4.3	12
8/19/2008	XX	SWSPOX0GJ	D	D	D		D			D	D
10/22/2008	XX	SWSPOX103	D	D	D					D	D
5/7/2009	XX	SWSPOX123	159.2	7.1	11.9					6	4.9
8/17/2009	XX	SWSPOX127	D	D	D					D	D
10/27/2009	XX	SWSPOX15B	92.5	7.27	4.6					6.9	2.2
6/7/2010	XX	SWSPOX17C	106	7.38	16.9					4.65	2.25
8/18/2010	XX	SWSPOX17H	D	D	D					D	D
10/21/2010	XX	SWSPOX1B1	D	D	D					D	D
5/18/2011	XX	SWXXXX1EA	96	8	13.3					8	1.4
8/10/2011	XX	SWXXXX1G1	D	D	D					D	D
11/2/2011	XX	SWXXXX1HC	F6	F6	F6					F6	F6
5/14/2012	XX	SWXXXX1J6	115	6.7	15.1					5	0.6
8/14/2012	XX	SWXXXX20J	F6	F6	F6					F6	F6
10/29/2012	XX	SWXXXX22D	114	6.8	12.7					3	2.7
5/21/2013	XX	SWXXXX247	153	6.7	14.2					6	1.8
7/24/2013	XX	SWXXXX261	99	6.1	22.7					6	2.8
10/1/2013	XX	SWXXXX27F	I	I	I					I	I
6/5/2014	XX	SWXXXX299	D	D	D					D	D
8/21/2014	XX	SWXXXX2B3	I	I	I					I	I
11/13/2014	XX	SWXXXX2CH	97	7.8	3.6					3	1.2
6/4/2015	XX	SWXXXX2ED	101	7.5	13.2					4	2.2
9/3/2015	XX	SWXXXX2G8	D	D	D					D	D
11/5/2015	XX	SWXXXX2I2	94	7.4	5.4					8.3	1.2
6/16/2016	XX	SWXXXX31C	D	D	D					D	D
9/22/2016	XX	SWXXXX336	D	D	D					D	D
11/10/2016	XX	SWXXXX350	I	I	I					I	I
6/15/2017	XX	SWXXXX36F	I	I	I					I	I
8/31/2017	XX	SWXXXX389	D	D	D					D	D
11/16/2017	XX	SWXXXX3A3	D	D	D					D	D
6/21/2018	XX	SWXXXX3BI	D	D	D					D	D
8/16/2018	XX	SWXXXX3CD	D	D	D					D	D
11/29/2018	XX	SWXXXX3F6	D	D	D					D	D
6/6/2019	XX	SWXXXX3H1	134	7.5	21.2					8.5	0.8

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(SPO) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU						
8/15/2019	XX	SWXXXX3HG	D	D	D					D	D						
10/24/2019	XX	SWXXXX409	105	7.8	11.8					7.8	0.9						
6/18/2020	XX	SWXXXX424	D	D	D					D	D						
8/6/2020	XX	SWXXXX42J	I	I	I					I	I						
10/22/2020	XX	SWXXXX45C	I	I	I					I	I						
6/24/2021	XX	SWXXXX477	D	D	D					D	D						
9/23/2021	XX	SWXXXX492	D	D	D					D	D						
6/30/2022	XX	SWXXXX4B4	D	D	D					D	D						
10/20/2022	XX	SWXXXX4D1	65	6.8	10.7					1.6	2.2						
6/8/2023	XX	SWXXXX4F2	F6	F6	F6					F6	F6						
10/19/2023	XX	SWXXXX4IH	745	6.4	12.1					0.7	2.7						
SPON																	
5/12/2005	XX	SWSPON01B	581	7.96	9.7					6.5	9.4						
7/25/2005	XX	SWSPON033	D	D	D					D	D						
11/10/2005	XX	SWSPON04F	674	8.03	2.1					8.7	4.6						
5/2/2006	XX	SWSPON09B	525	7.14	4					7.9	21.6						
8/3/2006	XX	SWSPON07J	1483	7.17	19.4					2	9.1						
10/18/2006	XX	SWSPON067	696	7.62	7.3					5.2	4.8						
5/21/2007	XX	SWSPON0B3	546	6.94	7.1					5.2	2.1						
8/9/2007	XX	SWSPON0CG	D	D	D					D	D						
11/6/2007	XX	SWSPON0E8	395	7.7	3.1					8.2	16.8						
6/11/2008	XX	SWSPON0GG	315	7.32	19					7.1	29.6						
8/19/2008	XX	SWSPON0H0	563	6.93	18.2					4.2	10.5						
10/22/2008	XX	SWSPON104	755	6.72	5.1					5.7	6.2						
5/7/2009	XX	SWSPON124	667	7.43	10.3					6	3.9						
8/12/2009	XX	SWSPON128	462	7.24	17.4					6.1	6.5						
10/27/2009	XX	SWSPON15C	446	6.2	3					10.6	3.1						
6/7/2010	XX	SWSPON17D	291	7.12	13.5					5.66	3						
8/18/2010	XX	SWSPON17I	D	D	D					D	D						
10/21/2010	XX	SWSPON1B2	694	7.18	7.3						1.82						
5/18/2011	XX	SWXXXX1EB	292	7.8	8.3					6	0.6						
8/10/2011	XX	SWXXXX1G2	D	D	D					D	D						
11/2/2011	XX	SWXXXX1HD	878	6.9	5.1					8	1.8						
5/14/2012	XX	SWXXXX1J7	287	7.1	11.3					5	2.4						
8/14/2012	XX	SWXXXX210	F6	F6	F6					F6	F6						
10/29/2012	XX	SWXXXX22E	753	6.7	12.2					6	8.2						
5/21/2013	XX	SWXXXX248	713	6.9	11.9					6	1.1						
7/24/2013	XX	SWXXXX262	412	6.4	19.3					5	2.8						
10/1/2013	XX	SWXXXX27G	709	7	15.9					6	2.6						
6/5/2014	XX	SWXXXX29A	843	7.2	13					3	0.6						
8/21/2014	XX	SWXXXX2B4	626	7.5	15.7					2	4.5						
11/13/2014	XX	SWXXXX2CI	672	7.3	2.3					3	0.8						
6/4/2015	XX	SWXXXX2EE	747	7.1	11					4	0.8						
9/3/2015	XX	SWXXXX2G9	812	7.6	18.8					5	2.2						
11/5/2015	XX	SWXXXX2I3	564	6.9	5.1					5.4	2.6						
6/16/2016	XX	SWXXXX31D	717	7.6	13.7					3.9	6.1						
9/22/2016	XX	SWXXXX337	D	D	D					D	D						
11/10/2016	XX	SWXXXX351	1213	7.8	4.9					9.4	7.8						
6/15/2017	XX	SWXXXX36G	647	7.7	15					5.2	2.1						

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(SPON) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU						
8/31/2017	XX	SWXXXX38A	D	D	D					D	D						
11/16/2017	XX	SWXXXX3A4	1033	7.1	2.6					11.5	1.3						
6/21/2018	XX	SWXXXX3BJ	D	D	D					D	D						
8/16/2018	XX	SWXXXX3CE	D	D	D					D	D						
11/29/2018	XX	SWXXXX3F7	227	7.6	1.2					8.3	0.6						
6/6/2019	XX	SWXXXX3H2	601	7.3	18.1					3.4	0.6						
8/15/2019	XX	SWXXXX3HH	481	7.5	17.5					3	0.8						
10/24/2019	XX	SWXXXX40A	473	7.7	8.5					7.9	1.1						
6/18/2020	XX	SWXXXX425	D	D	D					D	D						
8/6/2020	XX	SWXXXX430	I	I	I					I	I						
10/22/2020	XX	SWXXXX45D	317	7	8.8					9.5	0.6						
6/24/2021	XX	SWXXXX478	D	D	D					D	D						
9/23/2021	XX	SWXXXX493	383	7	16.3					4.4	1.3						
6/30/2022	XX	SWXXXX4B5	523	7.5	15.3					2.4	2.6						
10/20/2022	XX	SWXXXX4D2	314	7	9.2					2.3	0.8						
6/8/2023	XX	SWXXXX4F3	652	7.1	13.2					3	0.6						
10/19/2023	XX	SWXXXX4II	592	6.8	10.2					3.7	0.6						
SPOS																	
5/12/2005	XX	SWSPOS01C	111	8.42	9.9					6.1	0.8						
7/25/2005	XX	SWSPOS034	202	7.83	15.9					6.3	14.9						
11/10/2005	XX	SWSPOS04G	109	8.8	2.5					11.4	1						
5/2/2006	XX	SWSPOS09C	116.8	6.97	6.7					8.2	5.45						
8/3/2006	XX	SWSPOS080	174	7.51	19.1					3	0.9						
10/18/2006	XX	SWSPOS068	143	8.31	7.6					7.7	6.3						
5/21/2007	XX	SWSPOS0B4	102	7.68	7.3					9.7	0.7						
8/8/2007	XX	SWSPOS0CH	140	6.7	17.1					6	3.9						
11/6/2007	XX	SWSPOS0E9	102	7.71	3					12.1	0.8						
6/11/2008	XX	SWSPOS0GH	101	7.25	16					7.6	4.9						
8/19/2008	XX	SWSPOS0H1	195	6.87	17.2					3.6	1.1						
10/22/2008	XX	SWSPOS105	185	7.12	4.5					7.8	0.8						
5/7/2009	XX	SWSPOS125	125.7	6.64	8.9					4.9	0.8						
8/12/2009	XX	SWSPOS129	171	6.9	16.5					3.5	0.8						
10/27/2009	XX	SWSPOS15D	95.1	6.41	3.2					10.5	0.7						
6/7/2010	XX	SWSPOS17E	116	7.22	12.9					7.08	0.97						
8/18/2010	XX	SWSPOS17J	D	D	D					D	D						
10/21/2010	XX	SWSPOS1B3	149.7	7.07	6.5					8.66	0.37						
5/18/2011	XX	SWXXXX1EC	88	7.5	10.3					8	0.4						
8/10/2011	XX	SWXXXX1G3	D	D	D					D	D						
11/2/2011	XX	SWXXXX1HE	127	7.3	5.2					6	0.3						
5/14/2012	XX	SWXXXX1J8	137	7.5	9.7					8	0.3						
8/14/2012	XX	SWXXXX211	F6	F6	F6					F6	F6						
10/29/2012	XX	SWXXXX22F	143	6.9	12					2	3.1						
5/21/2013	XX	SWXXXX249	123	7	7.1					6	1.1						
7/24/2013	XX	SWXXXX263	120	6.4	18.8					5	0.8						
10/1/2013	XX	SWXXXX27H	171	6.9	13.3					6	0.8						
6/5/2014	XX	SWXXXX29B	173	7.2	13.3					4	0.3						
8/21/2014	XX	SWXXXX2B5	166	7.8	16.9					5	1.4						
11/13/2014	XX	SWXXXX2CJ	107	7.3	3.2					4	0.8						
6/4/2015	XX	SWXXXX2EF	132	8	10.5					6.5	0.3						

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(SPOS) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Depth Feet	Water Level Elevation Feet	Water Level Reference Point Feet	Well Depth Feet	Dissolved Oxygen mg/L	Turbidity (field) NTU						
9/3/2015	XX	SWXXXX2GA	233	7.9	17.9					5.6	2.2						
11/5/2015	XX	SWXXXX2I4	97	7.4	4.6					9	1.3						
6/16/2016	XX	SWXXXX31E	D	D	D					D	D						
9/22/2016	XX	SWXXXX338	D	D	D					D	D						
11/10/2016	XX	SWXXXX352	261	8.3	5.3					8.8	0.8						
6/15/2017	XX	SWXXXX36H	172	8.1	16.7					5.8	3.6						
8/31/2017	XX	SWXXXX38B	D	D	D					D	D						
11/16/2017	XX	SWXXXX3A5	155	7.6	3.5					9.4	0.8						
6/21/2018	XX	SWXXXX3C0	191	7.8	20.1					5.3	1.6						
8/16/2018	XX	SWXXXX3CF	172	7.9	21.1					5.4	0.5						
11/29/2018	XX	SWXXXX3F8	135	8.1	1.9					10.5	0.6						
6/6/2019	XX	SWXXXX3H3	111	7.8	20.6					8.1	0.8						
8/15/2019	XX	SWXXXX3HI	169	8.1	19.6					9	1.6						
10/24/2019	XX	SWXXXX40B	106	7.8	9.7					9.2	1.2						
6/18/2020	XX	SWXXXX426	187	7.5	21.3					4.4	0.8						
8/6/2020	XX	SWXXXX431	205	7.9	22.4					6.1	1.3						
10/22/2020	XX	SWXXXX45E	102	6.8	9.5					8.8	0.6						
6/24/2021	XX	SWXXXX479	122	6.9	17.2					6.6	0.9						
9/23/2021	XX	SWXXXX494	113	7.2	18					5.1	0.9						
6/30/2022	XX	SWXXXX4B6	160	7.5	18.9					4.6	0.7						
10/20/2022	XX	SWXXXX4D3	79	7.4	8.9					3.9	0.8						
6/8/2023	XX	SWXXXX4F4	143	7.9	14.3					7	0.5						
10/19/2023	XX	SWXXXX4IJ	342	7.2	12.6					7.4	0.9						
UDLP																	
6/24/2021	XX	LFXXXX47J	788	7.1	16.5					1.5	0.5						
9/23/2021	XX	LFXXXX49F	538	6.6	17.9					1.6	0.6						
6/29/2022	XX	LFXXXX4A1	739	6.6	15.9					2	5.1						
10/20/2022	XX	LFXXXX4DE	567	6.6	13.7					2.1	1.5						
6/8/2023	XX	LFXXXX4DJ	679	6.5	13.4					2.8	1.8						
10/19/2023	XX	LFXXXX4J9	687	6.5	14.6					2	0.4						

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(UDLP)			Specific Conductance	pH	Temperature	Water Level Depth	Water Level Elevation	Water Level Reference Point	Well Depth	Dissolved Oxygen	Turbidity (field)
Date	Type	Sample ID	µmhos/cm @25°C	STU	Deg C	Feet	Feet	Feet	Feet	mg/L	NTU

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

- ! - The sampling location was damaged or destroyed.
- A - The sampling location was inaccessible.
- D - The sampling location was dry.
- D3 - Sample too dark to take reading.
- F - The sampling location was frozen.
- F1 - Well was flowing
- F6 - No flow. Sample not taken.
- I - The sampling location yielded insufficient quantity to collect a sample.
- M7 - No reading taken at this location.
- U - Not Detected above the laboratory reporting limit.
- Z3 - Reference Point (Top of PVC) Changed.

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
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(104B)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
104B																	
4/27/2000	XX	104BXX36643	0.1 U	1 U		102	186	16.5	63.6	41	50.5	2.2	2.6				
8/1/2000	XX	104BXX36739	0.1 U	1 U		95	1	17.9	39.5	47	50.5	1 U	3.9				
10/24/2000	XX	104BXX36823	0.1 U	1 U		92	1	17	29.7	48	50.5	1 U	2.4				
5/8/2001	XX	104BXX37019	0.1 U	1.5		91	5	17.4	29.9	48	51	1 U	2.6				
7/24/2001	XX	104BXX37096	0.1 U	1 U		95	1 U	18.2	32.2	47	50	1 U	2				
10/16/2001	XX	104BXX37180	0.1 U	1 U		89	1	16.4	31.5	46	50	1 U	2.9				
5/15/2002	XX	104BXX37391	0.1 U	1 U		78	1 U	18.7	31.3	42	46	1 U	1.5				
7/29/2002	XX	104BXX37466	0.1 U	1 U		100	1	17.9	32.5	48	50	1 U	2.2				
10/15/2002	XX	104BXX37544	0.1 U	1 U		88	1 U	18.2	29.2	40	42	1 U	2.4				
6/19/2003	XX	104BXX37791	0.2 U	2 U		80	1 U	18	73	44	51	1 U	2 U				
8/5/2003	XX	104BXX37838	0.2 U	2 U		82	1 U	16	68	48	50	1 U	2 U				
10/7/2003	XX	104BXX37901	0.2 U	2 U		75	1 U	17	62	44	50	1	2 U				
4/26/2004	XX	104BXX38103	0.2 U	0.5 U		34	1 U	18	71	44	50	1	2.7				
8/9/2004	XX	104BXX38208	0.2 U	2 U		82	1 U	16	62	47	49	1 U	3				
10/11/2004	XX	104BXX38271	0.2 U	2 U		78	1 U	16	65	46	49	1 U	3				
5/24/2005	XX	GW104B005	0.29	2 U		91	1 U	18	57	46	48	1 U	2				
8/1/2005	XX	GW104B01H	0.2 U	2 U		140	1 U	15	59	42	46	1 U	2 U				
10/25/2005	XX	GW104B039	0.2 U	2 U		79	1 U	16	67	49	51	1 U	2 U				
5/10/2006	XX	GW104B085	0.2 U	2 U		70	1 U	18	75	44	47	1 U	2 U				
7/24/2006	XX	GW104B06D	0.2 U	2 U		77	1 U	18	70	50	50	1 U	2 U				
10/10/2006	XX	GW104B051	0.2 U	2 U		88	1 U	16	65	51	52	1 U	2 U				
5/10/2007	XX	GW104B09H	0.9	0.5 U		98	1 U	15	64	52	54	1 U	2 U				
8/6/2007	XX	GW104B0BA	0.2 U	0.5 U		78	1 U	15	70	46	47	1.8	2 U				
10/24/2007	XX	GW104B0D2	0.2 U	0.5 U		100	1 U	16	62	37	37	1 U	2 U				
10/24/2007	XD	GWDP2X0EJ	0.2 U	0.5 U		110	1 U	16	64		49	1 U	2 U				
5/28/2008	XX	GW104B0FA	0.2 U	0.5 U		140	1 U	17	65	53	53	1 U	2 U				
8/11/2008	XX	GW104B0HA	0.2 U	0.5 U		79	1 U	15	54	49	50	1 U	2 U				
10/15/2008	XX	GW104B0II	0.2 U	0.5 U		110	1 U	17	57	48	49	1 U	2 U				
10/15/2008	XD	GWDP1X106	0.2 U	0.5 U		100	1 U	17	57		49	1 U	2 U				
5/6/2009	XX	GW104B10I	0.2 U	0.5 U		120	0.6 U	18	54	50	50	1 U	2 U				
8/4/2009	XX	GW104B12I	0.2 U	0.5 U		100	2 U	17	51	49	50	1 U	2 U				
10/19/2009	XX	GW104B146	0.2 U	0.5 U		35	1 U	18	59	48	49	1 U	2 U				
5/25/2010	XX	GW104B167	0.2 U	0.5 U		91	1 U	15	57	49	49	1 U	2 U				
5/25/2010	XD	GWDP1X15J	0.2 U	0.5 U		98	1 U	15	57		49	1 U	2 U				
8/2/2010	XX	GW104B188	0.2 U	0.5 UH		87	1.1 U	17	57	50	50	1 U	2 U				
10/12/2010	XX	GW104B19G	0.2 U	0.5 U		110	1.1 U	17	58	49	50	1 U	2 U				
5/16/2011	XX	GW104B1DI	0.2 U	0.5 U		96	5 U	18	59	48	48	1 U	2 U				
5/16/2011	XD	GWXXXX1EG	0.2 U	0.5 U		80	5 U	17	59	47	47	1 U	2 U				
8/9/2011	XX	GW104B1F9	0.08 U	0.2 U		79	0.46 U	17	59	50	50	0.57 J	1.3 J				
11/3/2011	XX	GW104B1H0	0.082 U	0.2 U		80	0.32 U	17	57	51	51	0.82 J	1.2 J				
11/3/2011	XD	GWDP2X1HJ	0.082 U	0.2 U		56	0.32 U	17	51	50	50	0.63 J	1.2 U				
5/14/2012	XX	GW104B1IE	0.2 U	0.5 U		64	2.5 U	15	57	47	47	1 U	2 U				
5/14/2012	XD	GWXXXX1JC	0.2 U	0.5 U		70	2.5 U	16	59	47	47	1 U	2 U				
8/14/2012	XX	GW104B207	0.2 U	0.25 U		74	2.5 U	15	52	46	46	1 U	1				
8/14/2012	XD	GWDP1X215	0.2 U	0.25 U		82	2.7 U	15	51	48	48	1 U	1				
10/31/2012	XX	GW104B221	0.2 U	0.25 U		140	2.5 U	15	59	43	43	0.64	1				
5/22/2013	XX	GW104B23F	0.2 U	0.25 U		90	2.5 U	17	54	51	51	0.76	1.1				
5/22/2013	XD	GWDP3X24F	0.2 U	0.25 U		88	2.5 U	16	42	48	48	0.67	1.2				

DATA SUMMARY TABLE

Inorganics

SME SEVEE & MAHER ENGINEERS
SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(104B) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
7/23/2013	XX	GW104B259	0.2 U	0.25 U		85	2.5 U	16	62	51	51	0.6	1.1				
10/1/2013	XX	GW104B273	0.2 U	0.25 U		75	2.5 U	17	57	49	49	0.5 U	1.1				
6/4/2014	XX	GW104B28H	0.16	0.05 U		100	4 U	18	61.4	48	48	1 U	2.9				
6/4/2014	XD	GWDP3X29H	0.1 U	0.05 U		99	4 U	18	61.8	47	47	1 U	3.7				
8/19/2014	XX	GW104B2AB	0.1 U	0.05 U		97	4 U	17	63.1	50	50	1 U	2.6				
11/12/2014	XX	GW104B2C5	0.1 U	0.05 U		92	4 U	17	58.8	53	53	1 U	2 U				
6/3/2015	XX	GW104B2E1	0.1 U	0.05 U		90	4 U	16	58.3	47	47	1 U	2.5				
6/3/2015	XD	GWDP3X2F1	0.1 U	0.05 U		96	4 U	16	56.8	48	48	1 U	2.6				
9/2/2015	XX	GW104B2FG	0.1 U	0.074		87	4 U	16	63.5	49	49	1 U	2 U				
11/4/2015	XX	GW104B2HA	0.1 U	0.05 U		100	4 U	16	60.4	50	50	1 U	2				
6/14/2016	XD	GWDP3X320	0.1 U	0.088		94	4 U	17	62	46	46	1 U	3.4				
6/14/2016	XX	GW104B310	0.1 U	0.092		110	4 U	17	59.6	50	50	1 U	2 U				
9/20/2016	XX	GW104B32E	0.1 U	0.05 U		100	4 U	18	62.2	53	53	1 U	2.4				
11/8/2016	XX	GW104B348	0.1 U	0.05 U		94	4 U	19	63	57	57	1 U	2.5				
6/14/2017	XD	GWDP3X373	0.1 U	0.092		82	4 U	23	63.2	44	44	1 U	2.9				
6/14/2017	XX	GW104B363	0.1 U	0.11		66	4 U	18	62.2	49	49	1 U	3.1				
8/30/2017	XX	GW104B37H	0.1 U	0.065		100	4 U	17	62.2	49	49	1 U	2.6				
11/15/2017	XX	GW104B39B	0.1 U	0.05 U		85	4 U	16	62.2	52	52	1 U	2 U				
6/19/2018	XD	GWDP3X3C6	0.1 U	0.095		110	4 U	18	56.3	55	55	1 U	2 U				
6/19/2018	XX	GW104B3B6	0.1 U	0.096		110	4 U	18	60.6	52	52	1 U	2.2				
8/14/2018	XX	GW104B3DF	0.1 U	0.089		110	4 U	18	61.1	51	51	1 U	2 U				
11/27/2018	XX	GW104B3EE	0.1 U	0.05 U		87	4 U	19	64.2	53	53	1 U	3.2				
6/4/2019	XD	GWDP3X3H9	0.1 U	0.092		120	4 U	18	61.3	53	53	1 U	2 U				
6/4/2019	XX	GW104B3G9	0.1 U	0.092		100	4 U	18	66.8	54	54	1 U	2 U				
8/14/2019	XX	GW104B3II	0.1 U	0.076		120	4 U	18	63.5	53	53	1 U	3.4				
10/22/2019	XX	GW104B3JH	0.1 U	0.082		130	4 U	17	62.5	50	50	1 U	2.3				
6/16/2020	XD	GWDP3X42C	0.1 U	0.096		100	4 U	14	61.8	56	56	1 U	2 U				
6/16/2020	XX	GW104B41C	0.1 U	0.063		100	4 U	15	62.3	53	53	1 U	2 U				
8/4/2020	XX	GW104B441	0.1 U	0.06		53	4 U	14		53	53	1 U	2 U				
8/4/2020	XX	GW104B441R							68.7								
10/20/2020	XX	GW104B450	0.1 U	0.05 U		98	4 U	15	63.5	52	52	1 U	2 U				
6/22/2021	XD	GWDP3X47F	0.1 U	0.05 U		100	4 U	18	66.6	56	56	1 U	2 U				
6/22/2021	XX	GW104B46F	0.1 U	0.057		99	4 U	17	64.4	53	53	1 U	2 U				
9/21/2021	XX	GW104B48A	0.1 U	0.05 U		87	13	17	60.8	58	58	1 U	2 U				
6/28/2022	XD	GWDP3X4BC	0.1 U	0.05 U		83	4 U	21	66.7	54	54	1 U	2 U				
6/28/2022	XX	GW104B4AC	0.1 U	0.05 U		82	4 U	20	66.7	56	56	1 U	2 U				
10/18/2022	XX	GW104B4C9	0.1 U	0.05 U				18	67.4	55	56	1 U	2 U				
10/18/2022	XX	GW104B4C9RR				57 H	9.6 H										
6/6/2023	XD	GWDP3X4FA	0.1 U	0.05 U		96	81	18	71.1	57	57	1 U	2 U				
6/6/2023	XX	GW104B4EA	0.1 U	0.05 U		95	32	19	67.8	52	52	1 U	2 U				
10/17/2023	XX	GW104B4I5	0.1 U	0.05 U		89	8.8	17	61.6	54	54	1 U	2 U				
107A																	
5/3/2000	XX	107AXX36649	0.1 U	2		757	43	12.9	642.7	440	526.2	12.9	105				
8/10/2000	XX	107AXX36748	0.1 U	1.3		621	1	10.4	487	350	452.5	6.3	75.2				
11/9/2000	XX	107AXX36839	0.1 U	1.5		524	3	8	359.1	398	404	6.1	82.1				
5/16/2001	XX	107AXX37027	0.1 U	2		703	1	12.7	522.5	440	470	9.6	111				
8/1/2001	XX	107AXX37104	0.1 U	1.4		1324	5	11.2	1068	1000	1020	23.3	151.4				
10/24/2001	XX	107AXX37188	0.1 U	1.7		1834	7	11.4	1548.1	1429	1440	33.4	222				
5/22/2002	XX	107AXX37398	0.1 U	1.85		1811	6	15.4	1466.7	1210	1378	62.6	193				

DATA SUMMARY TABLE

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(107A)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
8/2/2002	XX	107AXX37470	0.1 U	1.8		1831	3	10	1316	1320	1428	34.8	186.4				
10/23/2002	XX	107AXX37552	0.1 U	1 U		1360	3	14.6	1071.3	1100	1148	24.7	118.4				
6/24/2003	XX	107AXX37796	0.2 U	2 U		1400	2	11	1200	1000	1100	24	140				
8/13/2003	XX	107AXX37846	0.2 U	2 U		1300	1	9.1	1000	970	1000	21	110				
10/16/2003	XX	107AXX37910	0.2 U	2 U		1100	1 U	9.5	1000	900	950	18	98				
5/13/2004	XX	107AXX38120	0.2 U	2 U		540	1 U	8.4	600	420	450	6.5	47				
8/2/2004	XX	107AXX38201	0.2 U	2 U		440	1 U	9.6	420	405	430	6	36				
10/19/2004	XX	107AXX38279	0.2 U	2 U		480	1 U	9.8	460	420	460	5.6	45				
5/10/2005	XX	GW107A006	0.2 U	2 U		910	1 U	10	810	500	550	6.5	100				
7/27/2005	XX	GW107A01I	0.2 U	2 U		910	1 U	9.5	850	615	690	11	93				
10/27/2005	XX	GW107A03A	0.2 U	2 U		610	3	8.8	640	530	620	7.1	57				
5/3/2006	XX	GW107A086	0.2 U	2 U		340	1 U	7.7	410	350	370	4	26				
8/1/2006	XX	GW107A06E	0.24	2 U		300	1 U	8.6	310	270	290	3.2	17				
10/25/2006	XX	GW107A052	0.2 U	2 U		280	1 U	8.4	200	240	260	2.9	14				
5/8/2007	XX	GW107A09I	0.5 U	0.5 U		310	1 U	7.5	290	290	310	1.5	15				
5/8/2007	XD	GWDP3X0EC	0.5 U	0.5 U		290	1 U	7.4	270		310	1.5	15				
8/7/2007	XX	GW107A0BB	0.2 U	0.5 U		430	1.2	6.5	340	280	320	11	22				
10/31/2007	XX	GW107A0D3	0.2 U	0.5 U		510	1 U	6.9	480	390	420	6.3	48				
5/28/2008	XX	GW107A0FB	0.2 U	0.5 U		500	1 U	8.4	430	360	380	5.1	41				
8/18/2008	XX	GW107A0HB	0.2 U	0.5 U		440	1 U	7.3	310	350	380	5.5	22				
10/23/2008	XX	GW107A0IJ	0.2 U	0.5 U		330	1 U	7	310	270	290	5.2	23				
5/12/2009	XX	GW107A10J	0.2 U	0.5 U		300	0.6 U	6.9	240	250	270	3.9	15				
5/12/2009	XD	GWDP3X10C	0.2 U	0.5 U		300	0.6 U	7	260		270	2.2	15				
8/11/2009	XX	GW107A12J	0.2 U	0.5 U		320	0.6 U	7.4	270	270	290	4.2	17				
10/26/2009	XX	GW107A147	0.2 U	0.5 U		400	1 U	6.4	260	270	290	4.3	37				
6/2/2010	XX	GW107A168	0.2 U	0.5 U		310	1 U	6.2	290	245	260	6.1	20				
8/5/2010	XX	GW107A189	0.2 U	0.5 U		360	1.1 U	5.9	300	290	320	4.2	25				
8/5/2010	XD	GWDP3X182	0.2 U	0.5 U		360	1 U	6	310		320	2.7	25				
10/18/2010	XX	GW107A19H	0.2 U	0.5 U		580	1.2 U	6.7	390	450	480	13	57				
5/18/2011	XX	GW107A1D8	0.2 U	0.5 U		680	5 U	7.3	440	550	550	16	83				
8/9/2011	XX	GW107A1EJ	0.08 U	0.2 U		450	0.7 J	6	260	380	380	9	40				
11/2/2011	XX	GW107A1GA	0.082 U	0.2 U		410	0.32 U	6	300	360	360	6.9	36				
5/17/2012	XX	GW107A1I4	0.2 U	0.09 U		418	2.5 U	6.4	380	420	420	6.81	54				
8/14/2012	XX	GW107A1JH	0.2 U	0.25 U		720	2.6 U	5	430	590	590	11.1	60				
10/31/2012	XX	GW107A21B	0.2 U	0.25 U		680	2.5 U	4.9	490	540	540	9.3	62				
5/21/2013	XX	GW107A235	0.2 U	0.25 U		740	2.5 U	6.2	510	580	580	10	77				
7/22/2013	XX	GW107A24J	0.2 U	0.25 U		710	2.5 U	5.8	440	500	500	7.6	58				
10/1/2013	XX	GW107A26D	0.2 U	0.25 U		580	2.5 U	5.4	390	500	500	6.8	45				
6/4/2014	XX	GW107A287	0.1 U	0.05 U		320	4 U	12	222	250	250	1.7	24				
8/19/2014	XX	GW107A2A1	0.1 U	0.05 U		680	4.8	8.1	386	560	560	6.6	47				
11/12/2014	XX	GW107A2BF	0.16	0.05 U		780	4 U	6.5	465	560	560	8	47				
6/3/2015	XX	GW107A2DB	0.1 U	0.05 U		540	4 U	7.3	509	430	430	13	72				
9/2/2015	XX	GW107A2F6	0.1	0.05 U		710	4 U	6.9	476	590	590	11	46				
11/4/2015	XX	GW107A2H0	0.11	0.05 U		780	4 U	1 U	536	670	670	11	45				
6/15/2016	XX	GW107A30A	0.1 U	0.05 U		420	4 U	6.6	315	330	330	4.1	19				
9/20/2016	XX	GW107A324	0.63	0.05 U		420	4 U	6.6	299	360	360	5.2	18				
11/8/2016	XX	GW107A33I	2.2	0.05 U		510	4 U	3.5	420	540	540	10	32				
6/14/2017	XX	GW107A35D	0.26	0.15		930	4 U	1 U	867	900	900	25	88				
8/29/2017	XX	GW107A377	0.59	0.05 U		930	4	1 U	720	840	840	17	57				

DATA SUMMARY TABLE

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SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
(107A)																	
11/15/2017	XX	GW107A391	1.5	0.05 U		880	4 U	1 U	682	880	880	16	42				
6/19/2018	XX	GW107A3AG	0.17	0.05 U		770	4 U	4.1	476	670	670	12	45				
8/16/2018	XX	GW107A3D5	0.36	0.05 U		670	4 U	2.3	548	660	660	9.5	36				
11/28/2018	XX	GW107A3E4	0.92	0.21		560	4 U	6.2	448	560	570	7.8	27				
6/5/2019	XX	GW107A3FJ	0.1 U	0.22		760	4 U	3.4	419	570	570	6.5	56				
8/14/2019	XX	GW107A3I8	0.21	0.05 U		610	4 U	10	470	540	540	7.9	36				
10/23/2019	XX	GW107A3J7	0.92	0.05 U		540	4 U	6.2	474	500	500	7.6	24				
6/17/2020	XX	GW107A412	0.35	0.05 U		580	4 U	5.8	399	570	570	7.2	39				
8/4/2020	XX	GW107A43B	0.6	0.05 U		530	4 U	7.3		520	520	6.7	28				
8/4/2020	XX	GW107A43BR							445								
10/22/2020	XX	GW107A44A	5.6	0.05 U		930	4 U	1 U	780	1000	1000	21	54				
6/22/2021	XX	GW107A465	2.2	0.05 U		860	4 U	1 U	626	930	930	13	46				
9/21/2021	XX	GW107A480	3.2	0.05 U		1100	5.6	1 U	783	1100	1100	18	54				
6/29/2022	XX	GW107A4A2	4.9	0.05 U		910	4 U	2 U	864	920	920	18	50				
10/20/2022	XX	GW107A4BJ	3.2	0.05 U		890		1 U	733	830	830	13	39				
10/20/2022	XX	GW107A4BJRR					6.4										
6/6/2023	XX	GW107A4E0	0.41	0.6		540	6.4	5.1	496	540	540	9.8	34				
10/17/2023	XX	GW107A4HF	1	0.2		460	5.6	4	404	480	480	11	23				
202AR																	
4/27/2000	XX	202ARXX36643	2.42	2.2		1046	17	7	984.8	820	985.8	15.1	38.4				
8/2/2000	XX	202ARXX36740	2.21	1.7		1095	4	7.5	998.6	920	1056.5	14.7	35.6				
10/24/2000	XX	202ARXX36823	1.22	2.7		1043	3	6	933.3	950	1090.8	18.2	38.1				
5/9/2001	XX	202ARXX37020	1.69	2.7		1128	2	7.9	944.2	1000	1060	14.1	41.2				
7/24/2001	XX	202ARXX37096	0.784	1 U		1142	2	7.5	946.8	1020	1075	13.6	27.9				
10/16/2001	XX	202ARXX37180	1.37	1 U		1176	2	2.5	1126	1105	1110	12.6	37.7				
5/16/2002	XX	202ARXX37392	1.28	1 U		1135	1	9.9	1061.2	990	1060	13	38.8				
7/31/2002	XX	202ARXX37468	2.02	1 U		1118	3	9.7	469.3	952.5	1036	15.2	28.9				
10/16/2002	XX	202ARXX37545	2.14	1 U		1129	5	12.5	943.4	1000	1064	14.9	34.2				
6/17/2003	XX	202ARXX37789	2.8	2 U		1100	2	10	1100	960	1000	11	34				
8/6/2003	XX	202ARXX37839	2.6	2 U		1000	2	8.6	1100	970	1000	15	24				
10/8/2003	XX	202ARXX37902	2.8	2 U		1100	2	9.4	1100	920	1000	14	27				
4/28/2004	XX	202ARXX38105	1.8	2 U		1100	1 U	8.5	1200	920	960	14	33				
8/11/2004	XX	202ARXX38210	4.1	2 U		950	3	8.4	1000	930	1000	14	26				
10/12/2004	XX	202ARXX38272	3.6	2 U		1000	1 U	7.2	1100	920	1000	21	23				
5/19/2005	XX	GW202A009	3.8	2 U		1100	7	7.7	950	900	980	10	31				
8/4/2005	XX	GW202A021	4.3	2 U		1000	1 U	6.6	890	98	100	11	23				
10/25/2005	XX	GW202A03D	3.3	2 U		1000	6	6.4	1100	940	1000	13	26				
5/9/2006	XX	GW202A089	1.4	2 U		1000	8.5	6.6	1700	1000	1000	13	27				
7/25/2006	XX	GW202A06H	3.6	2 U		1000	2.6	6.3	1300	820	860	13	21				
10/19/2006	XX	GW202A055	3.8	2 U		1000	1.7	5.3	1000	960	1000	12	22				
5/10/2007	XX	GW202A0A1	3.6	0.5 U		1000	3.1	5.1	1100	1040	1100	8.4	25				
8/6/2007	XX	GW202A0BE	4.8	0.5 U		1000	1.8	4.4	1200	960	1000	47	23				
10/25/2007	XX	GW202A0D6	2	0.5 U		1000	3.7	5.4	1400	920	1000	18	24				
5/29/2008	XX	GW202A0FE	2.1	0.5 U		990	1 U	5.3	1000	920	1000	11	23				
8/12/2008	XX	GW202A0HE	1.9	0.5 U		1000	1.4	5.5	950	920	1000	15	19				
8/12/2008	XD	GWDP1X0H2	1.8	0.5 U		1000	1.1	5.4	900		1000	15	20				
10/16/2008	XX	GW202A0J2	1.7	0.5 U		950	1.9	5.6	830	950	990	11	21				
5/4/2009	XX	GW202A112	2.9	0.5 U		1000	0.6 U	5.3	1200	940	1000	19	23				
8/5/2009	XX	GW202A132	2.8	0.5 U		1100	2 U	5.2	1300	920	1000	14	24				

(202AR)			Ammonia (N)	Nitrate (N)	Total Phosphorus	Total Dissolved Solids	Total Suspended Solids	Sulfate	Ca-mg Hardness (CaCO3)	Bicarbonate Alkalinity (CaCO3)	Alkalinity (CaCO3)	Organic Carbon	Chloride				
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L				
8/5/2009	XD	GWDP1X12A	2.7	0.5 U		1100	2	4.9	1300		1000	18	23				
10/20/2009	XX	GW202A14A	2.2	0.5 U		980	1.9	4.7	840	910	970	19	23				
5/26/2010	XX	GW202A16B	2.4	0.5 U		890	1.8	4	1100	880	920	11	19				
8/2/2010	XX	GW202A18C	2.3	0.5 UH		930	1.4	4.2	1000	920	980	15	22				
10/12/2010	XX	GW202A1A0	2.8	0.5 U		970	1.7	4.5	860	920	990	19	23				
5/17/2011	XX	GW202A1DJ	2.1	0.5 U		990	5 U	3.8	920	920	920	20	26				
8/10/2011	XX	GW202A1FA	2.7	0.2 U		910	2.4 J	5.2	870	920	920	16	23				
8/10/2011	XD	GWDP1X1G7	2.6	0.2 U		890	2.8 J	4.3	860	950	950	16	22				
11/3/2011	XX	GW202A1H1	2.9	0.2 U		960	2.7	5.8	820	990	990	16	22				
5/16/2012	XX	GW202A1IF	2.6	0.5 U		940	2.5 U	1 U	820	860	860	11.1	20				
8/15/2012	XX	GW202A208	2.9	0.25 U		920	2.5 U	4.3	770	890	890	12.4	17				
10/31/2012	XX	GW202A222	3.4	0.25 U		940	2.5	4.1	840	960	960	12	18				
5/20/2013	XX	GW202A23G	2.7	0.25 U		950	2.5 U	4.4	780	930	930	11	18				
7/23/2013	XX	GW202A25A	2.9	0.25 U		920	2.5 U	4.2	790	890	890	10	16				
10/2/2013	XX	GW202A274	3.1	0.25 U		910	2.6	4.3	790	930	930	10	16				
6/3/2014	XX	GW202A28I	3.4	0.05 U		940	4 U	1 U	818	890	890	8.9	18				
8/19/2014	XX	GW202A2AC	3.8	0.05 U		940	4 U	1 U	812	910	910	9	17				
11/12/2014	XX	GW202A2C6	4.1	0.05 U		950	4 U	1 U	846	940	940	9.1	18				
6/2/2015	XX	GW202A2E2	3.3	0.05 U		960	4.8	1 U	813	880	880	8.9	22				
9/2/2015	XX	GW202A2FH	3.6	0.05 U		910	4 U	1 U	864	870	870	9.8	18				
11/3/2015	XX	GW202A2HB	3.5	0.05 U		950	4 U	1.6	839	930	930	9.6	18				
6/14/2016	XX	GW202A311	3.1	0.05 U		900	4.4	1 U	815	830	830	7.5	17				
9/22/2016	XX	GW202A32F	3.5	0.05 U		900	4 U	1 U	800	810	810	8.6	18				
11/9/2016	XX	GW202A349	3.5	0.05 U		840	4 U	1 U	818	900	900	9.7	16				
6/13/2017	XX	GW202A364	3.6	0.05 U		920	4 U	1 U	822	870	870	9.4	18				
8/30/2017	XX	GW202A37I	3.7	0.05 U		900	4 U	1 U	801	880	880	8.9	16				
11/16/2017	XX	GW202A39C	3.5	0.05 U		860	4 U	1 U	822	830	830	8.6	17				
6/20/2018	XX	GW202A3B7	3.5	0.05 U		920	4 U	1 U	849	900	900	8.8	18				
8/14/2018	XX	GW202A3DG	3.6	0.05 U		920	4 U	1.1	802	890	890	8.9	16				
6/4/2019	XX	GW202A3GA	3.5	0.05 U		950	4 U	1 U	804	860	860	9.2	15				
8/13/2019	XX	GW202A3IJ	3.4	0.05 U		880	4 U	1 U	802	910	910	9.4	18				
10/24/2019	XX	GW202A3JI	3.2	0.05 U		860	5.6	1 U	784	850	850	9.5	15				
6/16/2020	XX	GW202A41D	3	0.05 U		920	4 U	1 U	795	940	940	9.3	15				
8/5/2020	XX	GW202A442	3.2	0.05 U		850	4.4	2.1	874	860	860	9.5	15				
10/22/2020	XX	GW202A451	3.6	0.05 U		880	4 U	1 U	864	870	870	9.8	14				
6/23/2021	XX	GW202A46G	3	0.82		900	4 U	1 U	846	900	900	10	16				
9/23/2021	XX	GW202A48B	3.5	0.05 U		820	4 U	1 U	794	910	910	9.8	15				
6/28/2022	XX	GW202A4AD	4.2	0.05 U		850	4 U	4.6	849	860	860	9.5	17				
10/19/2022	XX	GW202A4CA	3.5	0.05 U			4.4	1 U	889	870	870	8.7	16				
10/19/2022	XX	GW202A4CARR				840											
6/7/2023	XX	GW202A4EB	3.7	0.05 U		860	4 U	1 U	904	900	910	19	18				
10/19/2023	XX	GW202A4I6	4	0.05 U		860	4 U	1 U	843	910	910	23	15				
202B & 202BR																	
4/27/2000	XX	202BXX36643	1.9	1.4		538	247	6.7	478.6	410	474.7	10.4	20.6				
8/2/2000	XX	202BXX36740	3	1.7		986	7	7	840.3	810	923.1	19.2	35.5				
10/24/2000	XX	202BXX36823	2.52	2.8		1241	56	5.5	962.4	1100	1196.9	24.6	55.3				
5/9/2001	XX	202BXX37020	1.35	2.2		752	6	8.2	599.7	660	692.5	13.4	33.9				
7/25/2001	XX	202BXX37097	0.424	1 U		1200	10	5.8	1001.5	1130	1130	15.2	37.5				
10/16/2001	XX	202BXX37180	1.04	3.2		1021	8	14.4	779.5	904	910	11.8	42.2				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(202B & 202BR)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
5/16/2002	XX	202BXX37392	1.15	1 U		695	1	9.1	648.8	530	635	10.1	28.3				
7/31/2002	XX	202BXX37468	1.71	1 U		1008	1	15.2	879.5	847.5	916	17.2	33.5				
10/16/2002	XX	202BXX37545	1.47	1.7		1039	15	17.3	893.2	850	952	17.2	37.8				
6/17/2003	XX	202BXX37789	2	2 U		670	20	10	350	590	640	11	23				
8/6/2003	XX	202BXX37839	2.1	2 U		820	1 U	12	930	720	750	15	23				
10/8/2003	XX	202BXX37902	2.8	4.4		920	1 U	12	860	780	830	16	27				
4/28/2004	XX	202BXX38105	1.8	2 U		630	1 U	8.9	730	540	560	11	22				
8/11/2004	XX	202BXX38210	4.6	2 U		870	1 U	9.7	990	880	960	17	30				
10/12/2004	XX	202BXX38272	4.9	2 U		1000	1 U	9	1100	920	1000	33	31				
5/19/2005	XX	GW202B00A	2.6	2 U		510	4	6.5	530	440	480	7.1	15				
8/4/2005	XX	GW202B022	4	2 U		770	22	8	720	680	710	13	9.4				
10/25/2005	XX	GW202B03E	2.3	2 U		660	22	7.2	580	680	730	12	25				
5/9/2006	XX	GW202B08A	0.2 U	2 U		500	5	5.7	590	470	500	10	14				
7/25/2006	XX	GW202B06I	3.8	2 U		560	21	6.2	690	540	570	11	17				
10/19/2006	XX	GW202B056	2.8	2 U		810	43	6	830	780	810	14	22				
5/10/2007	XX	GW202B0A2	2.2	0.5 U		500	17	4.3	490	520	550	4.9	12				
5/10/2007	XD	GWDP1X0EA	2.4	0.5 U		510	51	4.4	480		540	4.6	12				
8/6/2007	XX	GW202B0BF	5.4	0.5 U		770	540	4.9	800	740	770	47	21				
10/25/2007	XX	GW202B0D7	1.2	1.2		680	32	6.4	640	640	680	14	20				
5/29/2008	XX	GW202B0FF	1.6	0.5 U		440	9.7	5.3	460	440	460	12	9.6				
8/26/2008	XX	GW202B0HF	1.8	0.5 U		470	19	4.9	410	460	490	8.1	11				
10/16/2008	XX	GW202B0J3	1.9	0.5 U		640	22	5.8	490	640	670	16	18				
5/4/2009	XX	GW202B113	2.1	10		480	41	33	580	430	460	9	44				
8/5/2009	XX	GW202B133	2.4	0.5 U		490	9.6	4.3	630	450	480	8.6	12				
10/20/2009	XX	GW202B14B	1.9	0.5 U		640	1 U	5.4	480	660	700	16	21				
5/26/2010	XX	GW202B16C	1.9	0.5 U		490	12	4.3	490	470	500	12	13				
8/2/2010	XX	GW202B18D	2.7	0.5 UH		680	46	4.8	170	670	700	13	19				
10/12/2010	XX	GW202B1A1	0.2 U	2.6		570	2.8	4.9	440	480	500	12	15				
5/17/2011	XX	GW202B1E0	1.1	0.5 U		380	4.2 U	4.7	240	370	370	7.5	9.6				
8/10/2011	XX	GW202B1FB	2.1	0.2 U		690	4.6	7.6	550	720	720	15	22				
11/3/2011	XX	GW202B1H2	1.8	0.2 U		480	4.2	6.5	420	500	500	11	11				
5/16/2012	XX	GW202B1IG	1.5	0.5 U		390	5	4.9	360	400	400	5.66	7.7				
8/15/2012	XX	GW202B209	2.3	0.25 U		650	2.5 U	5.7	580	660	660	10.5	15				
10/31/2012	XX	GW202B223	1.2	0.25 U		380	8.8	3.8	400	400	400	8.4	8.3				
5/20/2013	XX	GW202B23H	1.4	0.25 U		430	14	4.3	350	420	420	5.9	8.3				
7/23/2013	XX	GW202B25B	1.8	0.25 U		460	19	4.4	400	480	480	6.7	9.6				
10/2/2013	XX	GW202B275	2.3	0.25 U		550	4.5	4.5	410	580	580	7.4	12				
6/3/2014	XX	GW202B28J	2	0.05 U		490	16	4	383	460	460	4.6	12				
8/19/2014	XX	GW202B2AD	3.3	0.05 U		760	84	1 U	644	730	730	8.5	17				
11/12/2014	XX	GW202B2C7	2.1	1.2		710	12	1.7	624	700	700	7.7	18				
6/2/2015	XX	GW202B2E3	1.7	0.05 U		440	26	6.2	347	390	390	4	10				
9/2/2015	XX	GW202B2FI	3.3	0.05 U		760	29	3.3	694	710	710	9.8	17				
11/3/2015	XX	GW202B2HC	2.7	0.1		620	10	1.2	562	600	600	7.3	15				
6/14/2016	XX	GW202B312	1.8	0.05 U		480	8	3.3	404	410	410	4.4	10				
9/22/2016	XX	GW202B32G	I	I		I	I	I	I	I	I	I	I				
11/9/2016	XX	GW202B34A	I	I		I	I	I	I	I	I	I	I				
6/13/2017	XX	GW202B365	1.6	0.05 U		560	5.6	8.4	472	480	480	5.4	13				
8/30/2017	XX	GW202B37J	I	I		I	I	I	I	I	I	I	I				
11/16/2017	XX	GW202B39D	1.9	0.16		720	14	15	673	670	670	9.2	17				

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(202B & 202BR)			Ammonia (N)	Nitrate (N)	Total Phosphorus	Total Dissolved Solids	Total Suspended Solids	Sulfate	Ca-mg Hardness (CaCO3)	Bicarbonate Alkalinity (CaCO3)	Alkalinity (CaCO3)	Organic Carbon	Chloride				
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L				
6/20/2018	XX	GW202B3B8	2	0.05 U		550	17	19	398	510	510	5.2	13				
8/14/2018	XX	GW202B3DH	2.9	0.35		780	4 U	27	675	730	730	7.5	14				
11/27/2018	XX	GW202B3EG	2.2	0.14		710	13	23	674	690	700	8	17				
6/4/2019	XX	GW202B3GB	1.5	0.05 U		390	8.8	15	320	360	360	3.7	6.5				
8/13/2019	XX	GW202B3J0	2.6	0.052		600	4 U	18	539	610	610	6.9	14				
10/24/2019	XX	GW202B3JJ	2.3	0.24		620	6.8	16	446	570	570	7.3	14				
6/16/2020	XX	GW202B41E	!	!		!	!	!	!	!	!	!	!				
8/5/2020	XX	GW202B443	!	!		!	!	!	!	!	!	!	!				
10/22/2020	XX	GW202B452	!	!		!	!	!	!	!	!	!	!				
6/23/2021	XX	GW202B46H	!	!		!	!	!	!	!	!	!	!				
9/23/2021	XX	GW202B48C	4.5	0.074		950	5.6	1 U	922	1000	1000	14	21				
6/28/2022	XX	GW202B4AE	3.1	0.05 U		510	4 U	8.8	520	530	530	6	11				
10/19/2022	XX	GW202B4CB	3.4	0.05 U		620	4 U	7.3	626	630	630	6.9	17				
6/7/2023	XX	GW202B4EC	2	0.05 U		370	9.2	6	359	400	400	6.7	8.6				
10/19/2023	XX	GW202B4I7	2.2	0.05 U		420	4.4	5.4	389	410	410	10	8.6				
205A																	
4/27/2000	XX	205AXX36643	0.217	1.7		265	6	8.9	222.7	160	189.9	3	30.9				
8/2/2000	XX	205AXX36740	0.348	1.8		435	5	6.4	307.78	280	322.2	4.9	57				
10/25/2000	XX	205AXX36824	0.297	2		351	1	3.1	200.6	230	240.4	4.7	52.8				
5/9/2001	XX	205AXX37020	0.157	3		382	1	6.3	235.2	235	252	5	62.1				
7/25/2001	XX	205AXX37097	0.1 U	1 U		372	1	8.3	249.3	230	253	3.4	48				
10/17/2001	XX	205AXX37181	0.147	1 U		319	1	4.9	237.3	215	222	3.1	54.9				
5/15/2002	XX	205AXX37391	0.184	1 U		510	1 U	5.3	380.9	330	376	5	74.5				
8/1/2002	XX	205AXX37469	0.1 U	1 U		452	3	7.6	292.4	280	309	63.7	53				
10/16/2002	XX	205AXX37545	0.173	1 U		405	3	5.9	274.9	270	296	4.3	59.8				
6/19/2003	XX	205AXX37791	0.42	2 U		460	4	11	480	370	390	5.6	57				
8/20/2003	XX	205AXX37853	0.34	2 U		320	3	8.8	340	290	310	5.2	45				
10/9/2003	XX	205AXX37903	0.29	2 U		240	1 U	9.4	330	230	250	4.9	41				
4/27/2004	XX	205AXX38104	0.2 U	2 U		290	1 U	9.2	400	260	270	7.7	45				
8/12/2004	XX	205AXX38211	0.46	2 U		260	1 U	12	610	190	200	3.9	34				
10/14/2004	XX	205AXX38274	0.2 U	2 U		320	1 U	9.3	330	230	250	6	47				
5/17/2005	XX	GW205A00B	0.34	2 U		95	1 U	10	450	260	290	4.3	48				
8/4/2005	XX	GW205A023	0.55	2 U		390	1 U	10	440	230	250	5.7	38				
10/27/2005	XX	GW205A03F	0.2 U	2 U		320	3.5	8.8	410	280	310	4.5	42				
5/9/2006	XX	GW205A08B	0.2 U	2 U		400	3.5	11	480	340	360	4.4	40				
7/25/2006	XX	GW205A06J	0.3	2 U		540	3	12	580	480	500	5.7	43				
10/23/2006	XX	GW205A057	0.35	2 U		370	2	9.4	330	270	290	3.3	35				
5/14/2007	XX	GW205A0A3	0.2 U	2 U		520	3.5	11	460	480	500	2.2	39				
8/16/2007	XX	GW205A0BG	0.5 U	0.5 U		490	1.7	9	410	380	40	14	37				
8/16/2007	XD	GWDP1X0EE	0.5 U	0.5 U		480	1.8	9.2	380		38	9.8	37				
10/25/2007	XX	GW205A0D8	0.2 U	0.5 U		400	1.9	9.7	400	330	350	4.2	39				
5/29/2008	XX	GW205A0FG	0.2 U	0.5 U		530	1.9	11	510	470	500	7.8	36				
8/12/2008	XX	GW205A0HG	0.2 U	0.5 U		550	2.1	11	450	480	500	4.9	33				
10/16/2008	XX	GW205A0J4	0.2 U	0.5 U		470	1.6	11	410	420	440	5.8	32				
10/16/2008	XD	GWDP2X107	0.2 U	0.5 U		480	2.3	12	410		440	5.3	32				
5/4/2009	XX	GW205A114	0.2 U	10		530	2.9	33	520	425	450	5.8	44				
8/5/2009	XX	GW205A134	0.2 U	0.5 U		530	2 U	11	560	440	470	4.9	33				
10/20/2009	XX	GW205A14C	0.2 U	0.5 U		430	1 U	12	350	360	380	4.6	33				
5/26/2010	XX	GW205A16D	0.2 U	0.5 U		480	1.4	10	480	390	410	5.4	29				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(205A)			Ammonia (N)	Nitrate (N)	Total Phosphorus	Total Dissolved Solids	Total Suspended Solids	Sulfate	Ca-mg Hardness (CaCO3)	Bicarbonate Alkalinity (CaCO3)	Alkalinity (CaCO3)	Organic Carbon	Chloride				
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L				
5/26/2010	XD	GWDP2X160	0.2 U	0.5 U		460	2	9.6	400		410	5	28				
8/3/2010	XX	GW205A18E	0.2 U	0.5 U		430	2.1	11	350	350	360	3.9	33				
10/13/2010	XX	GW205A1A2	0.2 U	0.5 U		360	1.2 U	9.9	240	240	260	2.3	34				
5/17/2011	XX	GW205A1E1	0.2 U	0.5 U		440	4.2 U	10	380	380	380	4.1	35				
8/9/2011	XX	GW205A1FC	0.08 U	0.2 U		450	1.5 J	10	250	380	380	4	39				
11/3/2011	XX	GW205A1H3	0.12 J	0.2 U		390	1.16 J	10	300	330	330	4	35				
5/16/2012	XX	GW205A1IH	0.2 U	0.5 U		320	2.5 U	13	250	240	240	2.15	36				
8/16/2012	XX	GW205A20A	0.2 U	0.25 U		380	2.6 U	9.5	270	290	290	3.09	37				
10/30/2012	XX	GW205A224	0.2 U	0.25 U		300	2.5 U	7.8	260	240	240	2.2	37				
5/20/2013	XX	GW205A23I	0.2 U	0.25 U		320	2.5 U	9.2	210	230	230	1.7	41				
7/23/2013	XX	GW205A25C	0.2 U	0.25 U		340	2.5 U	8.8	240	230	230	2.2	41				
10/2/2013	XX	GW205A276	0.2 U	0.25 U		270	2.5 U	7.8	190	190	190	1.7	41				
6/3/2014	XX	GW205A290	0.24	0.05 U		310	4 U	8.8	188	190	190	1.4	43				
8/19/2014	XX	GW205A2AE	0.32	0.05 U		340	4 U	7.3	234	200	210	1.5	44				
11/12/2014	XX	GW205A2C8	0.34	0.05 U		290	4 U	8.2	216	200	200	1.4	40				
6/2/2015	XX	GW205A2E4	0.18	0.05 U		300	4 U	8.5	211	200	200	1.4	42				
9/2/2015	XX	GW205A2FJ	0.35	0.05 U		270	4 U	7.9	216	190	190	1.5	39				
11/3/2015	XX	GW205A2HD	0.37	0.05 U		250	4 U	8.2	218	190	190	1.5	43				
6/14/2016	XX	GW205A313	0.2	0.05 U		310	4 U	9.5	233	200	200	1.4	44				
9/21/2016	XX	GW205A32H	0.34	0.05 U		280	4 U	8.5	206	170	170	2.1	42				
11/9/2016	XX	GW205A34B	0.32	0.05 U		260	4 U	7.7	220	200	200	2	40				
6/13/2017	XX	GW205A366	0.1 U	0.05 U		340	4 U	10	220	200	200	1.4	40				
8/30/2017	XX	GW205A380	0.19	0.05 U		320	4 U	9.3	228	210	210	1.3	40				
11/16/2017	XX	GW205A39E	0.36	0.05 U		260	4 U	7.7	213	180	180	1.3	41				
6/19/2018	XX	GW205A3B9	0.1 U	0.05 U		340	4 U	11	228	220	220	1.1	40				
8/14/2018	XX	GW205A3DI	0.18	0.05 U		300	4 U	8.9	210	190	190	1.4	44				
11/27/2018	XX	GW205A3EH	0.14	0.075		240	4 U	9.3	199	170	170	1.5	40				
6/4/2019	XX	GW205A3GC	0.1 U	0.05 U		300	4 U	9.4	217	200	200	1.3	38				
8/13/2019	XX	GW205A3J1	0.13	0.05 U		280	4 U	7.9	215	210	210	1.3	41				
10/23/2019	XX	GW205A400	0.29	0.05 U		250	4 U	7.5	212	170	170	1.6	38				
6/16/2020	XX	GW205A41F	0.12	0.05 U		290	4 U	7.4	219	230	230	1.2	38				
8/5/2020	XX	GW205A444	0.13	0.05 U		260	4 U	6.8	225	220	220	1.5	36				
10/20/2020	XX	GW205A453	0.16	0.05 U		270	4 U	7.1	215	180	180	1.3	36				
6/23/2021	XX	GW205A46I	0.1 U	0.13		290	4 U	8.8	217	200	200	2.2	38				
9/22/2021	XX	GW205A48D	0.3	0.05 U		230	4 U	7	189	180	180	1.3	39				
6/28/2022	XX	GW205A4AF	0.3	0.05 U		250	4 U	8.1	209	190	190	1.2	37				
10/18/2022	XX	GW205A4CC	0.51	0.05 U		220		7.2	191	160	160	1.5	2 U				
10/18/2022	XX	GW205A4CCRR					4 UH										
6/7/2023	XX	GW205A4ED	0.15	0.05 U		540	4 U	8.2	217	190	190	1.9	34				
10/18/2023	XX	GW205A4I8	0.49	0.05 U		250	4 U	6.6	198	190	190	3.4	36				
205B																	
4/27/2000	XX	205BXX36643	0.1 U	1.3		215	36	11.5	184.1	150	172.7	2.3	3.5				
8/2/2000	XX	205BXX36740	0.1 U	1.1		226	2	13.2	166.6	160	169.7	2.8	3.4				
10/25/2000	XX	205BXX36824	0.1 U	1.4		254	1 U	11.5	168.8	210	214.1	3.4	4.7				
5/9/2001	XX	205BXX37020	0.1 U	2.3		413	1	12.4	290.1	360	366	3.5	7.1				
7/25/2001	XX	205BXX37097	0.1 U	1 U		295	2	9.5	218.1	229	244	2.7	8.3				
10/17/2001	XX	205BXX37181	0.1 U	1 U		418	1 U	9.8	352	345	364	3	20.5				
5/15/2002	XX	205BXX37391	0.1 U	1 U		547	1	13.2	430.3	330	478	4.3	33.6				
8/1/2002	XX	205BXX37469	0.1 U	1 U		507	2	9.6	403.9	400	430	90.6	23.1				

DATA SUMMARY TABLE

Inorganics

SME SEVEE & MAHER ENGINEERS
SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(205B)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
10/16/2002	XX	205BXX37545	0.1 U	1 U		664	2	14.6	540.7	540	586	6.4	34.4				
6/19/2003	XX	205BXX37791	0.2 U	2 U		410	1 U	12	440	350	370	4.4	13				
8/19/2003	XX	205BXX37852	0.2	2 U		280	1 U	11	330	280	300	3	8.6				
10/9/2003	XX	205BXX37903	0.2 U	2 U		330	1 U	11	340	290	310	3.3	7.9				
4/27/2004	XX	205BXX38104	0.2 U	2 U		250	1 U	12	260	220	220	3	8.4				
8/12/2004	XX	205BXX38211	0.2 U	2 U		210	1 U	13	220	195	210	2	6.1				
10/14/2004	XX	205BXX38274	0.2 U	2 U		220	1 U	11	230	210	230	4.5	5.8				
5/17/2005	XX	GW205B00C	0.2 U	2 U		280	1 U	12	400	200	220	2.9	6				
8/4/2005	XX	GW205B024	0.46	2 U		240	1 U	11	170	155	160	1.5	2.4				
10/27/2005	XX	GW205B03G	0.2 U	2 U		300	1 U	12	500	315	340	3.2	6.2				
5/9/2006	XX	GW205B08C	0.2 U	2 U		200	4	12	330	195	210	2	2.9				
7/25/2006	XX	GW205B070	0.2 U	2 U		140	1 U	11	170	135	140	1.6	2 U				
10/19/2006	XX	GW205B058	0.2 U	2 U		130	1 U	9.8	110	105	110	1.2	2 U				
5/14/2007	XX	GW205B0A4	0.2 U	2 U		260	1 U	11	310	250	270	1 U	2 U				
8/16/2007	XX	GW205B0BH	0.2 U	0.5 U		240	1 U	10	240	200	220	5.8	2 U				
10/25/2007	XX	GW205B0D9	0.2 U	0.5 U		210	1 U	10	200	170	180	2.2	2 U				
5/27/2008	XX	GW205B0FH	0.2 U	0.5 U		240	1 U	10	230	190	210	2.9	2 U				
5/27/2008	XD	GWDP2X0F3	0.2 U	0.5 U		230	1 U	10	220		220	3.4	2 U				
8/12/2008	XX	GW205B0HH	0.2 U	0.5 U		340	1 U	10	280	300	320	2.5	2 U				
10/16/2008	XX	GW205B0J5	0.2 U	0.5 U		160	1 U	10	160	120	130	2.1	2 U				
5/4/2009	XX	GW205B115	0.2 U	0.5 U		280	0.6 U	10	310	220	230	2.6	2 U				
8/5/2009	XX	GW205B135	0.2 U	0.5 U		270	2 U	10	370	260	280	2.4	2 U				
10/20/2009	XX	GW205B14D	0.2 U	0.5 U		160	1 U	8.9	120	125	130	1.9	2 U				
10/20/2009	XD	GWDP1X15E	0.2 U	0.5 U		160	1 U	9.3	130		130	1.9	2 U				
5/26/2010	XX	GW205B16E	0.2 U	0.5 U		170	1 U	8.1	200	155	160	2.3	2 U				
8/3/2010	XX	GW205B18F	0.2 U	0.5 U		170	2.5 U	7.8	180	140	150	2.1	2 U				
8/3/2010	XD	GWDP1X180	0.2 U	0.5 U		170	1.1 U	7.9	160		150	2.1	2 U				
10/13/2010	XX	GW205B1A3	0.2 U	0.5 U		160	1.1 U	6.4	120	135	140	2	2 U				
5/17/2011	XX	GW205B1E2	0.2 U	0.5 U		260	4.2 U	7.9	190	240	240	2.1	2 U				
8/9/2011	XX	GW205B1FD	0.08 U	0.2 U		130	0.38 U	6.4	97	100	100	1.4	1.2 U				
11/3/2011	XX	GW205B1H4	0.082 U	0.22 J		130	0.32 U	6.8	110	130	130	1.6	1.2 U				
5/16/2012	XX	GW205B1II	0.2 U	0.5 U		140	2.5 U	6.1	120	120	120	1.09	2 U				
8/16/2012	XX	GW205B20B	0.2 U	0.331		140	2.5 U	6.3	100	110	110	1.54	0.5 U				
10/30/2012	XX	GW205B225	0.2 U	0.25 U		170	2.5 U	4.9	190	180	180	1.4	0.5 U				
5/20/2013	XX	GW205B23J	0.2 U	0.25 U		150	2.5 U	6.2	100	120	120	1.3	0.5 U				
7/23/2013	XX	GW205B25D	0.2 U	0.26		170	2.5 U	6.2	120	130	130	1.5	0.52				
10/2/2013	XX	GW205B277	0.2 U	0.25 U		130	2.5 U	5.1	110	120	120	0.98	0.5 U				
6/3/2014	XX	GW205B291	0.1 U	0.05 U		170	4 U	5.1	194	140	140	1 U	2				
8/19/2014	XX	GW205B2AF	0.1 U	0.05 U		140	4 U	4.2	128	130	130	1 U	4.3				
11/12/2014	XX	GW205B2C9	0.1 U	0.05 U		170	4 U	4	158	150	150	1 U	2.9				
6/2/2015	XX	GW205B2E5	0.1 U	0.05 U		170	4 U	4.6	120	110	110	1 U	3.2				
9/2/2015	XX	GW205B2G0	0.1 U	0.091		120	4 U	4.5	108	100	100	1 U	2.1				
11/3/2015	XX	GW205B2HE	0.1 U	0.079		160	4 U	4.7	153	150	150	1 U	2 U				
6/14/2016	XX	GW205B314	0.1 U	0.08		140	4 U	6.9	114	110	110	1 U	2 U				
9/21/2016	XX	GW205B32I	0.1 U	0.05 U		140	4 U	4.9	87.7	87	87	1 U	3				
11/9/2016	XX	GW205B34C	0.1 U	0.05 U		91	4 U	4.6	93	97	97	1.1	2.4				
6/13/2017	XX	GW205B367	0.1 U	0.05 U		210	4 U	4.5	166	160	160	1 U	2.3				
8/30/2017	XX	GW205B381	0.5	0.05 U		130	4 U	3.9	103	110	110	1 U	2 U				
11/16/2017	XX	GW205B39F	0.12	0.05 U		200	4 U	2.7	165	160	160	1 U	4.3				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(205B) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
6/19/2018	XX	GW205B3BA	0.1 U	0.05 U		220	4 U	5.7	135	140	140	1 U	2 U				
8/14/2018	XX	GW205B3DJ	0.1 U	0.05 U		160	4 U	3.8	117	110	110	1 U	2 U				
11/27/2018	XX	GW205B3EI	0.1 U	0.05 U		160	4 U	4.2	170	160	160	1 U	2.6				
6/4/2019	XX	GW205B3GD	0.1 U	0.05 U		220	4 U	4.3	202	190	190	1.1	2 U				
8/13/2019	XX	GW205B3J2	0.1 U	0.05 U		130	4 U	3.6	96.5	110	110	1 U	2.6				
10/23/2019	XX	GW205B401	0.1 U	0.05 U		170	4 U	3.9	148	140	140	1.2	2 U				
6/16/2020	XX	GW205B41G	0.1 U	0.05 U		150	4 U	4.3	133	140	140	1 U	2 U				
8/5/2020	XX	GW205B445	0.1 U	0.05 U		130	4 U	3.9	118	110	110	1 U	2 U				
10/20/2020	XX	GW205B454	0.1 U	0.05 U		130	4 U	3.6	97.4	99	99	1 U	2 U				
6/23/2021	XX	GW205B46J	0.1 U	0.05 U		140	4 U	3.5	125	120	120	1.6	2 U				
9/22/2021	XX	GW205B48E	0.1 U	0.05 U		150	4 U	2.8	134	140	140	1	2 U				
6/28/2022	XX	GW205B4AG	0.1 U	0.05 U		110	4 U	4.5	131	120	120	1 U	2 U				
10/18/2022	XX	GW205B4CD	0.1 U	0.05 U		180		3.6	180	180	180	1.1	36				
10/18/2022	XX	GW205B4CDRR					4 UH										
6/7/2023	XX	GW205B4EE	0.1 U	0.05 U		140	4 U	4.5	159	130	130	1.2	2 U				
10/18/2023	XX	GW205B4I9	0.1 U	0.05 U		150	4 U	4.1	138	140	140	2.2	2 U				
206A																	
4/27/2000	XX	206AXX36643	21	2		774	16	8.4	545.3	135	141.4	14.7	24.2				
8/2/2000	XX	206AXX36740	20.8	3.3		1605	9	11.1	1218.2	1350	1531.2	33.8	70.7				
10/25/2000	XX	206AXX36824	29.1	5.1		1971	24	1.8	1468	1850	1948.7	48.5	95.3				
5/8/2001	XX	206AXX37019	34.2	4		1480	4	10.4	902.9	1100	1225	27.6	56.5				
7/25/2001	XX	206AXX37097	34.2	1 U		1862	13	10.5	1419.5	1680	1715	29.4	62.7				
10/17/2001	XX	206AXX37181	49.3	1 U		2088	33	1 U	1375.2	1997	2010	37.6	101				
5/16/2002	XX	206AXX37392	28.5	1 U		1065	2	13.5	817.5	990	1010	14.4	46.3				
8/1/2002	XX	206AXX37469	38.6	1.4		1682	14	11.5	1157.3	1440	1558	334.4	71.2				
10/17/2002	XX	206AXX37546	40.3	1 U		1943	31	8.8	1436.9	1850	1912	41.7	102				
6/19/2003	XX	206AXX37791	36	2 U		920	46	15	1000	1000	1100	4.9	38				
8/18/2003	XX	206AXX37851	33	2 U		1100	35	13	1000	1150	1200	25	33				
10/13/2003	XX	206AXX37907	38	2 U		1100	43	12	960	1040	1100	30	30				
4/29/2004	XX	206AXX38106	38	2 U		1100	51	11	1100	1020	1100	30	40				
8/16/2004	XX	206AXX38215	54	2 U		1700	58	8.5	1300	1560	1600	32	50				
10/12/2004	XX	206AXX38272	48	2 U		1300	17	9.2	1300	1400	1500	53	42				
5/17/2005	XX	GW206A00D	31	2 U		1100	48	8	1000	1320	1500	19	35				
8/15/2005	XX	GW206A025	45	2 U		1400	80	7.7	1200	1400	1400	33	46				
10/24/2005	XX	GW206A03H	37	2 U		1100	63	7.6	1100	1140	1200	29	36				
5/11/2006	XX	GW206A08D	48	2 U		1200	61	7.2	1500	1220	1300	30	37				
7/26/2006	XX	GW206A071	45	2 U		1100	65	8.1	740	1000	1100	24	27				
10/23/2006	XX	GW206A059	29	2 U		1100	60	6.3	1000	1160	1200	31	33				
5/14/2007	XX	GW206A0A5	31	2 U		960	52	6.2	980	115	1200	17	26				
5/14/2007	XD	GWDP2X0EB	32	2 U		880	45	6.1	930		1300	17	26				
8/16/2007	XX	GW206A0BI	34	0.5 U		1400	70	3.6	470	1440	1500	65	40				
10/29/2007	XX	GW206A0DA	30	0.5 U		1400	80	6.4	1500	1400	1500	48	44				
5/27/2008	XX	GW206A0FI	28	0.5 U		1000	58	5.5	1000	1030	1100	36	26				
5/27/2008	XD	GWDP1X0F2	28	0.5 U		1000	61	5.3	930		1200	35	26				
8/13/2008	XX	GW206A0HI	20	0.5 U		980	54	5.8	790	1000	1100	26	25				
10/20/2008	XX	GW206A0J6	19	0.5 U		1200	61	5.5	950	1300	1400	37	34				
5/5/2009	XX	GW206A116	32	0.5 U		970	26	5	910	950	1100	32	21				
8/6/2009	XX	GW206A136	26	0.5 U		880	44	13	1200	900	980	28	19				
8/6/2009	XD	GWDP2X12B	28	0.5 U		880	49	13	1300		970	24	19				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(206A) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
10/21/2009	XX	GW206A14E	34	0.5 U		1000	66	4.3	910	1120	1200	47	32				
5/27/2010	XX	GW206A16F	28	0.5 U		980	70	5.5	710	1000	1100	19	24				
8/3/2010	XX	GW206A18G	35	0.5 U		1100	55	3.9	1000	1200	1300	36	31				
10/13/2010	XX	GW206A1A4	25	0.5 U		770	47	6.6	620	880	930	31	22				
10/13/2010	XD	GWDP1X1B4	25	0.5 U		820	50	6.8	670		920	28	22				
5/17/2011	XX	GW206A1E3	23	0.5 U		760	42	5	630	810	810	24	19				
8/9/2011	XX	GW206A1FE	29	0.2 U		1300	91	4	1000	1400	1400	47	43				
11/3/2011	XX	GW206A1H5	27	0.2 U		1000	59	4.9	790	1100	1100	36	25				
5/16/2012	XX	GW206A1IJ	26	0.5 U		720	45	4.5	670	830	830	17.1	15				
8/15/2012	XX	GW206A20C	25	0.25 U		1200	77	3.7	940	1200	1200	28.3	26				
10/30/2012	XX	GW206A226	29	0.25 U		630	20	3.9	810	700	700	21	15				
5/20/2013	XX	GW206A240	29	0.25 U		990	65	3.7	740	1100	1100	20	19				
7/23/2013	XX	GW206A25E	24	0.25 U		950	29	2.7	590	1000	1000	14	19				
10/2/2013	XX	GW206A278	29	0.25 U		1000	77	2.8	860	1200	1200	23	23				
6/3/2014	XX	GW206A292	22	0.05 U		1000	61	1 U	465	1100	1100	8.2	22				
8/20/2014	XX	GW206A2AG	37	0.05 U		1200	91	1 U	1040	1400	1400	26	33				
11/11/2014	XX	GW206A2CA	3.1	0.05 U		440	11	1 U	107	450	450	1.2	19				
6/2/2015	XX	GW206A2E6	29	0.05 U		900	52	1.4	748	920	920	18	24				
9/2/2015	XX	GW206A2G1	36	0.05 U		1100	82	1 U	1090	1200	1200	30	30				
11/3/2015	XX	GW206A2HF	15	0.05 U		820	45	1 U	307	870	870	10	21				
6/15/2016	XX	GW206A315	28	0.1 U		1000	71	7.4	794	980	980	15	22				
9/21/2016	XX	GW206A32J	40	0.05 U		1300	75	2.2	1100	1300	1300	27	34				
11/9/2016	XX	GW206A34D	42	0.05 U		1400	94	1.4	1240	1400	1400	32	39				
6/13/2017	XX	GW206A368	28	0.05 U		1000	44	1 U	778	970	970	18	21				
8/30/2017	XX	GW206A382	39	0.05 U		1400	64	1 U	1080	1400	1400	30	34				
11/15/2017	XX	GW206A39G	41	0.5 U		1200	60	1.1	1220	1400	1400	29	30				
6/19/2018	XX	GW206A3BB	32	0.05 U		1000	76	3.4	863	1100	1100	21	23				
8/14/2018	XX	GW206A3E0	41	0.25 U		1300	48	1	1030	1400	1400	26	32				
11/27/2018	XX	GW206A3EJ	36	0.05 U		840	45	9.8	776	36	36	22	27				
6/4/2019	XX	GW206A3GE	23	0.2		730	24	2.3	614	810	810	17	16				
8/13/2019	XX	GW206A3J3	39	0.05 U		1200	90	1 U	1020	1200	1200	27	27				
10/23/2019	XX	GW206A402	47	0.05 U		1200	96	1 U	1320	1600	1600	34	30				
6/16/2020	XX	GW206A41H	32	0.05 U		1000	44	1 U	755	1300	1300	20	20				
8/5/2020	XX	GW206A446	36	0.05 U		1100	75	2.4	936	1300	1300	24	27				
10/20/2020	XX	GW206A455	46	0.05 U		1400	45	1 U	1300	1600	1600	34	32				
6/23/2021	XX	GW206A470	35	0.05 U		1000	72	1 U	960	1100	1100	25	25				
9/22/2021	XX	GW206A48F	41	0.05 U		1400	53	1 U	1210	1400	1400	31	32				
6/28/2022	XX	GW206A4AH	32	0.05 U		960	75	5 U	866	1000	1000	20	21				
10/18/2022	XX	GW206A4CE	24	0.05 U		760		1 U	686	900	900	17	17				
10/18/2022	XX	GW206A4CERR					55 H										
6/7/2023	XX	GW206A4EF	24	0.05 U		700	64	1 U	619	850	850	14	16				
10/17/2023	XX	GW206A4IA	28	0.05 U		690	59	1 U	544	840	840	32	14				
206B																	
4/27/2000	XX	206BXX36643	0.1 U	1 U		48	22	12.5	23.3	10.5	11.1	3.7	2.5				
8/2/2000	XX	206BXX36740	D	D			D	D	D	D	D	D	D				
10/25/2000	XX	206BXX36824	D	D			D	D	D	D	D	D	D				
5/8/2001	XX	206BXX37019	0.1 U	1.4		55	1	13.8	22.1	8	8	2.5	2.4				
7/25/2001	XX	206BXX37097	D	D			D	D	D	D	D	D	D				
10/17/2001	XX	206BXX37181	D	D			D	D	D	D	D	D	D				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(206B)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
5/16/2002	XX	206BXX37392	0.1 U	1.2		88	2	17.4	47.8	44	48	2.5	2.2				
7/29/2002	XX	206BXX37466	D	D		D	D	D	D	D	D	D	D				
10/15/2002	XX	206BXX37544	D	D		D	D	D	D	D	D	D	D				
6/17/2003	XX	206BXX37789	0.2 U	2 U		100	1 U	23	89	68	73	1.8	3.8				
8/18/2003	XX	206BXX37851	0.21	2 U		56	1	19	68	54	57	2.6	2.3				
10/13/2003	XX	206BXX37907	0.2 U	2 U		31	1 U	12	46	34	35	3.1	2 U				
4/29/2004	XX	206BXX38106	0.21	2 U		110	1 U	19	88	64	64	1.5	3.1				
8/16/2004	XX	206BXX38215	D	D		D	D	D	D	D	D	D	D				
10/12/2004	XX	206BXX38272	D	D		D	D	D	D	D	D	D	D				
5/17/2005	XX	GW206B00E	0.45	2 U		92	1 U	14	69	57	58	2	2.7				
8/15/2005	XX	GW206B026	D	D		D	D	D	D	D	D	D	D				
10/24/2005	XX	GW206B03I	0.2 U	2 U		28	1 U	7.3	32	32	33	5.1	2 U				
5/11/2006	XX	GW206B08E	0.2 U	2 U		69	1 U	13	68	51	53	1.9	2 U				
7/26/2006	XX	GW206B072	0.2	2 U		72	3.2	13	79	64	68	1.6	2.6				
10/23/2006	XX	GW206B05A	0.2 U	2 U		50	1 U	6.6	37	39	39	3.1	2 U				
5/14/2007	XX	GW206B0A6	0.2 U	2 U		86	1 U	11	82	81	83	1 U	2 U				
8/16/2007	XX	GW206B0BJ	D	D		D	D	D	D	D	D	D	D				
10/29/2007	XX	GW206B0DB	D	D		D	D	D	D	D	D	D	D				
5/27/2008	XX	GW206B0FJ	D	D		D	D	D	D		D	D	D				
8/13/2008	XX	GW206B0HJ	0.2 U	0.71		100	1 U	9.9	78	80	82	1.4	2 U				
10/20/2008	XX	GW206B0J7	D	D		D	D	D	D	D	D	D	D				
5/5/2009	XX	GW206B117	0.2 U	0.85		110	0.6 U	8.9	77	78	79	2.5	2				
8/6/2009	XX	GW206B137	0.2 U	0.79		90	2 U	15	66	56	58	2	2				
10/21/2009	XX	GW206B14F	0.2 U	0.53		200	1 U	9.5	85	81	85	2.6	2 U				
5/27/2010	XX	GW206B16G	D	D		D	D	D	D	D	D	D	D				
8/3/2010	XX	GW206B18H	D	D		D	D	D	D	D	D	D	D				
10/13/2010	XX	GW206B1A5	0.2 U	0.51		68	1.7	4.5	36	42	42	2.5	2 U				
5/17/2011	XX	GW206B1E4	0.2 U	0.5 U		35	4.2 U	2.8	28	28	28	3.4	2 U				
8/9/2011	XX	GW206B1FF	D	D		D	D	D	D	D	D	D	D				
11/4/2011	XX	GW206B1H6	0.082 U	0.46 J		95	0.32 U	10	67	76	76	2.3	1.2 U				
5/16/2012	XX	GW206B1J0	0.2 U	0.5 U		41	2.5 U	4.4	43	37	37	2.41	2 U				
8/15/2012	XX	GW206B20D	I	I		I	I	I	I	I	I	I	I				
10/30/2012	XX	GW206B227	0.2 U	0.35		66	2.5 U	6	55	54	54	2.6	0.96				
5/20/2013	XX	GW206B241	0.2 U	0.37		82	2.5 U	7.2	35	57	57	1.3	0.85				
7/24/2013	XX	GW206B25F	0.2 U	0.54		84	3.4	6.6	62	66	66	1.5	1.2				
10/2/2013	XX	GW206B279	0.2 U	0.3		77	2.5 U	6.5	58	58	58	1.2	0.63				
6/3/2014	XX	GW206B293	0.1 U	0.82		99	4 U	8.4	75.8	72	72	1.2	3.8				
8/20/2014	XX	GW206B2AH	D	D		D	D	D	D	D	D	D	D				
11/11/2014	XX	GW206B2CB	0.1 U	0.36		44	4 U	1 U	25.6	30	30	2.8	3.8				
6/2/2015	XX	GW206B2E7	0.1 U	0.25		70	4.4	5.1	35.7	38	38	1.5	3.5				
9/2/2015	XX	GW206B2G2	I	I		I	I	I	I	I	I	I	I				
11/3/2015	XX	GW206B2HG	0.1 U	0.35		59	4 U	2.2	33.2	36	36	2.5	2 U				
6/15/2016	XX	GW206B316	0.1 U	0.29		78	12	7.4	58.4	56	56	1 U	2.4				
9/21/2016	XX	GW206B330	D	D		D	D	D	D	D	D	D	D				
11/9/2016	XX	GW206B34E	D	D		D	D	D	D	D	D	D	D				
6/13/2017	XX	GW206B369	0.37	0.28		100	4 U	3.4	52.1	36	36	1.4	2.3				
8/30/2017	XX	GW206B383	I	I		I	I	I	I	I	I	I	I				
11/15/2017	XX	GW206B39H	0.1 U	0.62		88	4 U	8.7	75.3	66	66	1	3				
6/19/2018	XX	GW206B3BC	0.1 U	0.55		110	4 U	9.7	69	70	70	1 U	2.2				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(206B) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
8/14/2018	XX	GW206B3E1	I	I		I	I	I	I	I	I	I	I				
11/27/2018	XX	GW206B3F0	0.1 U	0.47		39	4 U	13	34.6	36	36	2.1	2.3				
6/4/2019	XX	GW206B3GF	0.1 U	0.17		81	4 U	4.1	53	39	39	1.5	2 U				
8/13/2019	XX	GW206B3J4	0.1 U	0.45		98	19	7.8	64	64	64	1.2	3				
10/23/2019	XX	GW206B403	D	D		D	D	D	D	D	D	D	D				
6/16/2020	XX	GW206B41I	0.1 U	0.61		95	11	6.9	74.6	77	77	1.1	2 U				
8/5/2020	XX	GW206B447	I	I		I	I	I	I	I	I	I	I				
10/22/2020	XX	GW206B456	D	D		D	D	D	D	D	D	D	D				
6/23/2021	XX	GW206B471	0.1 U	0.66		140	7.6	8	79.6	76	76	2	2 U				
9/22/2021	XX	GW206B48G	D	D		D	D	D	D	D	D	D	D				
6/28/2022	XX	GW206B4AI	0.11	0.28		70	8.8	8.8	67.6	64	64	1.1	2 U				
10/18/2022	XX	GW206B4CF	0.1 U	0.1		39		2.7	43.3	38	38	1.1	2 U				
10/18/2022	XX	GW206B4CFRR					4 UH										
6/7/2023	XX	GW206B4EG	0.1 U	0.34		65	7.2	5.8	72.9	66	66	1.3	2 U				
10/17/2023	XX	GW206B4IB	0.1 U	0.21		72	12	4.4	61.6	65	65	2.4	2 U				
301																	
5/3/2000	XX	301XX36649	0.1 U	1 U		212	41	9.3	166.3	110	125.2	1.8	28.7				
8/9/2000	XX	301XX36747	0.1 U	1 U		219	3	12	126.8	110	129.3	1.8	31.6				
11/8/2000	XX	301XX36838	0.1 U	1 U		242	1 U	12.9	125.8	142	143.4	1.7	31.9				
5/16/2001	XX	301XX37027	0.1 U	1 U		247	1 U	12.8	161.4	146	148	1.6	35.5				
7/31/2001	XX	301XX37103	0.1 U	1 U		245	1	12.7	159.7	150	152	3.8	35.6				
10/23/2001	XX	301XX37187	0.1 U	1 U		281	2	14.7	191	160	174	2.5	40				
5/21/2002	XX	301XX37397	0.1 U	1 U		293	2	16.3	141.9	175	178	2.2	43.1				
8/2/2002	XX	301XX37470	0.1 U	1 U		337	1	16.6	147.4	188	200	2.9	42.6				
10/23/2002	XX	301XX37552	0.1 U	1 U		304	1	23.1	205.8	190	208	2.4	43.3				
6/24/2003	XX	301XX37796	0.2 U	2 U		300	1 U	19	320	210	230	2.2	37				
8/12/2003	XX	301XX37845	0.2 U	2 U		340	1 U	23	320	200	230	2.6	33				
10/16/2003	XX	301XX37910	0.2 U	2 U		340	1 U	24	320	230	250	2.9	33				
5/5/2004	XX	301XX38112	0.2 U	2 U		370	1 U	23	350	250	270	2.5	31				
8/9/2004	XX	301XX38208	0.2 U	2 U		390	1 U	24	320	265	280	2.5	35				
10/20/2004	XX	301XX38280	0.2 U	2 U		420	1 U	23	330	260	280	3.4	35				
5/11/2005	XX	GW301X00F	0.2 U	2 U		410	1 U	27	360	270	290	4.1	42				
7/27/2005	XX	GW301X027	0.2 U	2 U		440	1 U	24	410	280	300	2.8	38				
11/7/2005	XX	GW301X03J	0.2 U	2 U		480	3	24	430	320	350	3.5	40				
5/1/2006	XX	GW301X08F	0.2 U	2 U		450	3.5	24	450	330	350	3.9	40				
7/31/2006	XX	GW301X073	0.2 U	2 U		480	1 U	26	500	330	360	5.1	41				
10/26/2006	XX	GW301X05B	0.2 U	2 U		498	1 U	28	390	370	380	3.8	36				
5/9/2007	XX	GW301X0A7	0.5 U	0.5 U		500	3.2	27	500	420	442	1.1	38				
8/9/2007	XX	GW301X0C0	0.2 U	0.5 U		620	1 U	26	560	400	440	24	42				
10/30/2007	XX	GW301X0DC	0.2 U	0.5 U		700	1 U	30	670	490	530	8.2	50				
10/30/2007	XD	GWDP3X0F0	0.2 U	0.5 U		680	1 U	30	670		530	7.8	50				
6/3/2008	XX	GW301X0G0	0.2 U	0.5 U		660	1 U	26	670	520	580	15	49				
8/14/2008	XX	GW301X0I0	0.2 U	0.5 U		700	1 U	25	560	540	570	9	49				
8/14/2008	XD	GWDP3X0H4	0.2 U	0.5 U		670	1 U	25	620		570	9.3	49				
10/21/2008	XX	GW301X0J8	0.2 U	0.5 U		760	1 U	26	790	550	590	10	58				
5/11/2009	XX	GW301X118	0.2 U	0.5 U		700	0.6 U	27	760	550	590	12	61				
8/10/2009	XX	GW301X138	0.2 U	0.5 U		770	0.6 U	27	910	550	590	10	62				
10/22/2009	XX	GW301X14G	0.2 U	0.5 U		750	1 U	29	690	570	600	15	71				
10/22/2009	XD	GWDP3X15G	0.2 U	0.5 U		780	1 U	28	810		600	14	73				

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(301) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
6/1/2010	XX	GW301X16H	0.2 U	0.5 U		780	1 U	27	710	580	610	13	77				
8/5/2010	XX	GW301X18I	0.2 U	0.5 U		800	1.1 U	25	760	590	630	11	77				
10/18/2010	XX	GW301X1A6	0.2 U	0.5 U		850	1.2 U	24	620	600	630	14	94				
5/18/2011	XX	GW301X1D9	0.2 U	0.5 U		820	4.2 U	27	710	640	640	13	90				
8/9/2011	XX	GW301X1F0	0.08 U	0.2 U		890	0.38 U	25	730	670	670	14	100				
11/2/2011	XX	GW301X1GB	0.082 U	0.2 U		810	0.55 J	27	660	640	640	13	87				
5/15/2012	XX	GW301X1I5	0.2 U	0.09 U		750	2.5 U	31	680	570	570	8	77				
8/14/2012	XX	GW301X1JI	0.2 U	0.25 U		810	3.5	26	620	610	610	8.99	89				
10/30/2012	XX	GW301X21C	0.2 U	0.25 U		900	2.5 U	25	790	680	680	8.9	99				
5/22/2013	XX	GW301X236	0.2 U	0.25 U		960	2.5 U	26	740	710	710	8.9	100				
7/25/2013	XX	GW301X250	0.2 U	0.25 U		1000	2.5 U	24	810	730	730	10	110				
10/1/2013	XX	GW301X26E	0.2 U	0.25 U		960	2.5 U	26	740	700	700	9.5	100				
6/4/2014	XX	GW301X288	0.1 U	0.05 U		1000	4 U	28	921	770	780	9.4	100				
8/20/2014	XX	GW301X2A2	0.1 U	0.05 U		1100	4 U	28	1010	890	900	11	100				
11/11/2014	XX	GW301X2BG	0.1 U	0.05 U		1100	4 U	28	854	830	830	12	110				
6/3/2015	XX	GW301X2DC	0.1 U	0.05 U		1100	4 U	24	876	840	840	11	110				
9/1/2015	XX	GW301X2F7	0.1 U	0.05 U		1200	4 U	23	1030	820	820	13	100				
11/4/2015	XX	GW301X2H1	0.1 U	0.05 U		1100	4 U	22	930	850	850	11	110				
6/15/2016	XX	GW301X30B	0.1 U	0.05 U		1100	4 U	25	954	850	850	11	110				
9/20/2016	XX	GW301X325	0.1 U	0.05 U		1300	4 U	26	971	910	910	13	110				
11/10/2016	XX	GW301X33J	0.1 U	0.05 U		1200	4 U	24	1000	1100	1100	15	95				
6/14/2017	XX	GW301X35E	0.1 U	0.05 U		1200	4 U	26	1080	960	960	14	97				
8/29/2017	XX	GW301X378	0.1 U	0.05 U		1200	4 U	24	1020	980	980	14	96				
11/14/2017	XX	GW301X392	0.1 U	0.1		1200	4 U	29	948	970	970	16	87				
6/19/2018	XX	GW301X3AH	0.1 U	0.05 U		1200	4 U	49	972	1000	1000	15	83				
8/14/2018	XX	GW301X3D6	0.1 U	0.05 U		1200	4 U	45	1010	1000	1000	16	91				
11/28/2018	XX	GW301X3E5	0.1 U	0.05 U		1200	12	47	1050	1100	1100	17	82				
6/5/2019	XX	GW301X3G0	0.1 U	0.05 U		1300	4 U	44	1040	1000	1000	17	77				
8/13/2019	XX	GW301X3I9	0.1 U	0.05 U		1200	4 U	42	999	1000	1000	17	78				
10/23/2019	XX	GW301X3J8	0.1 U	0.05 U		1200	4 U	38	1020	1000	1000	17	69				
6/16/2020	XX	GW301X413	0.1 U	0.05 U		1200	4 U	34	984	1100	1100	15	61				
8/4/2020	XX	GW301X43C	0.1 U	0.05 U		1000	4 U	34		970	980	16	56				
8/4/2020	XX	GW301X43CR							997								
10/21/2020	XX	GW301X44B	0.1 U	0.05 U		1000	4 U	32	1080	1000	1000	16	59				
6/22/2021	XX	GW301X466	0.1 U	0.05 U		1100	4 U	27	977	1000	1000	15	53				
9/22/2021	XX	GW301X481	0.1 U	0.05 U		1000	4 U	30	946	1000	1000	16	58				
6/29/2022	XX	GW301X4A3	0.1 U	0.05 U		1000	4 U	28	1060	1000	1000	15	58				
10/19/2022	XX	GW301X4C0	0.1 U	0.05 U		1100	4 U	24	1050	1000	1000	15	56				
6/6/2023	XX	GW301X4E1	0.1 U	0.05 U		1100	6.4	21	1050	1100	1100	39	62				
10/18/2023	XX	GW301X4HG	0.1 U	0.05 U		1200	4 U	20	1080	1200	1200	50	60				
302B																	
5/3/2000	XX	302BXX36649	0.1 U	1 U		224	9	11.1	143.9	81	88.9	3.5	50.9				
8/9/2000	XX	302BXX36747	0.1 U	1 U		307	1	12.1	175.8	165	181.8	3.1	39.3				
11/8/2000	XX	302BXX36838	0.1 U	1 U		303	1 U	12	153	144	147.5	4.3	52.1				
5/16/2001	XX	302BXX37027	0.1 U	1 U		368	1	14.5	223.2	210	230	4.1	47.5				
7/31/2001	XX	302BXX37103	0.1 U	1 U		300	1	12.8	189.7	158	158	7.4	46.5				
10/23/2001	XX	302BXX37187	0.1 U	1 U		314	2	14.8	177.4	158	162	4.3	53.4				
5/21/2002	XX	302BXX37397	0.1 U	1 U		394	1 U	19	259.6	200	230	6.3	69.2				
8/7/2002	XX	302BXX37475	0.1 U	1 U		438	4	17.7	288.1	265	290	14.7	49.9				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(302B)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
10/23/2002	XX	302BXX37552	0.1 U	1 U		362	1 U	20	245.4	230	244	6.7	57.7				
6/23/2003	XX	302BXX37795	0.2 U	2 U		530	1 U	39	460	325	350	13	50				
8/12/2003	XX	302BXX37845	0.2 U	2 U		460	1 U	27	370	330	360	9.6	39				
10/20/2003	XX	302BXX37914	0.27	2 U		500	1 U	45	460	330	350	13	41				
5/4/2004	XX	302BXX38111	0.2 U	2 U		540	1 U	63	540	370	390	24	41				
8/5/2004	XX	302BXX38204	0.2 U	2 U		520	1 U	37	460	340	360	10	38				
10/20/2004	XX	302BXX38280	0.2 U	2 U		520	1 U	36	490	325	350	16	40				
5/11/2005	XX	GW302B00G	0.2 U	2 U		600	1 U	78	490	330	350	12	52				
7/27/2005	XX	GW302B028	0.2 U	2 U		690	1 U	59	570	390	390	12	43				
11/7/2005	XX	GW302B040	0.2 U	2 U		600	3	63	520	390	410	13	50				
5/1/2006	XX	GW302B08G	0.2 U	2 U		620	1 U	63	640	415	460	22	51				
7/31/2006	XX	GW302B074	0.2 U	2 U		660	1 U	61	630	450	480	17	49				
10/25/2006	XX	GW302B05C	0.25	2 U		640	1 U	53	620	480	500	13	45				
5/9/2007	XX	GW302B0A8	0.5 U	0.5 U		610	1 U	50	530	440	470	8.2	42				
8/9/2007	XX	GW302B0C1	0.2 U	0.5 U		670	1 U	46	550	385	400	34	42				
10/30/2007	XX	GW302B0DD	0.2 U	0.5 U		670	1 U	41	630	450	490	16	48				
6/2/2008	XX	GW302B0G1	0.2 U	0.5 U		640	1 U	38	530	480	520	32	44				
8/14/2008	XX	GW302B0I1	0.2 U	0.5 U		680	1 U	37	570	530	560	23	47				
10/21/2008	XX	GW302B0J9	0.2 U	0.5 U		680	1 U	40	640	470	490	21	47				
10/21/2008	XD	GWDP3X108	0.2 U	0.5 U		680	1 U	40	660		500	22	46				
5/11/2009	XX	GW302B119	0.2 U	0.5 U		700	0.6 U	35	720	540	560	28	44				
8/10/2009	XX	GW302B139	0.2 U	0.5 U		720	0.6 U	35	670	520	560	24	46				
8/10/2009	XD	GWDP3X12C	0.2 U	0.5 U		730	0.6 U	35	680		560	22	45				
10/22/2009	XX	GW302B14H	0.2 U	0.5 U		650	1 U	39	520	490	520	22	50				
6/1/2010	XX	GW302B16I	0.2 U	0.5 U		700	1.1 U	36	610	510	550	24	49				
8/4/2010	XX	GW302B18J	0.2 U	0.5 UH		680	1 U	41	570	520	550	22	52				
10/14/2010	XX	GW302B1A7	0.2 U	0.5 U		750	1.1 U	37	490	530	570	22	56				
5/18/2011	XX	GW302B1DA	0.2 U	0.5 U		640	5 U	26	510	540	540	22	60				
8/8/2011	XX	GW302B1F1	0.08 U	0.2 U		770	0.39 U	30	300	600	600	22	69				
11/1/2011	XX	GW302B1GC	0.082 U	0.2 U		830	0.32 U	24	650	670	670	28	63				
5/15/2012	XX	GW302B1I6	0.2 U	0.09 U		760	2.5 U	17	640	650	650	19	57				
8/16/2012	XX	GW302B1JJ	0.2 U	0.25 U		820	2.5 U	25	540	630	630	19.6	62				
10/30/2012	XX	GW302B21D	0.2 U	0.25 U		790	2.5 U	20	690	670	670	20	63				
5/21/2013	XX	GW302B237	0.2 U	0.25 U		870	2.5 U	16	410	720	720	21	70				
7/25/2013	XX	GW302B251	0.2 U	0.25 U		940	2.5 U	17	670	730	730	22	70				
10/1/2013	XX	GW302B26F	0.2 U	0.25 U		910	2.5 U	19	660	700	700	21	75				
6/3/2014	XX	GW302B289	0.1 U	0.23		840	4 U	19	654	670	680	18	64				
8/20/2014	XX	GW302B2A3	0.11	0.14		850	4 U	22	716	700	700	16	70				
11/11/2014	XX	GW302B2BH	0.1 U	0.14		860	4 U	18	642	660	660	18	72				
6/3/2015	XX	GW302B2DD	0.11	0.05 U		960	4 U	11	712	720	720	21	78				
9/1/2015	XX	GW302B2F8	0.15	0.46		900	4 U	18	768	650	650	22	75				
11/4/2015	XX	GW302B2H2	0.13	0.05 U		960	4 U	1 U	745	770	770	21	80				
6/15/2016	XX	GW302B30C	0.67	0.05 U		990	4 U	7.9	764	740	740	20	82				
9/21/2016	XX	GW302B326	0.31	0.05 U		930	4 U	13	678	720	720	19	75				
11/8/2016	XX	GW302B340	0.16	0.1		850	4 U	18	706	770	770	20	73				
6/13/2017	XX	GW302B35F	0.46	0.05 U		1000	4 U	14	763	760	760	21	74				
8/29/2017	XX	GW302B379	0.34	0.05 U		950	4 U	14	719	740	740	20	75				
11/14/2017	XX	GW302B393	0.4	0.05 U		960	4 U	8.6	738	780	780	22	72				
6/19/2018	XX	GW302B3AI	0.69	0.11		940	4 U	11	758	810	810	19	68				

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(302B) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
8/14/2018	XX	GW302B3D7	0.79	0.05 U		990	4 U	12	733	840	840	21	79				
11/28/2018	XX	GW302B3E6	0.58	0.05 U		950	4 U	10	754	840	840	23	70				
6/5/2019	XX	GW302B3G1	0.81	0.068		1000	4.4	1 U	837	880	880	25	69				
8/13/2019	XX	GW302B3IA	1.1	0.05 U		1100	4 U	1 U	863	900	900	28	76				
10/23/2019	XX	GW302B3J9	0.86	0.05 U		1000	4 U	13	861	820	820	24	72				
6/17/2020	XX	GW302B414	0.85	0.05 U		990	4 U	1 U	808	940	940	25	65				
8/5/2020	XX	GW302B43D	0.91	0.05 U		930	6	13	2160	820	820	24	65				
10/21/2020	XX	GW302B44C	0.7	0.05 U		1000	4 U	1 U	471	880	880	26	68				
6/22/2021	XX	GW302B467	0.96	0.05 U		1100	4 U	1 U	891	940	940	28	67				
9/22/2021	XX	GW302B482	1.1	0.05 U		1100	4 U	1 U	908	980	980	28	73				
6/29/2022	XX	GW302B4A4	2	0.054		1100	4 U	7	990	990	990	28	66				
10/19/2022	XX	GW302B4C1	0.93	0.05 U		1100	4 U	1 U	979	1000	1000	27	65				
6/7/2023	XX	GW302B4E2	1.5	0.066		1200	4 U	1 U	938	950	950	40	60				
10/18/2023	XX	GW302B4HH	1.4	0.05 U		1100	4 U	1 U	908	1000	1000	71	59				
302C																	
5/3/2000	XX	302CXX36649	0.1 U	1 U		189	23	9.6	105.5	39	47.3	2.6	55				
8/9/2000	XX	302CXX36747	0.1 U	1 U		293	1	15.5	117	120	132.3	4.3	59.8				
11/8/2000	XX	302CXX36838	0.1 U	1 U		281	1 U	12.2	144.9	135	135.3	4.7	55.4				
5/16/2001	XX	302CXX37027	0.1 U	1 U		294	1	14.1	144	155	160	6.5	55.2				
7/31/2001	XX	302CXX37103	0.1 U	1 U		308	2	12.1	138	154	156	8.1	44.4				
10/23/2001	XX	302CXX37187	0.1 U	1 U		327	2	14.5	210.8	165	174	5.7	58.3				
5/21/2002	XX	302CXX37397	0.1 U	1 U		270	1 U	19.4	176.5	110	118	5.1	60.4				
8/7/2002	XX	302CXX37475	0.1 U	1 U		465	1 U	21.5	283	240	264	11.8	74.3				
10/23/2002	XX	302CXX37552	0.1 U	1 U		453	1 U	29.6	299.5	270	296	11.9	71.1				
6/23/2003	XX	302CXX37795	0.2 U	2 U		410	1 U	46	370	240	260	13	51				
8/12/2003	XX	302CXX37845	0.2 U	2 U		540	1 U	48	520	370	390	19	44				
10/20/2003	XX	302CXX37914	0.2 U	2 U		400	1 U	50	340	220	240	12	41				
5/4/2004	XX	302CXX38111	0.2 U	2 U		410	1 U	69	420	250	270	14	40				
8/5/2004	XX	302CXX38204	0.27	2 U		510	1 U	56	690	315	340	12	34				
10/20/2004	XX	302CXX38280	0.2 U	2 U		490	1 U	55	420	280	310	14	140				
5/11/2005	XX	GW302C00H	0.2 U	2 U		470	1 U	79	390	230	250	12	55				
7/27/2005	XX	GW302C029	0.2 U	2 U		630	1 U	78	570	380	400	12	53				
11/7/2005	XX	GW302C041	0.2 U	2 U		580	3	74	490	350	370	16	56				
5/1/2006	XX	GW302C08H	0.2 U	2 U		580	1.5	66	540	370	390	18	55				
7/31/2006	XX	GW302C075	0.2 U	2 U		640	1 U	57	610	460	490	16	48				
10/25/2006	XX	GW302C05D	0.2 U	2 U		560	1 U	55	380	340	360	14	39				
5/9/2007	XX	GW302C0A9	0.5 U	0.5 U		550	1 U	51	450	425	450	9.4	42				
8/9/2007	XX	GW302C0C2	0.26	0.5 U		640	2	41	490	390	410	48	40				
8/9/2007	XD	GWDP3X0EG	0.24	0.5 U		620	1.6	41	490		410	48	40				
10/30/2007	XX	GW302C0DE	0.2 U	0.5 U		600	1 U	43	530	400	420	18	44				
6/2/2008	XX	GW302C0G2	0.2 U	0.5 U		670	1 U	35	600	520	580	32	46				
6/2/2008	XD	GWDP3X0F4	0.2 U	0.5 U		670	1 U	36	570		560	31	46				
8/14/2008	XX	GW302C0I2	0.2 U	0.5 U		610	1 U	34	470	470	500	24	43				
10/21/2008	XX	GW302C0JA	0.2 U	0.5 U		620	1.2	32	590	470	490	22	38				
5/11/2009	XX	GW302C11A	0.2 U	0.5 U		640	0.6 U	32	540	525	530	18	40				
8/10/2009	XX	GW302C13A	0.2 U	0.5 U		670	0.6 U	33	480	490	540	26	45				
10/22/2009	XX	GW302C14I	0.2 U	0.5 U		580	1 U	31	460	440	460	22	35				
6/1/2010	XX	GWXXXX17F	0.2 U	0.5 U		700	1 U	26	650	510	550	25	44				
6/1/2010	XD	GWDP3X161	0.2 U	0.5 U		680	1 U	26	680		550	24	44				

DATA SUMMARY TABLE

Inorganics

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(302C)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
8/4/2010	XX	GW302C190	0.2 U	0.5 UH		600	1.1 U	23	490	480	510	20	42				
10/14/2010	XX	GW302C1A8	0.2 U	0.5 U		630	1.3 U	23	450	505	530	23	48				
5/18/2011	XX	GW302C1DB	0.2 U	0.5 U		320	5 U	18	280	290	290	12	26				
5/18/2011	XD	GWXXXX1EH	0.2 U	0.5 U		320	5 U	18	270	290	290	12	25				
8/8/2011	XX	GW302C1F2	0.08 U	0.2 U		800	1.3 J	19	530	650	650	28	71				
11/1/2011	XX	GW302C1GD	0.082 U	0.2 U		750	0.32 U	17	560	650	650	28	57				
11/1/2011	XD	GWDP1X1HI	0.082 U	0.2 U		780	0.32 U	17	590	670	670	30	57				
5/15/2012	XX	GW302C1I7	0.2 U	0.09 U		470	2.5 U	12	380	430	430	14	34				
5/15/2012	XD	GWDP2X1JD	0.2 U	0.09 U		480	2.5 U	14	370	430	430	14	33				
8/16/2012	XX	GW302C200	0.2 U	0.25 U		800	2.5 U	13	580	640	640	24	64				
8/16/2012	XD	GWDP2X216	0.2 U	0.25 U		810	2.5 U	13	620	650	650	24	62				
10/30/2012	XX	GW302C21E	0.2 U	0.25 U		760	2.6 U	12	650	670	670	20	60				
10/30/2012	XD	GWDP3X231	0.2 U	0.25 U		770	2.5 U	12	590	650	650	20	59				
5/21/2013	XX	GW302C238	0.2 U	0.25 U		860	2.5 U	12	650	750	750	21	70				
7/25/2013	XX	GW302C252	0.2 U	0.25 U		940	2.5 U	12	650	740	740	22	69				
7/25/2013	XD	GWDP1X267	0.2 U	0.25 U		960	2.5 U	12	640	770	770	23	71				
10/1/2013	XX	GW302C26G	0.2 U	0.25 U		800	2.5 U	10	620	680	680	21	58				
10/1/2013	XD	GWDP1X281	0.2 U	0.25 U		800	2.5 U	10	610	660	660	21	58				
6/3/2014	XX	GW302C28A	0.18	0.05 U		860	4 U	9	636	700	700	19	62				
8/20/2014	XX	GW302C2A4	0.12	0.05 U		740	4 U	22	575	620	620	17	52				
8/20/2014	XD	GWDP3X2BB	0.12	0.05 U		730	4 U	15	551	630	630	17	53				
11/11/2014	XX	GW302C2BI	0.68	0.05 U		760	4 U	6.2	595	670	670	19	64				
11/11/2014	XD	GWDP1X2D3	0.66	0.05 U		800	4 U	5.5	589	650	660	19	63				
6/3/2015	XX	GW302C2DE	0.98	0.05 U		930	4 U	1.5	631	730	730	20	71				
9/1/2015	XX	GW302C2F9	0.3	0.05 U		820	4 U	5.4	617	650	650	19	56				
9/1/2015	XD	GWDP3X2GG	0.3	0.05 U		830	4 U	4.8	577	660	660	19	57				
11/4/2015	XX	GW302C2H3	1.4	0.05 U		860	4 U	1 U	667	710	710	21	66				
11/4/2015	XD	GWDP1X2I8	1.4	0.05 U		870	4 U	1 U	688	700	700	21	63				
6/15/2016	XX	GW302C30D	0.32	0.05 U		970	4 U	1 U	731	770	770	20	74				
9/21/2016	XD	GWDP3X33E	0.32	0.05 U		810	4 U	1 U	582	640	640	19	55				
9/21/2016	XX	GW302C327	0.32	0.05 U		800	4 U	1 U	563	640	640	19	53				
11/8/2016	XD	GWDP1X356	0.82	0.05 U		790	4 U	1.7	636	740	740	22	63				
11/8/2016	XX	GW302C341	0.83	0.05 U		820	4 U	1.3	674	740	740	22	64				
6/13/2017	XX	GW302C35G	1.2	0.05 U		1000	4 U	1 U	728	810	810	24	67				
8/29/2017	XD	GWDP3X38H	0.75	0.05 U		830	4 U	1 U	623	710	710	20	54				
8/29/2017	XX	GW302C37A	0.7	0.05 U		840	4 U	1 U	626	710	710	19	52				
11/14/2017	XD	GWDP1X3A9	2.4	0.05 U		880	4 U	1 U	566	730	730	22	55				
11/14/2017	XX	GW302C394	2.3	0.05 U		880	4 U	1 U	590	720	720	22	55				
6/19/2018	XX	GW302C3AJ	1.5	0.05 U		1000	4 U	1 U	744	880	880	24	62				
8/14/2018	XD	GWDP3X3D1	1.6	0.05 U		880	4 U	1 U	654	780	780	21	59				
8/14/2018	XX	GW302C3D8	1.5	0.05 U		910	4 U	1 U	658	790	790	22	57				
11/28/2018	XD	GWDP1X3FC	3.6	0.05 U		1000	4 U	1 U	772	890	890	27	61				
11/28/2018	XX	GW302C3E7	3.6	0.05 U		1000	4 U	1 U	756	880	880	26	62				
6/5/2019	XX	GW302C3G2	4	0.05 U		1100	4 U	1 U	767	870	880	28	60				
8/13/2019	XD	GWDP3X3I4	0.65	0.05 U		980	4 U	1 U	700	900	900	27	61				
8/13/2019	XX	GW302C3IB	0.72	0.05 U		990	4 U	1 U	736	890	890	27	60				
10/23/2019	XD	GWDP1X40F	1.9	0.05 U		860	6	1 U	692	750	750	23	47				
10/23/2019	XX	GW302C3JA	0.71	0.05 U		860	4 U	6.1	661	730	730	22	45				
6/17/2020	XX	GW302C415	1.9	0.05 U		1000	4 U	1 U	801	1000	1000	27	54				

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(302C)			Ammonia (N)	Nitrate (N)	Total Phosphorus	Total Dissolved Solids	Total Suspended Solids	Sulfate	Ca-mg Hardness (CaCO3)	Bicarbonate Alkalinity (CaCO3)	Alkalinity (CaCO3)	Organic Carbon	Chloride				
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L				
8/5/2020	XD	GWDP3X437	1	0.05 U		900	4.8	1.4	775	800	800	24	46				
8/5/2020	XX	GW302C43E	1.5	0.05 U		900	4 U	1.3	735	820	820	24	44				
10/21/2020	XD	GWDP1X45I	5.3	0.05 U		1000	4 U	6.4	824	920	920	30	53				
10/21/2020	XX	GW302C44D	5.3	0.05 U		970	4 U	1 U	723	910	910	30	52				
6/22/2021	XX	GW302C468	1.9	0.05 U		1200	5.2	1 U	977	1100	1100	33	60				
9/22/2021	XD	GWDP1X498	3.4	0.05 U		1100	4 U	1 U	782	990	990	29	54				
9/22/2021	XX	GW302C483	3.3	0.05 U		1000	4 U	1 U	812	990	990	29	55				
6/29/2022	XX	GW302C4A5	2.7	0.05 U		1100	4 U	1 U	967	1000	1000	29	54				
10/19/2022	XD	GWDP1X4D7	6.6	0.05 U		880	4 U	1 U	785	850	850	24	42				
10/19/2022	XX	GW302C4C2	6.5	0.05 U		890	4 U	1 U	760	860	860	25	41				
6/7/2023	XX	GW302C4E3	5.3	0.05 U		1200	4 U	1 U	936	1000	1000	53	52				
10/18/2023	XD	GWDP1X4J2	6.4	0.05 U		1100	4 U	1 U	740	1000	1000	59	47				
10/18/2023	XX	GW302C4HI	6.3	0.05 U		1000	4 U	1 U	770	920	920	56	46				
303A																	
4/27/2000	XX	303AXX36643	8.15	6.3		815	7	13.8	693.9	680	747.4	10.1	33				
8/2/2000	XX	303AXX36740	7.83	2.7		853	6	15.7	665.3	680	773.7	10.4	44.4				
10/25/2000	XX	303AXX36824	5.21	3.5		1262	4	12.4	1065.1	1180	1254.9	22.7	75.8				
5/9/2001	XX	303AXX37020	11.7	8		1537	6	12.4	1260.7	1470	1470	25.4	79.8				
7/25/2001	XX	303AXX37097	5.48	4.1		1120	4	14.5	927.8	1030	1035	11.2	43.8				
10/17/2001	XX	303AXX37181	6.52	1.2		1476	4	13.2	1274.3	1385	1395	11.9	83.9				
5/16/2002	XX	303AXX37392	11.2	3.6		993	1	13	829	840	916	10.7	39.2				
8/1/2002	XX	303AXX37469	10.78	7.1		920	4	20.7	728.3	770	842	158.5	39.1				
10/17/2002	XX	303AXX37546	9.66	1.2		1104	1	21.4	863.4	1000	1040	14	61.9				
6/23/2003	XX	303AXX37795	12	7.7		820	1 U	16	700	740	760	9.4	28				
8/19/2003	XX	303AXX37852	13	3.1		870	1 U	14	800	790	830	10	29				
10/14/2003	XX	303AXX37908	15	2 U		1000	1 U	20	980	920	1000	15	37				
5/3/2004	XX	303AXX38110	16	2.4		920	1 U	21	1000	820	840	12	31				
8/17/2004	XX	303AXX38216	17	2 U		1000	1 U	18	990	930	1000	15	35				
10/19/2004	XX	303AXX38279	18	2 U		1100	1 U	14	1200	1120	1200	27	42				
5/18/2005	XX	GW303A00I	24	3		930	1 U	15	1000	600	200	12	31				
8/15/2005	XX	GW303A02A	15	2.3		690	1.5	16	710	180	650	7.4	24				
11/3/2005	XX	GW303A042	12	2 U		970	6.5	14	970	960	1000	13	46				
5/11/2006	XX	GW303A08I	12	2 U		600	1 U	19	690	520	580	8.7	25				
7/26/2006	XX	GW303A076	10	2 U		580	1 U	18	640	540	590	7.2	19				
10/24/2006	XX	GW303A05E	11	2 U		770	1 U	18	640	720	750	11	32				
5/15/2007	XX	GW303A0AA	9.3	2 U		810	1 U	15	660	840	890	9.9	24				
8/15/2007	XX	GW303A0C3	8.4	0.56		690	1 U	16	540	550	590	29	23				
8/15/2007	XD	GWDP2X0EF	8.7	0.56		700	1 U	16	540		610	21	23				
10/29/2007	XX	GW303A0DF	6.1	0.5 U		970	1 U	14	1000	900	950	23	42				
6/2/2008	XX	GW303A0G3	7.9	1.6		660	1 U	17	640	640	690	8	20				
8/13/2008	XX	GW303A0I3	7.1	1.1		560	1 U	17	440	530	580	7.4	14				
10/20/2008	XX	GW303A0JB	6.3	0.78		590	1 U	18	470	530	570	9.7	19				
5/5/2009	XX	GW303A11B	8.5	0.86		730	0.6 U	15	780	690	730	15	19				
8/6/2009	XX	GW303A13B	7.6	3.1		580	2 U	41	650	520	560	9.7	38				
10/21/2009	XX	GW303A14J	6.8	1		560	1 U	16	390	480	510	10	15				
5/27/2010	XX	GW303A170	6.6	2		510	1.1 U	18	530	470	490	8.3	11				
8/4/2010	XX	GW303A191	7.5	0.55 H		530	1 U	14	530	540	560	12	16				
10/14/2010	XX	GW303A1A9	4.8	0.5 U		710	1.2	14	540	730	750	15	26				
5/17/2011	XX	GW303A1E5	6.5	2.8		500	4.2 U	11	420	490	490	9.3	8.8				

SEVEE & MAHER ENGINEERS, INC.
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(303A) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
8/9/2011	XX	GW303A1FG	6.6	1.4		390	0.38 U	14	310	380	380	7.6	9.4
11/3/2011	XX	GW303A1H7	7.9	0.46 J		540	0.32 U	14	440	560	560	13	15
5/17/2012	XX	GW303A1J1	7.9	1.4		300	2.5 U	13	450	490	490	6.99	8.6
8/15/2012	XX	GW303A20E	7.1	0.83		480	2.5 U	15	400	490	490	6.82	9.5
11/1/2012	XX	GW303A228	8.5	0.25 U		550	2.5 U	12	510	530	530	8.7	15
5/21/2013	XX	GW303A242	6.3	1.7		460	2.5 U	16	390	480	480	5.2	8.6
7/24/2013	XX	GW303A25G	6.6	2.1		460	2.5 U	15	320	440	440	4.8	7.3
10/2/2013	XX	GW303A27A	6.6	0.41		430	2.5 U	15	340	430	430	4.8	9.2
6/3/2014	XX	GW303A294	6	2.5		500	4 U	13	388	440	440	5.3	9.6
8/20/2014	XX	GW303A2AI	6.7	0.57		450	4 U	13	363	450	450	5.1	11
11/12/2014	XX	GW303A2CC	9.2	0.05 U		620	4 U	10	511	610	610	7.8	17
6/3/2015	XX	GW303A2E8	6.5	2.3		430	4 U	10	322	400	400	4.8	9
9/1/2015	XX	GW303A2G3	6.3	0.86		300	4 U	11	305	360	360	4.6	8
11/3/2015	XX	GW303A2HH	7.1	0.24		500	4 U	15	401	480	480	6.3	13
6/15/2016	XX	GW303A317	4.4	2.6		350	4 U	15	255	270	270	2.9	5.8
9/20/2016	XX	GW303A331	5.9	0.093		350	4 U	14	320	370	370	4.9	13
11/8/2016	XX	GW303A34F	6.1	0.05 U		550	4 U	14	434	630	630	7.1	19
6/13/2017	XX	GW303A36A	5.3	1.2		420	4 U	13	304	370	370	4.5	7.7
8/30/2017	XX	GW303A384	5.1	0.76		380	4 U	13	289	360	360	3.9	7.8
11/15/2017	XX	GW303A39I	6.3	0.05 U		510	4 U	11	461	510	510	7.2	17
6/20/2018	XX	GW303A3BD	5.1	2.1		360	4 U	14	292	330	330	3.7	5.3
8/15/2018	XX	GW303A3E2	5.1	0.05 U		360	4 U	15	263	340	340	4	6.7
11/27/2018	XX	GW303A3F1	7.5	0.66		690	4 U	11	570	690	690	10	20
6/4/2019	XX	GW303A3GG	5	2.5		410	4 U	12	286	350	350	4.7	5.9
8/14/2019	XD	GWDP1X3I2	5.3	1.1		360	4 U	15	240	320	320	3.9	6.4
8/14/2019	XX	GW303A3J5	5.3	0.94		350	4 U	16	221	350	350	3.9	6.9
10/22/2019	XX	GW303A404	5.7	0.05 U		430	4 U	12	330	380	380	5.9	11
6/16/2020	XX	GW303A41J	5.6	2.3		400	4 U	9	318	400	400	4.9	4.2
8/4/2020	XD	GWDP1X435	5.7	0.74		360	4 U	11		380	380	4.9	5.8
8/4/2020	XD	GWDP1X435R							326				
8/4/2020	XX	GW303A448	5.7	0.96		340	4 U	10		360	360	4.8	5
8/4/2020	XX	GW303A448R							328				
10/20/2020	XX	GW303A457	7.4	0.05 U		510	4 U	9.9	462	520	520	7.7	17
6/22/2021	XX	GW303A472	5.7	2.1		380	4 U	13	331	370	370	5.3	5.8
9/21/2021	XX	GW303A48H	6.2	0.064		440	4 U	11	386	500	500	6.3	12
6/28/2022	XX	GW303A4AJ	6.2	2.2		300	4 U	13	270	300	300	4.2	3.2
10/18/2022	XX	GW303A4CG	7.3	0.05 U				10	419	470	470	6.8	13
10/18/2022	XX	GW303A4CGRR				460 H	4 UH						
6/6/2023	XX	GW303A4EH	5.7	3.1		370	4 U	14	336	390	390	9.2	7.8
10/17/2023	XX	GW303A4IC	5.9	0.93		410	4 U	12	366	460	460	14	10
303B													
4/27/2000	XX	303BXX36643	5.36	8		444	35	8.1	349.6	300	364.6	5	18
8/2/2000	XX	303BXX36740	4.94	2.8		826	1	12.1	675.3	700	784.8	12.7	51.6
10/25/2000	XX	303BXX36824	3.92	5.1		1605	7	7.6	1337.8	1480	1545.3	30.5	85.4
5/9/2001	XX	303BXX37020	10.2	12.5		1051	1	8.1	733	950	982.5	14	49.6
7/25/2001	XX	303BXX37097	6.26	3.6		1143	2	10.7	890.3	860	930	16.4	51.1
10/17/2001	XX	303BXX37181	8.7	5.7		1604	5	11.3	1392.2	1514	1523	24.4	86.1
5/16/2002	XX	303BXX37392	7.28	8.2		673	1	8.3	505.3	485	560	1 U	20.6
8/2/2002	XX	303BXX37470	5.16	10.5		650	2	11.9	460	480	528	7.9	33.9

DATA SUMMARY TABLE

Inorganics

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(303B)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
10/17/2002	XX	303BXX37546	4.38	1.9		1296	7	19.9	999.1	1150	1198	20.4	75.8				
6/23/2003	XX	303BXX37795	9.9	13		510	1 U	16	450	420	470	7.1	16				
8/19/2003	XX	303BXX37852	11	2.8		810	1 U	11	770	780	820	13	30				
10/14/2003	XX	303BXX37908	12	2 U		1100	1 U	9.9	1100	1040	1100	21	38				
5/3/2004	XX	303BXX38110	12	5.5		680	1 U	12	650	590	610	10	20				
8/17/2004	XX	303BXX38216	14	2		1100	1 U	10	970	970	1100	16	39				
10/19/2004	XX	303BXX38279	15	2.5		1100	1 U	9	1100	1120	1200	23	35				
5/18/2005	XX	GW303B00J	20 U	6.8		520	1 U	13	170	440	480	6.1	12				
8/15/2005	XX	GW303B02B	10	4		490	1 U	14	410	400	440	7.1	26				
11/3/2005	XX	GW303B043	12	3.4		840	3.5	9	890	800	850	12	35				
5/11/2006	XX	GW303B08J	7.8	2 U		530	1 U	16	570	485	510	9.3	24				
7/26/2006	XX	GW303B077	7.7	2.7		420	1 U	15	440	400	420	6	15				
10/24/2006	XX	GW303B05F	6.9	2 U		790	1 U	13	920	780	810	13	35				
5/15/2007	XX	GW303B0AB	7.5	4.3		480	1 U	15	390	460	480	5.2	8.6				
8/15/2007	XX	GW303B0C4	0.21	1.6		650	1 U	13	490	470	510	37	29				
10/29/2007	XX	GW303B0DG	4.9	0.68		1100	1 U	10	1200	920	1000	26	44				
6/3/2008	XX	GW303B0G4	6.5	4.4		370	1 U	15	390	380	380	8	7.1				
8/13/2008	XX	GW303B0I4	5.5	2.5		350	1 U	17	280	330	360	6.3	9.5				
10/20/2008	XX	GW303B0JC	4.5	1.1		540	1 U	15	450	490	520	11	21				
5/5/2009	XX	GW303B11C	7.5	3.1		460	0.6 U	13	410	430	440	8.5	8.5				
8/6/2009	XX	GW303B13C	5.9	7.3		340	2 U	35	240	290	320	5.9	20				
10/21/2009	XX	GW303B150	4.4	1.5		460	1 U	13	360	410	420	12	17				
5/27/2010	XX	GW303B171	4.7	3.4		320	1 U	17	260	290	300	6.1	6.2				
8/4/2010	XX	GW303B192	6	0.84 H		540	1 U	10	550	550	580	12	19				
8/4/2010	XD	GWDP2X181	6.2	0.7 H		550	1.1 U	10	430		580	12	18				
10/14/2010	XX	GW303B1AA	2.4	4.6		720	1.1 U	10	530	705	720	16	24				
5/17/2011	XX	GW303B1E6	4.4	4.4		280	4.2 U	12	220	260	260	5.3	4.3				
8/9/2011	XX	GW303B1FH	4.2	1.7		320	0.38 U	13	180	290	290	6.5	11				
11/3/2011	XX	GW303B1H8	5.2	1.1 J		500	0.32 U	11	400	510	510	11	11				
5/17/2012	XX	GW303B1J2	6.4	2.6		120	2.5 U	12	290	330	330	5.08	5.4				
8/15/2012	XX	GW303B20F	5.7	2		370	2.5 U	12	300	350	350	6	7.2				
11/1/2012	XX	GW303B229	6.8	0.89		670	2.5 U	11	580	600	600	10	14				
5/21/2013	XX	GW303B243	4.8	3.8		250	2.5 U	14	230	270	270	3.7	4				
7/24/2013	XX	GW303B25H	4.4	3.2		290	2.5 U	12	190	250	250	3.9	4				
10/2/2013	XX	GW303B27B	4.6	0.35		370	2.5 U	9.6	300	390	390	5.6	8.7				
6/3/2014	XX	GW303B295	4.6	3.3		340	4 U	12	239	280	280	3.5	6.2				
8/20/2014	XX	GW303B2AJ	5.7	1.2		410	4 U	11	326	400	400	5.3	11				
11/12/2014	XX	GW303B2CD	7.3	2.1		700	4 U	6.4	572	660	660	9.1	18				
6/3/2015	XX	GW303B2E9	4.2	3.4		310	4 U	9.6	229	270	270	3.5	6.3				
9/1/2015	XX	GW303B2G4	2.8	1.9		350	4 U	9.7	268	280	280	4.4	8.2				
11/3/2015	XX	GW303B2HI	4.7	1.6		420	4 U	9.6	348	390	390	5.4	8.5				
6/15/2016	XX	GW303B318	2.6	2.4		230	4 U	13	157	170	170	2.3	5				
9/20/2016	XX	GW303B332	4.3	1.3		510	4 U	10	400	430	430	6.6	15				
11/8/2016	XX	GW303B34G	4.2	2.6		600	4 U	8.4	523	620	620	9.2	19				
6/13/2017	XX	GW303B36B	3.2	2		100	4 U	12	191	210	210	3.3	4.2				
8/30/2017	XX	GW303B385	2.7	3		300	4 U	13	220	240	240	3.4	8.4				
11/15/2017	XX	GW303B39J	5	0.98		610	4 U	6.2	554	640	640	9	18				
6/20/2018	XX	GW303B3BE	3.8	2.4		240	4 U	13	168	190	190	2.8	3				
8/15/2018	XX	GW303B3E3	2.7	0.82		340	4 U	13	252	270	270	4.2	9.1				

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(303B)			Ammonia (N)	Nitrate (N)	Total Phosphorus	Total Dissolved Solids	Total Suspended Solids	Sulfate	Ca-mg Hardness (CaCO3)	Bicarbonate Alkalinity (CaCO3)	Alkalinity (CaCO3)	Organic Carbon	Chloride				
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L				
11/27/2018	XX	GW303B3F2	5.4	3.8		650	4 U	7.2	565	680	680	9.7	17				
6/4/2019	XX	GW303B3GH	3.9	2.6		260	4 U	12	182	220	220	3.4	3.1				
8/14/2019	XX	GW303B3J6	3.2	1.8		250	4 U	14	178	210	210	3.2	6.3				
10/22/2019	XX	GW303B405	4.6	0.16		490	4 U	9.6	415	430	430	7.6	15				
6/16/2020	XX	GW303B420	4.6	2.9		280	4 U	9.7	205	260	260	3.4	2.8				
8/4/2020	XX	GW303B449	5.5	0.62		290	4 U	10		320	320	4.9	7.6				
8/4/2020	XX	GW303B449R							301								
10/20/2020	XX	GW303B458	6.2	3.1		570	4 U	6.5	508	580	580	9.7	16				
6/22/2021	XX	GW303B473	3.4	2.3		270	4 U	12	229	250	250	4.2	4.8				
9/21/2021	XX	GW303B48I	4.9	0.61		500	4 U	8.2	464	560	560	8.7	15				
6/28/2022	XX	GW303B4B0	4.4	2.1		220	4 U	17	200	210	210	3	3.6				
10/18/2022	XX	GW303B4CH	4.5	0.43				7.1	407	440	440	6.4	10				
10/18/2022	XX	GW303B4CHRR				400 H	4 UH										
6/6/2023	XX	GW303B4EI	3.6	3.2		280	4 U	13	274	290	300	7.1	5.9				
10/17/2023	XX	GW303B4ID	4	1.6		380	4 U	13	367	410	410	13	9.1				
304A																	
5/3/2000	XX	304AXX36649	0.1 U	1.4		216	14	13.7	164.3	145	164.6	1.6	9.5				
8/9/2000	XX	304AXX36747	0.1 U	1.3		191	2	15.4	114.8	135	148.5	2.9	8.5				
11/9/2000	XX	304AXX36839	0.1 U	1.1		289	1 U	14.5	70.3	170	180.8	1	10.3				
5/16/2001	XX	304AXX37027	0.1 U	1.4		210	1	16.9	108.5	160	164	1.6	13.2				
7/31/2001	XX	304AXX37103	0.1 U	1 U		198	2	15.8	102.6	146	146	7.6	9				
10/23/2001	XX	304AXX37187	0.1 U	1 U		236	3	15.9	165.3	166	175	1.7	15.4				
5/21/2002	XX	304AXX37397	0.12	1 U		241	1 U	17.9	117.4	180	180	1 U	16.8				
7/30/2002	XX	304AXX37467	0.1 U	1 U		232	1	19.4	109.1	165	170	1.1	14				
10/22/2002	XX	304AXX37551	0.1 U	1 U		265	2	19.5	137.9	205	220	1 U	18				
6/24/2003	XX	304AXX37796	0.2 U	2 U		220	1 U	15	230	195	210	1 U	11				
8/7/2003	XX	304AXX37840	0.2 U	2 U		210	1 U	15	210	170	180	1 U	7.2				
10/21/2003	XX	304AXX37915	0.2 U	2 U		260	1 U	17	250	200	220	1.2	12				
5/10/2004	XX	304AXX38117	0.2 U	2 U		210	1 U	14	220	190	210	1	9.1				
7/28/2004	XX	304AXX38196	0.2 U	2 U		210	1 U	16	190	195	210	1 U	9.6				
10/21/2004	XX	304AXX38281	0.2 U	2 U		320	1 U	16	240	200	220	1 U	11				
5/10/2005	XX	GW304A010	0.2 U	2 U		290	1 U	5.6	260	180	190	1 U	4.8				
7/28/2005	XX	GW304A02C	0.2 U	2 U		200	1.2	13	190	180	190	1 U	6.2				
11/8/2005	XX	GW304A044	0.2 U	2 U		240	1 U	13	130	200	220	1.2	7.6				
5/3/2006	XX	GW304A090	0.2 U	2 U		170	1.5	13	200	145	180	1.3	8.5				
8/1/2006	XX	GW304A078	0.24	2 U		230	23	12	240	190	200	1.1	8.7				
10/26/2006	XX	GW304A05G	0.2 U	2 U		239	5.5	13	180	180	190	1 U	9.7				
5/8/2007	XX	GW304A0AC	0.5 U	0.5 U		190	1.9	5.8	190	190	200	1 U	7				
8/7/2007	XX	GW304A0C5	0.2 U	0.5 U		250	1 U	11	190	180	190	3.8	12				
8/7/2007	XD	GWDP4X0EH	0.2 U	0.5 U		240	1 U	11	230		180	2.8	12				
10/31/2007	XX	GW304A0DH	0.2 U	0.5 U		260	1 U	13	270	180	190	1 U	18				
6/3/2008	XX	GW304A0G5	0.2 U	0.5 U		210	1 U	11	160	150	160	1.8	8.2				
8/18/2008	XX	GW304A0I5	0.2 U	0.5 U		240	1 U	13	150	160	170	1.1	9.4				
10/23/2008	XX	GW304A0JD	0.2 U	0.5 U		210	1 U	11	180	160	170	1 U	9				
10/23/2008	XD	SWDP4X109	0.2 U	0.5 U		210	1 U	11	170		170	1.2	9.1				
5/12/2009	XX	GW304A11D	0.2 U	0.5 U		190	0.6 U	13	140	155	160	1.2	7.4				
8/11/2009	XX	GW304A13D	0.2 U	0.5 U		240	1.7	13	170	120	150	1.6	5.8				
10/26/2009	XX	GW304A151	0.2 U	0.5 U		290	1.1	13	160	155	160	1.3	7.1				
6/2/2010	XX	GW304A172	0.2 U	0.5 U		190	2.3	14	170	150	150	2.2	6.8				

DATA SUMMARY TABLE

Inorganics

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(304A)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
8/5/2010	XX	GW304A193	0.2 U	0.5 U		170	1.1 U	13	160	150	150	1	6.1				
10/18/2010	XX	GW304A1AB	0.2 U	0.5 U		200	1.3 U	12	130	130	130	1.3	11				
5/19/2011	XX	GW304A1DC	0.2 U	0.5 U		150	5 U	12	130	140	140	1.1	5.1				
8/8/2011	XX	GW304A1F3	0.08 U	0.2 U		180	0.38 U	13	90	140	140	0.94 J	5.1				
8/8/2011	XD	GWDP2X1G8	0.08 U	0.2 U		720	0.38 U	7.6	130	680	680	0.8 J	33				
11/2/2011	XX	GW304A1GE	0.082 U	0.2 U		170	0.32 U	13	130	140	140	1.3	3.8				
5/15/2012	XX	GW304A1I8	0.2 U	0.09 U		130	2.5 U	9.9	130	130	130	1	4.1				
5/15/2012	XD	GWDP3X1JE	0.2 U	0.09 U		130	2.5 U	10	140	130	130	1.2	4.5				
8/15/2012	XX	GW304A201	0.2 U	0.25 U		140	2.5 U	12	110	120	120	1.36	2.5				
10/31/2012	XX	GW304A21F	0.2 U	0.25 U		140	2.5 U	11	130	130	130	0.8	8.6				
10/31/2012	XD	GWDP1X22J	0.2 U	0.25 U		150	2.5 U	11	130	130	130	0.6	9.3				
5/21/2013	XX	GW304A239	0.2 U	0.25 U		140	2.5 U	13	120	130	130	0.63	6.1				
5/21/2013	XD	GWDP1X24D	0.8	0.25 U		160	2.5 U	12	120	130	130	0.8	9.7				
7/25/2013	XX	GW304A253	0.2 U	0.25 U		180	2.5 U	12	120	130	130	0.64	6.5				
7/25/2013	XD	GWDP3X269	0.2 U	0.25 U		180	2.5 U	13	120	130	130	0.82	6.9				
10/2/2013	XX	GW304A26H	0.2 U	0.25 U		170	2.5 U	12	120	130	130	0.58	9.5				
10/2/2013	XD	GWDP2X283	0.2 U	0.25 U		180	2.5 U	12	120	130	130	0.53	9.9				
6/4/2014	XX	GW304A28B	0.1 U	0.05 U		160	4 U	13	121	110	110	1 U	6.9				
6/4/2014	XD	GWDP1X29F	0.1 U	0.05 U		160	4 U	13	118	120	120	1 U	6.5				
8/20/2014	XX	GW304A2A5	0.1 U	0.05 U		160	6	13	121	140	140	1 U	7				
8/20/2014	XD	GWDP1X2B9	0.1 U	0.05 U		150	4 U	13	119	130	130	1 U	7.8				
11/12/2014	XX	GW304A2BJ	0.1 U	0.05 U		160	4 U	10	103	120	120	1 U	6				
11/12/2014	XD	GWDP2X2D5	0.1 U	0.05 U		140	4 U	10	106	130	130	1 U	6.1				
6/3/2015	XX	GW304A2DF	0.1 U	0.05 U		160	4 U	11	112	120	120	1 U	5.1				
6/3/2015	XD	GWDP1X2EJ	0.1 U	0.05 U		150	4 U	11	108	120	120	1 U	5.1				
9/2/2015	XX	GW304A2FA	0.1 U	0.052		160	4 U	12	117	120	120	1 U	4.3				
9/2/2015	XD	GWDP1X2GE	0.1 U	0.05 U		160	4 U	12	125	120	120	1 U	4.6				
11/4/2015	XX	GW304A2H4	0.1 U	0.05 U		180	4 U	11	121	130	130	1 U	5.6				
11/4/2015	XD	GWDP2X2IA	0.1 U	0.05 U		180	4 U	11	116	130	130	1 U	5.5				
6/16/2016	XD	GWDP1X31I	0.1 U	0.05 U		150	4 U	13	114	120	120	1 U	4.7				
6/16/2016	XX	GW304A30E	0.1 U	0.05 U		150	4 U	13	112	120	120	1 U	4.5				
9/21/2016	XD	GWDP1X33C	0.1 U	0.05 U		190	4 U	14	107	120	120	1 U	3.6				
9/21/2016	XX	GW304A328	0.1 U	0.05 U		140	4 U	14	109	110	110	1 U	3.3				
11/8/2016	XD	GWDP2X358	0.1 U	0.05 U		140	4 U	13	117	140	140	1 U	5.6				
11/8/2016	XX	GW304A342	0.1 U	0.05 U		150	4 U	13	118	140	140	1 U	4.6				
6/14/2017	XD	GWDP1X371	0.1 U	0.05 U		140	4 U	14	116	120	120	1 U	4				
6/14/2017	XX	GW304A35H	0.1 U	0.05 U		140	4 U	14	121	180	180	1 U	3.4				
8/29/2017	XD	GWDP1X38F	0.1 U	0.05 U		180	4 U	12	108	120	120	1 U	2.9				
8/29/2017	XX	GW304A37B	0.1 U	0.05 U		160	4 U	12	111	120	120	1 U	3.5				
11/14/2017	XD	GWDP2X3AB	0.1 U	0.05 U		160	4 U	11	109	120	120	1 U	3.9				
11/14/2017	XX	GW304A395	0.1 U	0.05 U		150	4 U	12	104	120	120	1 U	3.8				
6/21/2018	XD	GWDP1X3C4	0.1 U	0.05 U		190	4 U	13	113	120	120	1 U	2 U				
6/21/2018	XX	GW304A3B0	0.1 U	0.05 U		170	4.8	13	125	120	120	1 U	2 U				
8/15/2018	XD	GWDP1X3CJ	0.1 U	0.05 U		170	4 U	14	109	120	120	1 U	2.7				
8/15/2018	XX	GW304A3D9	0.1 U	0.05 U		150	8	14	111	120	120	1 U	2.2				
11/30/2018	XD	GWDP2X3FE	0.1 U	0.05 U		140	4 U	12	118	120	120	1 U	4.7				
11/30/2018	XX	GW304A3E8	0.1 U	0.05 U		110	4 U	12	119	120	120	1 U	4.5				
6/5/2019	XD	GWDP1X3H7	0.1 U	0.05 U		170	4 U	12	110	120	120	1 U	3.7				
6/5/2019	XX	GW304A3G3	0.1 U	0.05 U		160	4 U	12	107	120	120	1 U	3				

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(304A) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
8/14/2019	XX	GW304A3IC	0.1 U	0.05 U		160	4 U	14		120	120	1 U	3.1				
8/14/2019	XX	GW304A3ICR							117								
10/24/2019	XD	GWDP2X40H	0.1 U	0.05 U		160	5.2	12	107	120	120	1 U	2.9				
10/24/2019	XX	GW304A3JB	0.1 U	0.05 U		150	4 U	12	112	120	120	1 U	3.3				
6/17/2020	XD	GWDP1X42A	0.1 U	0.05 U		150	4 U	10	114	140	140	1 U	2.8				
6/17/2020	XX	GW304A416	0.1 U	0.05 U		140	4 U	11	106	130	130	1 U	2.1				
8/5/2020	XX	GW304A43F	0.1 U	0.05 U		120	4 U	11	113	120	120	1 U	2.1				
10/22/2020	XD	GWDP2X460	0.1 U	0.05 U		160	4 U	9.2	128	130	130	1 U	4.8				
10/22/2020	XX	GW304A44E	0.1 U	0.05 U		170	4 U	9.4	129	130	130	1 U	4.5				
6/22/2021	XD	GWDP1X47D	0.1 U	0.05 U		140	4 U	13	110	130	130	1 U	3				
6/22/2021	XX	GW304A469	0.1 U	0.05 U		99	4 U	13	114	130	130	1 U	2.8				
9/22/2021	XD	GWDP2X49A	0.1 U	0.05 U		150	7.2	11	130	140	140	1 U	4.5				
9/22/2021	XX	GW304A484	0.1 U	0.05 U		150	4 U	11	127	140	140	1 U	4.6				
6/29/2022	XD	GWDP1X4BA	0.1 U	0.05 U		140	4 U	13	131	140	140	1 U	5.2				
6/29/2022	XX	GW304A4A6	0.1 U	0.05 U		140	4.8	14	133	130	130	1 U	5				
10/18/2022	XD	GWDP2X4D9	0.1 U	0.05 U		160		12	131	140	140	1 U	6.7				
10/18/2022	XD	GWDP2X4D9RR					4 UH										
10/18/2022	XX	GW304A4C3	0.1 U	0.05 U		160		12	130	140	140	1 U	5.4				
10/18/2022	XX	GW304A4C3RR					4 UH										
6/6/2023	XD	GWDP1X4F8	0.1 U	0.05 U		160	4 U	13	135	140	140	1 U	5.6				
6/6/2023	XX	GW304A4E4	0.1 U	0.05 U		160	4 U	13	129	140	140	1 U	4.9				
10/17/2023	XD	GWDP2X4J4	0.1 U	0.05 U		180	8.4	12	132	160	160	1.7	5.1				
10/17/2023	XX	GW304A4HJ	0.1 U	0.05 U		170	4 U	12	134	150	150	1.6	4.3				
304B																	
5/3/2000	XX	304BXX36649	0.1 U	1 U		67	86	2.9	22	22	24.2	5	1.4				
8/9/2000	XX	304BXX36747	0.1 U	1 U		122	16	7.7	39.4	54	61.6	1	20.3				
11/9/2000	XX	304BXX36839	0.1 U	1 U		168	1	6.5	74.3	58	58.6	1 U	63.7				
5/16/2001	XX	304BXX37027	0.1 U	1 U		163	1 U	13.4	47.6	74	75	1 U	34.1				
7/31/2001	XX	304BXX37103	D	D			D	D	D	D	D	D	D				
10/23/2001	XX	304BXX37187	0.1 U	1 U		204	16	20.7	121.4	110	115	1.7	25.7				
5/21/2002	XX	304BXX37397	0.1	1 U		125	1	8.9	49.8	76	80	1	13.4				
7/30/2002	XX	304BXX37467	0.1 U	1 U		187	1 U	14	68.7	120	122	1.4	15.6				
10/22/2002	XX	304BXX37551	0.1 U	1 U		175	2	13.3	73.8	110	116	1.5	21.7				
6/24/2003	XX	304BXX37796	0.2 U	2 U		120	1 U	12	130	100	100	1 U	19				
8/7/2003	XX	304BXX37840	0.2 U	2 U		120	1 U	11	110	96	100	1 U	13				
10/21/2003	XX	304BXX37915	0.2 U	2 U		140	1 U	11	100	92	93	1.4	14				
5/10/2004	XX	304BXX38117	0.2 U	2 U		63	1 U	10	87	70	70	1 U	12				
7/28/2004	XX	304BXX38196	0.2 U	2 U		98	1 U	10	74	78	81	1 U	9.7				
10/21/2004	XX	304BXX38281	0.2 U	2 U		180	1 U	11	92	78	83	1 U	8.7				
5/10/2005	XX	GW304B011	0.2 U	2 U		100	1 U	6.8	59	58	59	1 U	11				
7/28/2005	XX	GW304B02D	0.2 U	2 U		180	16	7.6	110	60	63	1 U	34				
11/8/2005	XX	GW304B045	0.2 U	2 U		150	1 U	6.8	99	62	65	1 U	33				
5/3/2006	XX	GW304B091	0.2 U	2 U		120	1 U	6.8	62	56	57	1 U	11				
8/1/2006	XX	GW304B079	0.24	2 U		120	1 U	7.1	85	60	61	1 U	24				
10/26/2006	XX	GW304B05H	0.2 U	2 U		96	1 U	5.9	77	56	56	1 U	26				
5/8/2007	XX	GW304B0AD	0.5 U	0.5 U		98	1 U	6.7	74	68	69	1 U	13				
8/7/2007	XX	GW304B0C6	0.2 U	0.5 U		160	2.1	6.1	98	68	69	2.2	28				
10/31/2007	XX	GW304B0DI	0.2 U	0.5 U		160	1 U	6.1	85	68	69	1 U	29				
6/5/2008	XX	GW304B0G6	0.2 U	0.5 U		98	1 U	6.9	53	54	54	1 U	5.8				

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(304B) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
6/5/2008	XD	LTDP4X0F5	0.2 U	0.5 U		100	1 U	6.9	56		54	1 U	5.9				
8/18/2008	XX	GW304B0I6	0.2 U	0.5 U		100	1 U	5.4	35	46	46	1.2	3.1				
10/23/2008	XX	GW304B0JE	0.2 U	0.5 U		93	3.7	6.5	50	53	53	1.4	3.3				
5/12/2009	XX	GW304B11E	0.2 U	0.5 U		67	0.6 U	3.5	20	28	28	1	4.3				
8/11/2009	XX	GW304B13E	0.2 U	0.5 U		140	0.6 U	3.5	69	33	33	1	30				
10/26/2009	XX	GW304B152	0.2 U	0.5 U		110	5.8	4.1	44	31	33	1.6	20				
6/2/2010	XX	GW304B173	0.2 U	0.5 U		72	1 U	4.4	38	42	42	1.1	5.4				
8/5/2010	XX	GW304B194	0.2 U	0.5 U		89	1.7	5.2	47	40	40	1.2	21				
10/18/2010	XX	GW304B1AC	0.2 U	0.5 U		85	1.6	3.8	38	34	34	2.2	21				
10/18/2010	XD	GWDP3X1B6	0.2 U	0.5 U		100	1.4	3.9	35		34	2.4	21				
5/19/2011	XX	GW304B1DD	0.2 U	0.5 U		25	5 U	2.9	19	26	26	1 U	3.8				
8/8/2011	XX	GW304B1F4	0.08 U	0.2 U		87	0.38 U	Y4	28	39	39	0.72 J	18				
11/2/2011	XX	GW304B1GF	0.082 U	0.2 U		75	0.32 U	3.8	44	34	34	1.3	15				
5/15/2012	XX	GW304B1I9	0.2 U	0.09 U		13	2.5 U	2.5	29	26	26	1	6.5				
8/15/2012	XX	GW304B202	0.2 U	0.25 U		160	2.5 U	3.6	68	36	36	1 U	46				
10/31/2012	XX	GW304B21G	0.2 U	0.25 U		52	2.5 U	3.1	53	34	34	0.96	22				
5/21/2013	XX	GW304B23A	0.67	0.25 U		34	2.5 U	3.8	32	37	37	0.69	9.8				
7/25/2013	XX	GW304B254	0.2 U	0.25 U		90	2.5 U	5.1	41	41	41	0.85	9.8				
10/2/2013	XX	GW304B26I	0.2 U	0.25 U		72	2.5 U	5.8	36	42	42	0.7	7.5				
6/4/2014	XX	GW304B28C	0.1 U	0.05 U		69	4 U	5.5	37.3	44	44	1 U	5				
8/20/2014	XX	GW304B2A6	0.1 U	0.053		68	4 U	4.6	36.9	43	43	1 U	9.4				
11/12/2014	XX	GW304B2C0	0.1 U	0.05 U		63	4 U	3.1	26.5	31	31	1.2	7.2				
6/3/2015	XX	GW304B2DG	0.1 U	0.05 U		29	4 U	2.9	20.2	26	26	1 U	3.3				
9/2/2015	XX	GW304B2FB	0.1 U	0.05 U		75	4 U	5	35.9	43	43	1 U	4.7				
11/4/2015	XX	GW304B2H5	0.1 U	0.05 U		73	4 U	5.8	27	35	35	1 U	4.2				
6/16/2016	XX	GW304B30F	0.1 U	0.05 U		64	4 U	3.6	29.2	39	39	1 U	5.1				
9/21/2016	XX	GW304B329	0.1 U	0.05 U		75	16	4.5	33.2	44	44	1 U	3.6				
11/8/2016	XX	GW304B343	0.1 U	0.057		96	4 U	5.3	52.2	71	71	1 U	7.5				
6/14/2017	XX	GW304B35I	0.1 U	0.05 U		72	4 U	4.7	37.1	48	48	1 U	3.4				
8/29/2017	XX	GW304B37C	0.1 U	0.05 U		71	14	1.8	27.8	38	38	1 U	2.9				
11/14/2017	XX	GW304B396	0.1 U	0.05 U		75	4 U	2.7	37.8	48	48	1 U	3.9				
6/21/2018	XX	GW304B3B1	0.1 U	0.05 U		84	4 U	3.8	36.8	43	43	1 U	3.8				
8/15/2018	XX	GW304B3DA	0.1 U	0.05 U		88	4.4	2.8	40.1	40	40	1 U	9				
11/30/2018	XX	GW304B3E9	0.1 U	0.05 U		22	4 U	1 U	18.2	24	24	2.1	2.3				
6/5/2019	XX	GW304B3G4	0.1 U	0.05 U		110	5.2	2.3	36.7	45	45	1 U	3.8				
8/14/2019	XX	GW304B3ID	0.1 U	0.05 U		77	47	4.6	42.4	55	55	1 U	6				
10/24/2019	XX	GW304B3JC	0.1 U	0.05 U		65	47	4.2	37.7	49	49	1 U	5.3				
6/17/2020	XX	GW304B417	0.1 U	0.05 U		84	6	3.6	40.1	62	62	1 U	4.1				
8/5/2020	XX	GW304B43G	0.1 U	0.05 U		39	66	3.6	50.7	58	58	1 U	5.2				
10/22/2020	XX	GW304B44F	0.1 U	0.05 U		68	6.8	3.2	22.6	34	34	2.6	2.9				
6/22/2021	XX	GW304B46A	0.1 U	0.05 U		100	10	3.8	60.7	72	72	1.1	6.2				
9/22/2021	XX	GW304B485	0.1 U	0.05 U		220	4 U	3.8	95.3	110	110	1 U	15				
6/29/2022	XX	GW304B4A7	0.1 U	0.05 U		86	4 U	5.1	102	100	100	1 U	11				
10/18/2022	XX	GW304B4C4	0.1 U	0.05 U		77		2.5	41	53	53	1.2	2.2				
10/18/2022	XX	GW304B4C4RR					12 H										
6/6/2023	XX	GW304B4E5	0.1 U	0.05 U		40	11	1 U	44.2	56	56	1	2 U				
10/17/2023	XX	GW304B4I0	0.1 U	0.05 U		82	7.2	3.7	54.6	70	70	1.4	2				
401A																	
5/3/2000	XX	401AXX36649	0.1 U	1 U		128	15	5.4	78.7	78	87.9	1.1	3.6				

DATA SUMMARY TABLE

Inorganics

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(401A)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
8/10/2000	XX	401AXX36748	0.1 U	1 U		136	1	6.2	56	78	80.8	1.2	4.3				
11/9/2000	XX	401AXX36839	0.1 U	1 U		125	1 U	6.8	49.8	100	103.2	1 U	4.6				
5/17/2001	XX	401AXX37028	0.1 U	1 U		126	1	7.5	59.2	95	96	1 U	3.7				
8/1/2001	XX	401AXX37104	0.1 U	1 U		131	3	8.3	61.7	79	79	3.2	4				
10/24/2001	XX	401AXX37188	0.1 U	1 U		133	3	10.1	71.6	94	99	1.1	4.1				
5/22/2002	XX	401AXX37398	0.1 U	1 U		137	4	9.2	60.6	90	94	1 U	3.2				
7/30/2002	XX	401AXX37467	0.1 U	1 U		145	2	9.9	59.5	98	100	1.1	3.4				
10/22/2002	XX	401AXX37551	0.1 U	1 U		125	1 U	11.1	60.7	98	102	1 U	4				
6/25/2003	XX	401AXX37797	0.2 U	2 U		99	1 U	10	110	100	100	1 U	2.8				
8/11/2003	XX	401AXX37844	0.2 U	2 U		78	1 U	9.9	100	95	99	1 U	3.6				
10/21/2003	XX	401AXX37915	0.2 U	2 U		120	1 U	11	110	95	98	1 U	4.2				
5/10/2004	XX	401AXX38117	0.2 U	2 U		90	1 U	12	110	95	96	1 U	5.3				
7/29/2004	XX	401AXX38197	0.2 U	2 U		100	1 U	11	95	78	80	1 U	5.3				
10/21/2004	XX	401AXX38281	0.2 U	2 U		180	1 U	12	110	95	96	1 U	5.6				
5/9/2005	XX	GW401A012	0.2 U	2 U		140	1 U	11	100	74	76	1 U	5.7				
7/28/2005	XX	GW401A02E	0.2 U	2 U		160	1.2	12	130	95	97	1 U	5.8				
11/8/2005	XX	GW401A046	0.2 U	2 U		120	1 U	13	120	90	95	1 U	6.2				
5/4/2006	XX	GW401A092	0.2 U	2 U		120	1 U	12	120	97	99	1 U	6.1				
8/2/2006	XX	GW401A07A	0.2 U	2 U		120	1 U	14	100	93	94	12	5.7				
10/30/2006	XX	GW401A05I	0.2 U	2 U		140	1 U	15	110	93	94	1 U	5.9				
5/7/2007	XX	GW401A0AE	0.5 U	0.5 U		130	1 U	13	110	100	110	1 U	5.7				
8/14/2007	XX	GW401A0C7	0.2 U	0.5 U		150	1 U	14	88	93	95	2.3	6.8				
11/5/2007	XX	GW401A0DJ	0.2 U	0.5 U		160	1 U	17	130	98	99	1 U	7.7				
6/5/2008	XX	GW401A0G7	0.2 U	0.5 U		140	1 U	15	110	97	97	1 U	6.1				
8/20/2008	XX	GW401A0I7	0.2 U	0.5 U		160	1 U	17	110	98	99	1	6.4				
10/27/2008	XX	GW401A0JF	0.2 U	0.5 U		140	1 U	15	120	96	98	1 U	7.2				
5/13/2009	XX	GW401A11F	0.2 U	0.5 U		160	0.6 U	18	98	95	96	1 U	7.8				
8/13/2009	XX	GW401A13F	0.2 U	0.5 U		150	0.6 U	17	110	97	99	1 U	6.9				
10/28/2009	XX	GW401A153	0.2 U	0.5 U		120	1 U	18	92	95	98	1 U	8.1				
10/28/2009	XD	SWDP4X15H	0.2 U	0.5 U		140	1 U	18	90		100	1.3	8				
6/3/2010	XX	GW401A174	0.2 U	0.5 U		120	1 U	19	120	95	95	1.6	8				
8/17/2010	XX	GW401A195	0.2 U	0.5 U		150	1 U	19	93	95	99	1.7	8.4				
10/19/2010	XX	GW401A1AD	0.2 U	0.5 U		140	1.3 U	20	93	94	97	1 U	9.1				
5/16/2011	XX	GW401A1DE	0.2 U	0.5 U		140	5 U	18	100	86	86	1.1	9				
8/8/2011	XX	GW401A1F5	0.08 U	0.2 U		2 J	0.7 J	20	72	99	99	1.8	10				
11/1/2011	XX	GW401A1GG	0.082 U	0.2 U		140	0.32 U	20	110	100	100	1	7.9				
5/14/2012	XX	GW401A1IA	0.2 U	0.5 U		100	2.5 U	19	110	89	89	1 U	8				
8/14/2012	XX	GW401A203	0.2 U	0.25 U		160	2.8 U	20	99	95	95	1.14	8.4				
11/1/2012	XX	GW401A21H	0.2 U	0.25 U		150	2.5 U	19	110	85	85	0.86	8.6				
5/21/2013	XX	GW401A23B	0.2 U	0.25 U		130	2.5 U	21	100	96	96	0.68	9.4				
7/22/2013	XX	GW401A255	0.2 U	0.25 U		120	2.5 U	21	100	90	90	0.81	9.4				
9/30/2013	XX	GW401A26J	0.2 U	0.25 U		120	2.5 U	22	78	94	94	0.53	9.4				
6/4/2014	XX	GW401A28D	0.1 U	0.069		160	4 U	23	113	93	94	1 U	10				
8/19/2014	XX	GW401A2A7	0.1 U	0.065		180	7.2	22	113	110	110	1	14				
11/11/2014	XX	GW401A2C1	0.1 U	0.05 U		160	6	24	106	100	100	1 U	12				
6/2/2015	XX	GW401A2DH	0.1 U	0.05 U		160	8.8	23	108	94	94	1 U	11				
9/1/2015	XX	GW401A2FC	0.1 U	0.23		180	4 U	23	121	98	98	1 U	11				
11/3/2015	XX	GW401A2H6	0.1 U	0.05 U		150	4 U	24	118	100	100	1 U	11				
6/14/2016	XX	GW401A30G	0.1 U	0.05 U		160	4 U	23	123	99	99	1 U	12				

SEVEE & MAHER ENGINEERS, INC.
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(401A) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
9/20/2016	XX	GW401A32A	0.1 U	0.05 U		200	4 U	24	122	100	100	1 U	11				
11/9/2016	XX	GW401A344	0.1 U	0.05 U		170	5.2	25	119	110	110	1.1	12				
6/14/2017	XX	GW401A35J	0.1 U	0.05 U		150	4 U	25	119	12	12	1 U	10				
8/29/2017	XX	GW401A37D	0.1 U	0.05 U		180	4 U	24	120	100	100	1 U	11				
11/14/2017	XX	GW401A397	0.1 U	0.05 U		160	4 U	23	115	93	93	1 U	9.9				
6/20/2018	XX	GW401A3B2	0.1 U	0.05 U		190	4 U	24	122	100	100	1 U	12				
8/15/2018	XX	GW401A3DB	0.1 U	0.05 U		170	4 U	25	119	110	110	1 U	11				
11/30/2018	XX	GW401A3EA	0.1 U	0.064		150	4 U	28	120	96	96	1 U	8.9				
6/5/2019	XX	GW401A3G5	0.1 U	0.05 U		190	4 U	24	116	100	100	1 U	10				
8/14/2019	XX	GW401A3IE	0.1 U	0.05 U		170	4 U	24	125	100	100	1 U	11				
10/22/2019	XX	GW401A3JD	0.1 U	0.05 U		180	4 U	24	127	110	110	1 U	8.9				
6/17/2020	XX	GW401A418	0.1 U	0.05 U		160	4 U	22	120	120	120	1 U	8.9				
8/4/2020	XX	GW401A43H	0.1 U	0.05 U		120	4 U	22		110	110	1 U	9.6				
8/4/2020	XX	GW401A43HR							130								
10/21/2020	XX	GW401A44G	0.1 U	0.05 U		180	4 U	41	135	110	110	1 U	8.8				
6/23/2021	XX	GW401A46B	0.1 U	0.05 U		190	4 U	23	125	110	110	1 U	10				
9/21/2021	XX	GW401A486	0.1 U	0.05 U		140	4.4	24	121	120	120	1 U	9.7				
6/28/2022	XX	GW401A4A8	0.1 U	0.05 U		130	4 U	27	131	110	110	1 U	10				
10/19/2022	XX	GW401A4C5	0.1 U	0.05 U			4 U	24	139	110	110	1 U	9.4				
10/19/2022	XX	GW401A4C5RR				130											
6/7/2023	XX	GW401A4E6	0.1 U	0.05 U		160	4 U	25	141	110	110	1.2	10				
10/18/2023	XX	GW401A4I1	0.1 U	0.05 U		180	4 U	26	132	110	120	1.5	9.1				
401B																	
5/3/2000	XX	401BXX36649	0.1 U	1.1		195	30	25	142.6	83	92.9	2	29.8				
8/10/2000	XX	401BXX36748	0.1 U	1.1		352	2	27.5	109.5	92	99	1.3	30.1				
11/9/2000	XX	401BXX36839	0.1 U	1.1		198	1	27.8	77.8	99	101	1.1	26				
5/17/2001	XX	401BXX37028	0.1 U	1.6		203	12	30	117	98	99	1.1	23.1				
8/1/2001	XX	401BXX37104	0.1 U	1 U		213	3	31.8	128.2	102	102	3.7	25.1				
10/24/2001	XX	401BXX37188	0.1 U	1 U		215	29	29.8	119.6	98	104	1.4	26.1				
5/22/2002	XX	401BXX37398	0.15	1 U		213	6	32	85.4	100	104	1.3	25.5				
7/30/2002	XX	401BXX37467	0.1 U	1 U		218	1 U	34.5	92.9	97	108	1.4	25.4				
10/22/2002	XX	401BXX37551	0.1 U	1 U		191	1 U	30.4	87.9	109	112	1 U	25.3				
6/25/2003	XX	401BXX37797	0.2 U	2 U		170	1 U	33	160	110	110	1.3	25				
8/11/2003	XX	401BXX37844	0.2 U	2 U		170	1 U	30	150	107	110	1.1	19				
10/21/2003	XX	401BXX37915	0.2 U	2 U		200	1 U	29	160	108	110	1	20				
5/10/2004	XX	401BXX38117	0.2 U	2 U		150	1 U	35	160	98	110	1	21				
7/29/2004	XX	401BXX38197	0.2 U	2 U		170	1 U	32	140	100	110	1.2	20				
10/21/2004	XX	401BXX38281	0.2 U	2 U		270	1 U	32	160	110	120	1 U	20				
5/9/2005	XX	GW401B013	0.2 U	2 U		210	1.2	32	160	98	100	1.2	20				
7/28/2005	XX	GW401B02F	0.2 U	2 U		230	3.6	30	170	115	120	1 U	17				
11/8/2005	XX	GW401B047	0.2 U	2 U		200	1 U	34	150	120	130	1.1	20				
5/4/2006	XX	GW401B093	0.2 U	2 U		210	1 U	30	170	115	120	1.8	18				
8/2/2006	XX	GW401B07B	0.2 U	2 U		190	1 U	32	160	115	120	1 U	17				
10/30/2006	XX	GW401B05J	0.32	2 U		210	1 U	32	140	120	130	1 U	16				
5/7/2007	XX	GW401B0AF	0.5 U	0.5 U		210	1 U	32	170	140	150	1 U	14				
8/14/2007	XX	GW401B0C8	0.2 U	0.5 U		220	1 U	31	150	110	130	3.6	15				
11/5/2007	XX	GW401B0E0	0.2 U	0.5 U		230	1 U	33	210	130	140	1	17				
6/5/2008	XX	GW401B0G8	0.2 U	0.5 U		220	1 U	29	160	130	140	1.4	11				
8/20/2008	XX	GW401B0I8	0.2 U	0.5 U		230	1 U	31	160	120	140	1.4	12				

(401B)			Ammonia (N)	Nitrate (N)	Total Phosphorus	Total Dissolved Solids	Total Suspended Solids	Sulfate	Ca-mg Hardness (CaCO3)	Bicarbonate Alkalinity (CaCO3)	Alkalinity (CaCO3)	Organic Carbon	Chloride				
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L				
10/27/2008	XX	GW401B0JG	0.2 U	0.5 U		180	1 U	28	190	120	140	1.7	13				
5/13/2009	XX	GW401B11G	0.2 U	0.5 U		230	0.6 U	32	150	135	140	1.6	12				
8/13/2009	XX	GW401B13G	0.2 U	0.5 U		220	0.6 U	33	180	120	140	1.3	11				
10/28/2009	XX	GW401B154	0.2 U	0.5 U		190	1 U	30	150	145	150	2.1	11				
6/3/2010	XX	GW401B175	0.2 U	0.5 U		220	1 U	31	170	140	140	2.2	10				
8/17/2010	XX	GW401B196	0.2 U	0.5 U		220	1 U	28	160	150	150	2.4	10				
10/19/2010	XX	GW401B1AE	0.2 U	0.5 U		220	1.3 U	31	140	145	150	1.6	10				
5/16/2011	XX	GW401B1DF	0.2 U	0.5 U		230	5 U	29	160	150	150	3.1	9.8				
8/8/2011	XX	GW401B1F6	0.08 U	0.2 U		220	0.38 U	31	150	160	160	1.4	9.6				
11/1/2011	XX	GW401B1GH	0.082 U	0.2 U		220	0.32 U	27	160	170	170	1.6	6.9				
5/14/2012	XX	GW401B1IB	0.2 U	0.5 U		200	2.5 U	26	160	150	150	1 U	6.9				
8/14/2012	XX	GW401B204	0.2 U	0.25 U		150	2.8 U	26	140	160	160	1.43	6.3				
11/1/2012	XX	GW401B21I	0.2 U	0.25 U		230	2.5 U	26	170	160	160	1	6.5				
5/21/2013	XX	GW401B23C	0.2 U	0.25 U		200	2.5 U	26	160	160	160	1	6.7				
7/22/2013	XX	GW401B256	0.2 U	0.25 U		230	2.5 U	25	160	150	150	1.1	6.3				
9/30/2013	XX	GW401B270	0.2 U	0.25 U		220	2.5 U	26	170	170	170	0.99	6.4				
6/4/2014	XX	GW401B28E	0.1 U	0.05 U		240	4 U	24	176	160	160	1 U	7				
8/19/2014	XX	GW401B2A8	0.1 U	0.05 U		240	5.6	24	175	180	180	1 U	9				
11/11/2014	XX	GW401B2C2	0.1 U	0.05 U		220	4 U	24	157	180	180	1 U	8.1				
6/2/2015	XX	GW401B2DI	0.1 U	0.05 U		230	4 U	20	165	160	160	1 U	6.8				
9/1/2015	XX	GW401B2FD	0.1 U	0.05 U		220	4 U	20	189	180	180	1 U	6.6				
11/3/2015	XX	GW401B2H7	0.1 U	0.05 U		230	4 U	21	186	180	180	1 U	7.2				
6/14/2016	XX	GW401B30H	0.1 U	0.05 U		230	4 U	21	191	180	180	1 U	6.7				
9/20/2016	XX	GW401B32B	0.1 U	0.05 U		270	4 U	20	191	190	190	1 U	5.8				
11/9/2016	XX	GW401B345	0.1 U	0.05 U		230	4 U	20	185	200	200	1.1	7.8				
6/14/2017	XX	GW401B360	0.1 U	0.05 U		200	4 U	20	197	190	190	1.2	6				
8/29/2017	XX	GW401B37E	0.1 U	0.05 U		240	4 U	17	183	200	200	1 U	4.6				
11/14/2017	XX	GW401B398	0.1 U	0.05 U		230	4 U	17	180	200	200	1 U	4.8				
6/20/2018	XX	GW401B3B3	0.1 U	0.05 U		270	4 U	17	210	200	200	1 U	5.2				
8/15/2018	XX	GW401B3DC	0.1 U	0.05 U		240	4 U	17	200	240	300	1 U	4.6				
11/30/2018	XX	GW401B3EB	0.1 U	0.05 U		220	4 U	15	198	200	200	1 U	4.1				
6/5/2019	XX	GW401B3G6	0.1 U	0.05 U		250	4 U	14	194	210	210	1 U	3.6				
8/14/2019	XX	GW401B3IF	0.1 U	0.05 U		260	4 U	15	194	210	210	1 U	5.7				
10/22/2019	XX	GW401B3JE	0.1 U	0.05 U		260	4 U	14	205	200	200	1 U	4.3				
6/17/2020	XX	GW401B419	0.1 U	0.05 U		220	4 U	12	202	240	240	1 U	2.6				
8/4/2020	XX	GW401B43I	0.1 U	0.05 U		200	4 U	11		210	210	1 U	3.6				
8/4/2020	XX	GW401B43IR							210								
10/21/2020	XX	GW401B44H	0.1 U	0.05 U		240	4.4	11	217	210	210	1 U	2.2				
6/23/2021	XX	GW401B46C	0.1 U	0.05 U		240	4 U	12	204	220	220	1 U	3.4				
9/21/2021	XX	GW401B487	0.1 U	0.05 U		220	4 U	11	197	220	220	1 U	3.2				
6/28/2022	XX	GW401B4A9	0.1 U	0.05 U		180	6.4	13	219	210	210	1 U	3.4				
10/19/2022	XX	GW401B4C6	0.1 U	0.05 U			4 U	12	210	200	200	1 U	3.7				
10/19/2022	XX	GW401B4C6RR				220											
6/7/2023	XX	GW401B4E7	0.1 U	0.05 U		210	4.8	12	216	220	220	2	3.3				
10/18/2023	XX	GW401B4I2	0.1 U	0.05 U		220	4 U	11	196	220	220	2.5	2.9				
402A																	
5/3/2000	XX	402AXX36649	0.178	1 U		128	2	9.3	86.9	78	88.9	1 U	4.4				
8/10/2000	XX	402AXX36748	0.119	1 U		81	1 U	10.8	67.2	85	92.9	1 U	4.5				
11/9/2000	XX	402AXX36839	0.1 U	1 U		131	1 U	8.4	57.4	90	94.9	1 U	5.3				

DATA SUMMARY TABLE

Inorganics

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(402A)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
5/17/2001	XX	402AXX37028	0.1 U	1 U		125	2	9.2	58.7	91	92	1 U	7.2				
8/1/2001	XX	402AXX37104	0.1 U	1 U		180	1	9.7	63.4	90	90	3.2	7.2				
10/24/2001	XX	402AXX37188	0.1 U	1 U		137	4	8.6	62.3	82	90	1.6	8.3				
5/22/2002	XX	402AXX37398	0.18	1 U		141	1 U	9	63.9	83	86	1 U	6.7				
7/30/2002	XX	402AXX37467	0.1 U	1 U		142	1 U	9.4	68.9	85	90	1 U	8.1				
10/22/2002	XX	402AXX37551	0.1 U	1 U		121	1 U	9.3	61.8	76	82	1 U	8.3				
6/25/2003	XX	402AXX37797	0.2 U	2 U		100	1 U	10	110	89	91	1 U	10				
8/11/2003	XX	402AXX37844	0.2 U	2 U		86	1 U	8.6	100	86	90	1 U	8.6				
10/22/2003	XX	402AXX37916	0.2 U	2 U		120	1 U	9.5	99	88	90	1 U	9.8				
5/11/2004	XX	402AXX38118	0.2 U	2 U		87	1 U	10	120	90	91	1 U	12				
7/29/2004	XX	402AXX38197	0.2 U	2 U		100	1 U	9.4	100	79	82	1 U	12				
10/26/2004	XX	402AXX38286	0.2 U	2 U		120	1 U	10	110	85	90	1 U	14				
5/9/2005	XX	GW402A014	0.2 U	2 U		150	1 U	8.5	110	79	81	1 U	14				
8/1/2005	XX	GW402A02G	0.2 U	2 U		190	1 U	8.8	120	88	91	1 U	12				
11/9/2005	XX	GW402A048	0.47	2 U		110	1 U	8.3	120	94	96	1.2	15				
5/4/2006	XX	GW402A094	0.2 U	2 U		130	1 U	8	120	90	93	1 U	16				
8/2/2006	XX	GW402A07C	0.2 U	2 U		120	1 U	8.4	110	89	90	1.2	15				
10/30/2006	XX	GW402A060	0.2	2 U		120	1 U	8.7	120	88	89	1 U	16				
5/7/2007	XX	GW402A0AG	0.5 U	0.5 U		140	1 U	7.8	120	95	100	1 U	16				
8/14/2007	XX	GW402A0C9	0.2 U	0.5 U		160	1 U	8.5	99	89	90	2.8	19				
11/5/2007	XX	GW402A0E1	0.2 U	0.5 U		160	1 U	8.6	150	93	94	1 U	21				
6/5/2008	XX	GW402A0G9	0.2 U	0.5 U		150	1 U	7.7	120	94	94	1 U	16				
8/20/2008	XX	GW402A0I9	0.2 U	0.5 U		170	1 U	8.2	120	93	95	1.3	18				
10/27/2008	XX	GW402A0JH	0.2 U	0.5 U		130	1 U	7.1	130	94	95	1.3	22				
5/13/2009	XX	GW402A11H	0.2 U	0.5 U		160	0.6 U	8.3	110	94	95	1.2	22				
5/13/2009	XD	LTDP4X10D	0.2 U	0.5 U		130	0.6 U	8.3	110		94	1 U	22				
8/13/2009	XX	GW402A13H	0.2 U	0.5 U		170	0.6 U	8.8	130	94	95	1 U	21				
10/28/2009	XX	GW402A155	0.2 U	0.5 U		130	1 U	7.1	100	93	96	1.6	24				
6/3/2010	XX	GW402A176	0.2 U	0.5 U		160	1.1 U	7.2	120	85	94	1.5	21				
8/17/2010	XX	GW402A197	0.2 U	0.5 U		180	1 U	6.4	110	96	97	1.8	27				
10/19/2010	XX	GW402A1AF	0.2 U	0.5 U		170	1.4 U	8.3	110	94	96	1.7	29				
5/16/2011	XX	GW402A1DG	0.2 U	0.5 U		170	5 U	8.3	120	98	98	1.6	32				
8/8/2011	XX	GW402A1F7	0.08 U	0.2 U		190	0.38 U	12	110	93	93	1.4	34				
11/1/2011	XX	GW402A1GI	0.082 U	0.2 U		170	0.32 U	8	120	100	100	1.8	27				
5/16/2012	XX	GW402A1IC	0.2 U	0.5 U		180	2.5 U	7.1	120	91	91	1.65	33				
8/15/2012	XX	GW402A205	0.2 U	0.25 U		180	2.5 U	7.1	120	96	96	1.87	32				
10/31/2012	XX	GW402A21J	0.2 U	0.25 U		170	3.3	6.6	140	85	85	1.4	29				
5/20/2013	XX	GW402A23D	0.2 U	0.25 U		180	2.5 U	7.8	110	94	94	1.2	26				
7/22/2013	XX	GW402A257	0.2 U	0.25 U		190	2.5 U	7.1	130	94	94	1.5	31				
9/30/2013	XX	GW402A271	0.2 U	0.25 U		190	2.5 U	7.2	130	100	100	1.5	31				
6/4/2014	XX	GW402A28F	0.1 U	0.05 U		210	4 U	7.7	157	100	100	1.1	34				
8/19/2014	XX	GW402A2A9	0.1 U	0.05 U		220	4 U	7.6	149	110	110	1.3	34				
11/11/2014	XX	GW402A2C3	0.1 U	0.05 U		170	4 U	8	130	110	110	1.1	32				
6/4/2015	XX	GW402A2DJ	0.1 U	0.05 U		190	4 U	6.9	144	100	100	1.3	35				
9/1/2015	XX	GW402A2FE	0.1 U	0.05 U		200	4 U	6.8	154	110	110	1.5	34				
11/3/2015	XX	GW402A2H8	0.1 U	0.05 U		170	4 U	7.8	150	110	110	1.3	33				
6/14/2016	XX	GW402A30I	0.1 U	0.05 U		220	4 U	7.8	162	110	110	1.3	38				
9/20/2016	XX	GW402A32C	0.1 U	0.05 U		220	4 U	8	171	120	120	1.5	39				
11/9/2016	XX	GW402A346	0.1 U	0.05 U		190	4 U	7.9	180	130	130	1.8	40				

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(402A) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
6/14/2017	XX	GW402A361	0.1 U	0.05 U		180	4 U	13	166	110	110	1.7	36				
8/29/2017	XX	GW402A37F	0.1 U	0.05 U		200	4 U	6.8	172	120	120	1.3	38				
11/15/2017	XX	GW402A399	0.1 U	0.05 U		180	4 U	6.4	168	120	120	1.3	33				
6/20/2018	XX	GW402A3B4	0.1 U	0.05 U		220	4 U	7.4	182	120	120	1.3	39				
8/15/2018	XX	GW402A3DD	0.1 U	0.05 U		650	4 U	4.5	172	650	650	1.4	15				
11/28/2018	XX	GW402A3EC	0.1 U	0.05 U		170	4 U	6.7	170	120	120	1.4	32				
6/5/2019	XX	GW402A3G7	0.1 U	0.05 U		250	4 U	6.5	184	130	130	1.5	36				
8/13/2019	XX	GW402A3IG	0.1 U	0.05 U		240	4 U	6.6	180	140	140	1.6	40				
10/22/2019	XX	GW402A3JF	0.1 U	0.44		240	4 U	7.4	177	130	130	1.9	34				
6/17/2020	XX	GW402A41A	0.1 U	0.05 U		200	4 U	6.5	177	140	140	1.7	35				
8/4/2020	XX	GW402A43J	0.1 U	0.05 U		180	4 U	6.6		140	140	1.8	34				
8/4/2020	XX	GW402A43JR							206								
10/21/2020	XX	GW402A44I	0.1 U	0.85		250	4 U	6.6	203	140	140	1.7	36				
6/23/2021	XX	GW402A46D	0.1 U	0.05 U		230	4 U	7.2	211	160	160	2.3	39				
9/21/2021	XX	GW402A488	0.1 U	0.05 U		220	4 U	6.4	203	170	170	1.9	37				
6/28/2022	XX	GW402A4AA	0.1 U	0.05 U		220	4 U	8.1	213	160	160	1.4	36				
10/19/2022	XX	GW402A4C7	0.1 U	0.05 U			4 U	7.4	225	170	170	1.8	35				
10/19/2022	XX	GW402A4C7RR				210											
6/7/2023	XX	GW402A4E8	0.1 U	0.05 U		220	4 U	8.3	244	180	180	2.7	37				
10/17/2023	XX	GW402A4I3	0.1 U	0.05 U		260	4 U	7.1	209	170	170	3.4	34				
402B																	
5/3/2000	XX	402BXX36649	0.1 U	2.9		796	91	8.5	689.4	610	680.7	16.5	58				
8/10/2000	XX	402BXX36748	0.1 U	3.8		1299	4	7.8	1084.4	1000	1131.2	23.1	122				
11/9/2000	XX	402BXX36839	0.221	3		1205	5	7.6	926.4	1000	1071.6	21.4	98.7				
5/17/2001	XX	402BXX37028	0.1 U	2.5		1308	1	7.9	1038.7	1050	1148	21.9	79.4				
8/1/2001	XX	402BXX37104	0.1 U	1.1		1305	3	7.2	1137.5	1100	1130	22.2	75.8				
10/24/2001	XX	402BXX37188	0.115	1 U		1258	5	30.9	1082.1	1029	1045	18.7	82.8				
5/22/2002	XX	402BXX37398	0.1 U	1.45		1089	3	10.1	958.6	880	974	15.3	65.3				
8/7/2002	XX	402BXX37475	0.1 U	1.1		1079	2	10.9	866.8	864	934	16.5	63.8				
10/24/2002	XX	402BXX37553	0.1 U	1 U		1068	3	17.2	937.6	1000	1040	211.2	70.8				
6/25/2003	XX	402BXX37797	0.2 U	2 U		830	1 U	13	920	720	780	16	50				
8/11/2003	XX	402BXX37844	0.37	2 U		880	1 U	7.6	840	890	940	13	51				
10/22/2003	XX	402BXX37916	0.25	2 U		890	1 U	7.1	900	760	810	14	40				
5/11/2004	XX	402BXX38118	0.2 U	2 U		730	1 U	10	680	680	710	14	39				
8/2/2004	XX	402BXX38201	0.28	2 U		770	1 U	9.4	710	690	740	13	42				
10/26/2004	XX	402BXX38286	0.2 U	2 U		810	1 U	7.8	820	700	730	10	39				
5/9/2005	XX	GW402B015	0.2 U	2 U		700	1 U	8.4	640	460	480	8.6	34				
8/1/2005	XX	GW402B02H	0.2 U	2 U		940	1 U	8.2	870	760	810	9.3	44				
11/9/2005	XX	GW402B049	0.2 U	2 U		670	1 U	7.4	950	700	750	8.7	41				
5/5/2006	XX	GW402B095	0.2 U	2 U		640	2.5	7.1	760	600	640	8.7	30				
8/2/2006	XX	GW402B07D	0.2 U	2 U		800	1 U	7.3	820	740	790	9.8	39				
10/30/2006	XX	GW402B061	0.34	2 U		630	1 U	6	610	600	630	7.6	27				
5/7/2007	XX	GW402B0AH	0.5 U	0.5 U		680	1 U	6.5	650	690	730	6	24				
8/14/2007	XX	GW402B0CA	0.2 U	0.5 U		780	1 U	7.7	720	720	750	37	33				
11/5/2007	XX	GW402B0E2	4.6	0.5 U		660	1 U	7.8	710	610	670	11	26				
6/11/2008	XX	GW402B0GA	0.2 U	0.5 U		770	1 U	7.3	740	710	770	13	25				
8/20/2008	XX	GW402B0IA	0.2 U	0.5 U		800	1 U	8.6	710	710	770	10	25				
8/20/2008	XD	GWDP4X0H5	0.2 U	0.5 U		790	1 U	8.7	700		770	11	25				
10/27/2008	XX	GW402B0JI	0.2 U	0.5 U		720	1 U	7	800	680	740	13	26				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(402B) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
5/13/2009	XX	GW402B11I	0.2 U	0.5 U		750	0.6 U	8	730	690	720	13	26				
8/13/2009	XX	GW402B13I	0.2 U	0.5 U		400	0.6 U	8.3	910	680	720	9.5	25				
8/13/2009	XD	GWDP4X12D	0.2 U	0.5 U		760	0.6 U	8.3	860		720	9.6	26				
10/28/2009	XX	GW402B156	0.2 U	0.5 U		490	1 U	7	540	670	700	15	26				
6/3/2010	XX	GW402B177	0.2 U	0.5 U		690	1.1 U	7.3	790	620	680	13	27				
8/17/2010	XX	GW402B198	0.2 U	0.5 U		720	1 U	7	630	670	700	13	28				
8/17/2010	XD	GWDP4X183	0.2 U	0.5 U		720	2.2 U	7.3	590		700	12	28				
10/19/2010	XX	GW402B1AG	0.2 U	0.5 U		700	2.5 U	8.1	570	650	690	10	30				
5/16/2011	XX	GW402B1DH	0.2 U	0.5 U		580	5 U	6.6	550	540	540	12	23				
8/8/2011	XX	GW402B1F8	0.08 U	0.2 U		170	0.38 U	14	590	140	140	11	4.6				
11/1/2011	XX	GW402B1GJ	0.082 U	0.2 U		670	0.32 U	7.4	630	710	710	11	26				
5/16/2012	XX	GW402B1ID	0.2 U	0.5 U		600	2.5 U	6.8	540	580	580	5.64	22				
8/15/2012	XX	GW402B206	0.2 U	0.25 U		690	2.5 U	6.9	460	640	640	7.05	26				
10/31/2012	XX	GW402B220	0.2 U	0.25 U		590	2.5 U	6.4	610	590	590	6	22				
5/20/2013	XX	GW402B23E	0.2 U	0.25 U		650	2.5 U	7.2	510	630	630	5.9	23				
7/22/2013	XX	GW402B258	0.2 U	0.25 U		700	2.5 U	7.1	560	620	620	5.9	23				
9/30/2013	XX	GW402B272	0.2 U	0.25 U		640	2.5 U	6.8	590	670	670	6.1	23				
6/4/2014	XX	GW402B28G	0.1 U	0.05 U		700	4.4	7	626	630	630	4.4	21				
8/19/2014	XX	GW402B2AA	0.1 U	0.05 U		710	4 U	6.9	614	670	670	5	20				
11/11/2014	XX	GW402B2C4	0.1 U	0.05 U		640	4 U	6.8	576	630	630	4.8	20				
6/4/2015	XX	GW402B2E0	0.1 U	0.05 U		660	4 U	6.2	578	590	590	4.7	17				
9/1/2015	XX	GW402B2FF	0.15	0.39		710	4 U	5.9	688	640	640	5.4	18				
11/3/2015	XX	GW402B2H9	0.13	0.05 U		620	4 U	1.5	581	600	600	5.1	17				
6/14/2016	XX	GW402B30J	0.1 U	0.05 U		690	4 U	6.1	625	600	600	4.3	20				
9/20/2016	XX	GW402B32D	0.11	0.05 U		670	4 U	5.7	630	620	620	4.9	17				
11/9/2016	XX	GW402B347	0.11	0.05 U		660	4 U	5.7	638	660	660	5.5	18				
6/14/2017	XX	GW402B362	0.1 U	0.05 U		640	4 U	8.5	646	620	620	4.9	14				
8/29/2017	XX	GW402B37G	0.1 U	0.05 U		640	4 U	3.8	582	620	620	4.5	14				
11/15/2017	XX	GW402B39A	0.1	0.05 U		630	4 U	3.9	596	650	650	4.6	13				
6/20/2018	XX	GW402B3B5	0.1 U	0.05 U		650	4 U	4.9	620	640	640	4.3	18				
8/15/2018	XX	GW402B3DE	0.1 U	0.54		650	4 U	4.5	586	140	140	4.5	14				
11/28/2018	XX	GW402B3ED	0.1	0.05 U		640	10	7.3	590	620	620	4.5	13				
6/5/2019	XX	GW402B3G8	0.1 U	0.05 U		650	4 U	4.9	588	600	600	4.3	11				
8/13/2019	XX	GW402B3IH	0.1 U	0.05 U		600	4 U	5.6	572	610	620	4.9	14				
10/22/2019	XX	GW402B3JG	0.1 U	0.05 U		660	4 U	6.4	588	590	590	5	12				
6/17/2020	XX	GW402B41B	0.1 U	0.05 U		590	4 U	5.7	546	630	630	4.5	10				
8/4/2020	XX	GW402B440	0.1 U	0.05 U		540	4 U	6.4		580	580	4.5	11				
8/4/2020	XX	GW402B440R							607								
10/21/2020	XX	GW402B44J	0.11	0.05 U		590	4 U	6.2	606	580	580	4.7	9.8				
6/23/2021	XX	GW402B46E	0.1 U	0.05 U		590	4 U	7.3	563	600	600	4.9	11				
9/21/2021	XX	GW402B489	0.16	0.05 U		570	6	6.5	554	600	600	4.6	11				
6/28/2022	XX	GW402B4AB	0.17	0.05 U		520	4 U	7.7	584	560	560	4.1	11				
10/19/2022	XX	GW402B4C8	0.12	0.05 U			4 U	6.5	583	540	540	3.9	10				
10/19/2022	XX	GW402B4C8RR				520											
6/7/2023	XX	GW402B4E9	0.1 U	0.05 U		530	8.4	6.9	571	580	580	9.8	11				
10/17/2023	XX	GW402B4I4	0.13	0.05 U		520	4 U	5.4	561	570	570	10	9.4				
LDS																	
6/10/2008	XX	LDSXX39597	0.21	0.5 U	0.045	550	8.6	22	480	430	460	19	28				
8/19/2008	XX	LDSXX39687	0.2 U	0.5 U	0.053	600	8.8	22	510	470	500	20	25				

DATA SUMMARY TABLE

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(LDS) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
10/22/2008	XX	LDSXX39736	0.2 U	0.5 U	0.06	640	9.9	13	640	520	550	11	25				
5/7/2009	XX	LDSXX39940	2.7	0.5 U		880	37	1 U	870	790	820	30	49				
8/12/2009	XX	LDSXX40037	2.8	0.5 U	0.05 U	800	72	1 U	680	725	770	19	40				
10/27/2009	XX	LDSXX40113	2.2	0.5 U	0.02 U	820	24	9.5	650	740	770	49	41				
6/7/2010	XX	GWXXXX1B8	5.9	0.5 U	0.02 U	970	42	1 U	790	840	880	25	47				
8/18/2010	XX	GWXXXX1B9	7.1	0.5 U	0.02 U	1000	34	1 U	660	880	950	42	54				
10/21/2010	XX	GWXXXX1BA	4.5	0.5 U	0.24	860	32	1 U	590	785	810	29	49				
5/18/2011	XX	LTXXXX1EF	1.4	0.5 U	0.045	560	20	18	440	510	510	18	38				
8/10/2011	XX	LTXXXX1G6	1.5	0.2 U	0.079	580	17	19	360	520	520	11	40				
11/2/2011	XX	LTXXXX1HH	1.6	0.2 U	0.044	620	13	19	430	500	500	12	35				
5/14/2012	XX	LTXXXX1JB	5.1	0.5 U	0.02 U	850	18	30	730	676	676	21	41				
8/14/2012	XX	LTXXXX214	7.1	0.25 U	0.086	370	46	3.7	180	320	320	41.3	4				
10/30/2012	XX	LTXXXX22I	5.4	0.25 U	0.043	790	14	27	650	710	710	20	42				
5/21/2013	XX	LTXXXX24C	5	0.25 U	0.041	830	15	24	600	740	740	18	40				
7/25/2013	XX	LTXXXX266	4.9	0.25 U	0.042	840	14	21	580	690	690	19	38				
10/1/2013	XX	LTXXXX280	4.9	0.25 U	0.02 U	800	15	13	620	710	710	17	38				
6/5/2014	XX	LTXXXX29E	7.9	0.05 U	0.1 U	1000	14	1 U	738	830	830	23	49				
8/21/2014	XX	LTXXXX2B8	1.4	0.05 U	0.1 U	550	4.4	16	406	440	440	7.2	37				
11/13/2014	XX	LTXXXX2D2	0.66	0.19	0.1 U	560	4 U	29	428	480	480	8.4	38				
6/4/2015	XX	LTXXXX2EI	1.2	0.05 U	0.1 U	590	10	20	419	440	440	6.5	37				
9/3/2015	XX	LTXXXX2GD	1	0.05 U	0.1 U	570	9.6	16	436	460	460	6.8	32				
11/5/2015	XX	LTXXXX2I7	1.1	0.05 U	0.1 U	580	8.8	16	452	470	470	6.2	37				
6/16/2016	XX	LTXXXX31H	1.6	0.05 U	0.1 U	630	6.4	26	496	500	500	7.6	34				
9/22/2016	XX	LTXXXX33B	1.5	0.05 U	0.1 U	620	9.6	1 U	473	480	480	7.6	34				
11/10/2016	XX	LTXXXX355	1.3	0.05 U	0.1 U	590	10	1 U	444	540	540	8	36				
6/15/2017	XX	LTXXXX370	3.9	0.05 U	0.1 U	780	6.8	36	658	640	640	16	38				
8/31/2017	XX	LTXXXX38E	2.4	0.05 U	0.1 U	720	7.6	22	547	590	590	11	38				
11/16/2017	XX	LTXXXX3A8	2.6	0.05 U	0.1 U	680	8	51	503	560	560	12	35				
6/21/2018	XX	LTXXXX3C3	3.2	0.05 U	0.1 U	760	5.6	30	578	620	620	13	35				
8/16/2018	XX	LTXXXX3CI	2.8	0.05 U	0.1 U	750	8.8	24	555	630	630	12	38				
11/29/2018	XX	LTXXXX3FB	6.2	0.05 U	0.1 U	820	4 U	29	712	720	720	24	42				
6/6/2019	XX	LTXXXX3H6	6.6	0.05 U	0.1 U	900	4.8	26	755	810	810	21	39				
8/15/2019	XX	LTXXXX3I1	6	0.05 U	0.1 U	880	8	23	651	760	760	19	40				
10/24/2019	XX	LTXXXX40E	2.3	0.05 U	0.1 U	620	23	16	533	550	550	12	31				
6/18/2020	XX	LTXXXX429	2.4	0.05 U	0.1 U	860	13	12	531	630	630	11	150				
8/6/2020	XX	LTXXXX434	2.6	0.05 U	0.1 U	790	17	5.8	573	580	580	11	120				
10/22/2020	XX	LTXXXX45H	2.4	0.05 U	0.1 U	780	10	10 U	559	580	580	10	110				
6/24/2021	XX	LTXXXX47C	1.5	0.5 U	0.34	580	4 U	110	382	420	420	85	54				
9/23/2021	XX	LTXXXX497	0.46	0.05 U	0.1 U	570	11	16	508	520	520	7.2	34				
6/30/2022	XX	LTXXXX4B9	0.19	0.05 U	0.1 U	570	4.4	48	478	500	500	6.7	28				
10/20/2022	XX	LTXXXX4D6	D	D	D	D		D	D	D	D	D	D				
6/8/2023	XX	LTXXXX4F7	D	D	D	D	D	D	D	D	D	D	D				
10/19/2023	XX	LTXXXX4J1	D	D	D		D	D	D	D	D	D	D				
LP																	
5/3/2000	XX	LPXX36649	23.4	6.1	1.364	1943	133	61.7	1243.8	1180	1351.4	263	95.2				
8/9/2000	XX	LPXX36747	14.56	15.5	1.18	2440	101	8.4	1407.3	1475	1835.7	238.8	136.8				
11/8/2000	XX	LPXX36838	22.05	13.5	0.861	2464	80	78	1351.7	1900	1979.6	203.3	110.6				
5/16/2001	XX	LPXX37027	22.8	10	0.503	2563	125	50	1418.9	1800	1865	253	141.4				
7/31/2001	XX	LPXX37103	27	2.4	0.287	3903	128	20	1035.2	2550	2700	383.4	208				

DATA SUMMARY TABLE

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CUMBERLAND CENTER, ME 04021

(LP)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
10/23/2001	XX	LPXX37187	22.4	4.4	1.1	3556	50	17.4	1810.8	2415	2475	325.2	248				
5/21/2002	XX	LPXX37397	15.75	1.88	0.093	1828	129	91	1229.7	1230	1354	56.3	107				
8/6/2002	XX	LPXX37474	22.05	3.1	0.585	2684	119	3.2	1302.4	1914	2005	140.1	161.5				
10/24/2002	XX	LPXX37553	21.1	1.35	0.575	2118	45	52.2	1167.1	1650	1720	144.5	139.6				
6/26/2003	XX	LPXX37798	14	2 U	0.23	1400	83	70	1100	1000	1100	68	78				
8/13/2003	XX	LPXX37846	14	2 U	0.36	1400	50	51	870	1080	1100	74	58				
10/22/2003	XX	LPXX37916	11	2 U	0.13	1000	58	180	930	680	710	60	27				
5/6/2004	XX	LPXX38113	9.9	2 U	0.1 U	1000	54	77	870	800	840	46	37				
7/27/2004	XX	LPXX38195	15	0.5 U	0.1 U	1400	55	47	2300	1120	1200	80	93				
10/25/2004	XX	LPXX38285	21	2 U	0.1 U	1700	24	13	1300	1300	1400	64	100				
5/12/2005	XX	LTLPXX002	11	2 U	0.28	1100	35	61	970	840	880	69	48				
7/25/2005	XX	LTLPXX01E	14	2 U	0.27	1800	86	30	1300	1600	1700	77	88				
11/9/2005	XX	LTLPXX036	12	2 U	0.1 U	920	50	95	1000	900	980	40	48				
5/2/2006	XX	LTLPXX082	12	2 U	0.3	1300	54	80	1100	890	980	47	53				
8/3/2006	XX	LTLPXX06A	12	2 U	0.41	910	58	32	820	780	810	52	41				
10/18/2006	XX	LTLPXX04I	17	2 U	0.65	1400	50	120	650	1040	1100	48	65				
5/21/2007	XX	LTLPXX09E	1.1	2 U	0.43	1000	65	66	790	780	820	59	47				
5/21/2007	XD	LTXXXX0ED	1.1	2 U	0.47	1100	64	54	850		860	77	38				
8/8/2007	XX	LTLPXX0B7	A	A		A	A	A	A	A	A	A	A				
11/6/2007	XX	LTLPXX0CJ	4.2	1.9	0.28	1200	82	320	680	590	640	67	38				
5/27/2008	XX	LTLPXX0F7	1.2	0.5 U	0.22	1200	63	15	810	880	930	92	69				
8/19/2008	XX	LTLPXX0H7	4.3	0.5 U	0.28	1100	66	33	740	860	920	56	45				
10/22/2008	XX	LTLPXX0IF	6	0.5 U	0.55	1900	69	100	1500	1300	1400	120	92				
5/7/2009	XX	LTLPXX10F	7.5	0.5 U		1400	50	50	1200	940	1000	170	33				
8/12/2009	XX	LTLPXX12F	8.3	0.5 U	0.26	1400	30	4	1300	1120	1200	260	59				
10/27/2009	XX	LTLPXX143	4.9	0.59	0.14	840	59	65	680	675	710	150	34				
6/7/2010	XX	LTLPXX164	8.2	0.5 U	0.19	1300	87	48	670	960	1000	130	62				
6/7/2010	XD	LTDP4X162	8	0.5 U	0.21	1300	95	48	680		1000	130	62				
8/18/2010	XX	LTLPXX185	15	0.5 U	0.022	2000	46	11	760	1560	1700	110	140				
10/21/2010	XX	LTLPXX19D	10	0.5 U	0.37	1400	45	150	920	1060	1100	68	66				
5/18/2011	XX	LTXXXX1ED	5	0.5 U	0.11	710	31	37	500	610	610	37	24				
5/18/2011	XD	LTXXXX1EI	5	0.5 U	0.11	710	33	37	510	620	620	36	24				
8/10/2011	XX	LTXXXX1G4	6.6	0.2 U	0.51	1300	68	15	680	1200	1300	89	130				
11/2/2011	XX	LTXXXX1HF	11	0.2 U	0.16	1200	17	67	750	1100	1100	51	48				
11/2/2011	XD	LTDP3X1I0	11	0.2 U	0.15	1100	20	66	770	980	980	51	48				
5/14/2012	XX	LTXXXX1J9	5.6	0.52	0.035	640	24	33	490	520	520	26	17				
8/15/2012	XX	LTXXXX212	5.3	0.25 U	0.33	1300	100	13	690	1100	1100	96.5	85				
8/15/2012	XD	LTDP3X217	5.3	0.25 U	0.34	1300	92	13	650	1000	1000	97.7	84				
10/30/2012	XX	LTXXXX22G	9.6	0.25 U	0.12	940	23	70	680	780	780	32	33				
5/21/2013	XX	LTXXXX24A	8	0.25 U	0.14	960	42	26	650	810	810	31	42				
7/25/2013	XX	LTXXXX264	6.4	0.25 U	0.17	900	70	11	370	740	760	43	47				
10/1/2013	XX	LTXXXX27I	11	0.25 U	0.066	1000	18	18	510	890	890	33	37				
6/5/2014	XX	LTXXXX29C	11	0.05 U	0.1 U	1100	7.2	1 U	749	850	850	27	39				
8/21/2014	XX	LTXXXX2B6	27	0.05 U	0.14	1800	82	1.1	1160	1400	1400	51	82				
11/13/2014	XX	LTXXXX2D0	6.9	1.1	0.1 U	830	7.2	100	556	590	590	23	23				
6/4/2015	XX	LTXXXX2EG	6.2	0.36	0.1 U	700	15	28	500	550	560	18	19				
9/3/2015	XX	LTXXXX2GB	7.8	0.16	0.14	1100	26	1.5	705	870	880	47	50				
11/5/2015	XX	LTXXXX2I5	7.6	0.39	0.1 U	800	25	3.1	548	640	640	24	24				
6/16/2016	XX	LTXXXX31F	11	0.38	0.1 U	1100	6.8	1 U	760	930	930	30	48				

SEVEE & MAHER ENGINEERS, INC.
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(LP) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
9/22/2016	XX	LTXXXX339	4.2	0.84	0.19	1400	24	1 U	871	1000	1100	54	82				
11/10/2016	XX	LTXXXX353	14	0.69	0.1 U	1500	14	1 U	918	1200	1200	51	82				
6/15/2017	XX	LTXXXX36I	12	0.12	0.1 U	1000	4 U	26	810	910	910	30	39				
8/31/2017	XX	LTXXXX38C	27	0.05 U	0.11	1800	10	1 U	1230	1600	1600	55	91				
11/16/2017	XX	LTXXXX3A6	7.4	0.75	0.1 U	780	8.4	77	610	600	600	22	26				
6/21/2018	XX	LTXXXX3C1	9.2	1.4	0.1 U	1300	8.8	1 U	875	1000	1000	34	50				
8/16/2018	XX	LTXXXX3CG	5.5	0.53	0.15	1000	49	54	644	810	820	35	50				
11/29/2018	XX	LTXXXX3F9	3.2	0.6	0.1 U	270	4 U	33	259	260	260	9.9	11				
6/6/2019	XX	LTXXXX3H4	7.5	0.18	0.1 U	680	17	23	551	630	630	19	20				
8/15/2019	XX	LTXXXX3HJ	16	0.05 U	0.1 U	1200	4 U	1 U	824	1100	1100	45	51				
10/24/2019	XX	LTXXXX40C	12	0.68	0.1 U	950	6.8	35	696	850	850	30	39				
6/18/2020	XX	LTXXXX427	12	0.05 U	0.1 U	1000	4 U	1 U	742	1000	1000	32	39				
8/6/2020	XX	LTXXXX432	4.4	0.31	0.1 U	1200	10	1.4	907	1000	1000	43	57				
10/22/2020	XX	LTXXXX45F	3.7	4.4	0.1 U	750	9.6	88	565	540	540	24	27				
6/24/2021	XX	LTXXXX47A	8.5	0.084	0.1 U	1200	4.8	1 U	822	1000	1000	40	50				
10/5/2021	XX	LTXXXX49J	5.6	0.52	0.1 U	710	7.2	55	523	580	580	23	21				
6/30/2022	XX	LTXXXX4B7	1.8	0.58	0.1 U	580	4 U	22	481	510	510	10	27				
10/20/2022	XX	LTXXXX4DG	2.5	1.8	0.23	400		62	323	260	260	23	9.2				
10/20/2022	XX	LTXXXX4DGRR					16										
6/8/2023	XX	LTXXXX4F5	7.8	0.9	0.15	800	4 U	33	691	770	770	27	31				
10/19/2023	XX	LTXXXX4JB	11	0.12	0.1 U	670	9.6	46	636	760	760	32	27				
LPD2																	
5/19/2005	XX	LTLPD2003	0.79	2 U	0.1 U	160	4	4.5	120	115	120	6.9	2 U				
8/2/2005	XX	LTLPD201F	3.3	2 U		410	16	6.9	410	345	370	17	4.5				
10/26/2005	XX	LTLPD2037	2.9	2 U	0.12	160	12	18	130	110	120	11	2 U				
5/10/2006	XX	LTLPD2083	0.2 U	2 U	0.02 U	95	3	3.5	120	97	99	8.1	2				
7/24/2006	XX	LTLPD206B	0.21	2 U	0.024	100	7	1.9	110	100	100	9.2	2 U				
10/10/2006	XX	LTLPD204J	4.9	2 U	0.02 U	320	22	12	340	290	310	24	5.2				
5/21/2007	XX	LTLPD209F	0.65	2 U	0.02 U	94	1 U	1.8	100	100	110	4.2	1				
8/6/2007	XX	LTLPD20B8	1.5	0.5 U	0.17	370	30	6.9	360	300	330	40	6.1				
10/24/2007	XX	LTLPD20D0	0.43	0.5 U	0.074	170	5.7	24	100	62	63	9.7	2 U				
5/28/2008	XX	LTLPD20F8	1.7	0.5 U	0.02 U	140	1 U	3.4	140	145	150	8	2 U				
8/11/2008	XX	LTLPD20H8	0.2 U	0.5 U	0.03	130	1.3	1.5	120	110	130	8.2	2 U				
10/15/2008	XX	LTLPD20IG	2.4	0.67	0.04	140	3.7	17	130	100	110	10	2 U				
5/6/2009	XX	LTLPD210G	0.2 U	0.5 U		120	0.6 U	1.3	90	98	100	5.8	1.1				
5/6/2009	XD	GWDP2X10B	0.2 U	0.5 U		150	0.6 U	1.2	90		100	4.8	2 U				
8/4/2009	XX	LTLPD212G	0.2 U	0.5 U	0.03	120	2 U	1 U	86	89	91	6.4	2 U				
10/19/2009	XX	LTLPD2144	0.71	0.5 U	0.04	140	5.2	15	86	71	72	9.9	2 U				
10/19/2009	XD	GWDP2X15F	0.71	2.2	0.05	120	1.3	15	90		100	10	2 U				
5/25/2010	XX	LTLPD2165	2.8	0.5 U	0.02 U	190	2.7	3.6	180	165	170	11	2 U				
8/2/2010	XX	LTLPD2186	1.9	0.5 UH	0.029	280	25	1 U	110	240	260	28	3.3				
10/12/2010	XX	LTLPD219E	0.62	1.5	0.062	150	4.8	30	97	73	74	9.6	2 U				
10/12/2010	XD	GWDP2X1B5	0.55	1.6	0.035	160	4.7	31	51		74	9.8	2 U				
5/18/2011	XX	LTXXXX1EE	0.2 U	0.5 U	0.02 U	26	5 U	2.9	44	44	44	4	2 U				
8/10/2011	XX	LTXXXX1G5	4.3	0.2 U	0.12	330	13	5	240	300	300	39	6.2				
11/2/2011	XX	LTXXXX1HG	6.3	0.2 U	0.039	200	17	15	170	210	210	13	1.2 U				
5/14/2012	XX	LTXXXX1JA	0.2 U	0.5 U	0.02 U	70	2.5 U	2.6	66	63	63	7	2 U				
8/14/2012	XX	LTXXXX213	4.6	0.25 U	0.03	810	14	21	550	710	710	23.1	41				
10/30/2012	XX	LTXXXX22H	3.4	0.58	0.041	200	13	35	140	120	120	9.5	1				

SEVEE & MAHER ENGINEERS, INC.
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(LPD2)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
5/21/2013	XX	LTXXXX24B	0.2 U	0.25 U	0.025	28	3.1	2.4	48	53	53	6.2	0.58				
7/25/2013	XX	LTXXXX265	0.86	0.25 U	2.4	130	11	13	70	91	91	8.2	0.7				
10/1/2013	XX	LTXXXX27J	2.1	0.4	0.031	140	6.9	14	88	120	120	9.4	0.58				
6/5/2014	XX	LTXXXX29D	0.16	0.05 U	0.1 U	98	8	1 U	67.2	82	82	5.6	2 U				
8/21/2014	XX	LTXXXX2B7	3.4	0.05 U	0.14	310	25	1 U	218	250	250	23	7.2				
11/13/2014	XX	LTXXXX2D1	2.7	0.81	0.1 U	190	29	33	125	110	110	7.4	2.6				
6/4/2015	XX	LTXXXX2EH	0.1 U	0.05 U	0.1 U	68	4 U	3.4	56.3	56	56	4.4	2.7				
9/3/2015	XX	LTXXXX2GC	1.6	1.6	0.1 U	180	4 U	24	110	91	91	15	2.7				
11/5/2015	XX	LTXXXX2I6	4.3	0.49	0.1 U	200	34	16	151	150	150	8.8	3.1				
6/16/2016	XX	LTXXXX31G	4.6	0.31	0.1 U	290	4 U	1 U	268	260	260	11	7.1				
9/22/2016	XX	LTXXXX33A	D	D	D	D	D	D	D	D	D	D	D				
11/10/2016	XX	LTXXXX354	D	D	D	D	D	D	D	D	D	D	D				
6/15/2017	XX	LTXXXX36J	0.54	2.4	0.1 U	94	4 U	4.9	82.7	79	79	7.4	2.2				
8/31/2017	XX	LTXXXX38D	6.2	0.19	0.1 U	310	8.4	15	235	250	250	27	6.8				
11/16/2017	XX	LTXXXX3A7	2.1	1	0.1 U	190	10	43	135	78	78	7.1	2.9				
6/21/2018	XX	LTXXXX3C2	2.6	0.076	0.1 U	200	6	1.9	168	160	160	12	2.1				
8/16/2018	XX	LTXXXX3CH	0.8	5.3	0.1 U	230	4 U	22	108	92	92	11	2.1				
11/29/2018	XX	LTXXXX3FA	2.7	0.39	0.1 U	180	19	38	136	94	94	8.2	3.9				
6/6/2019	XX	LTXXXX3H5	0.1 U	0.05 U	0.1 U	76	4 U	2.9	50.5	45	45	5.2	2 U				
8/15/2019	XX	LTXXXX3I0	4.5	0.05 U	0.1 U	250	7.2	11	213	220	220	15	4.4				
10/24/2019	XX	LTXXXX40D	1	2.7	0.1 U	130	8	23	89.7	58	58	12	3.6				
6/18/2020	XX	LTXXXX428	3.6	0.05 U	0.1 U	200	4 U	6.3	192	220	220	10	2.2				
8/6/2020	XX	LTXXXX433	3.7	0.05 U	0.18	370	12	1 U	297	280	280	43	14				
10/22/2020	XX	LTXXXX45G	0.18	6.2	0.1 U	150	4 U	40	90.2	21	21	9.8	2 U				
6/24/2021	XX	LTXXXX47B	3.6	0.1	0.1 U	260	6.4	14	244	240	240	14	2.8				
9/23/2021	XX	LTXXXX496	0.1 U	4	0.19	92	4 U	21	74.7	45	45	9.9	2 U				
6/30/2022	XX	LTXXXX4B8	3.6	0.4	0.1 U	220	7.6	11	218	210	210	11	2 U				
10/20/2022	XX	LTXXXX4D5	0.32	0.2	0.1 U	100		53	51.6	42	42	9.7	2 U				
10/20/2022	XX	LTXXXX4D5RR					4.4										
6/8/2023	XX	LTXXXX4F6	3.4	0.32	0.1 U	140	4 U	14	173	160	160	9	2 U				
10/19/2023	XX	LTXXXX4J0	1.9	0.18	0.1 U		13	16	103	96	96	14	2 U				
10/19/2023	XX	LTXXXX4J0RR				140 H											
ND																	
5/3/2000	XX	NDXX36649	D		D			D	D			D	D				
8/9/2000	XX	NDXX36747	D		D			D	D			D	D				
11/8/2000	XX	NDXX36838	D		D			D	D			D	D				
5/16/2001	XX	NDXX37027	D	D			D	D	D	D	D	D	D				
7/31/2001	XX	NDXX37103	D	D			D	D	D	D	D	D	D				
10/23/2001	XX	NDXX37187	D	D	D		D	D	D	D	D	D	D				
5/21/2002	XX	NDXX37397	D	D	D	D	D	D	D	D	D	D	D				
7/30/2002	XX	NDXX37467	D	D	D	D	D	D	D	D	D	D	D				
10/22/2002	XX	NDXX37551	D	D	D	D	D	D	D	D	D	D	D				
6/23/2003	XX	NDXX37795	D	D	D	D	D	D	D	D	D	D	D				
8/13/2003	XX	NDXX37846	D	D	D	D	D	D	D	D	D	D	D				
10/20/2003	XX	NDXX37914	D	D	D	D	D	D	D	D	D	D	D				
5/6/2004	XX	NDXX38113	D	D	D	D	D	D	D	D	D	D	D				
7/27/2004	XX	NDXX38195	D	D	D	D	D	D	D	D	D	D	D				
10/25/2004	XX	NDXX38285	D	D	D	D	D	D	D	D	D	D	D				
5/12/2005	XX	SWNDXX016	D	D		D	D	D	D	D	D	D	D				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(ND)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
7/25/2005	XX	SWNDXX02I	D	D		D	D	D	D	D	D	D	D				
11/10/2005	XX	SWNDXX04A	0.2 U	2 U	0.1 U	96	20	10	77	61	63	8.6	2 U				
5/2/2006	XX	SWNDXX096	0.21	2 U	0.16	73	160	9.2	79	53	56	16	2 U				
8/3/2006	XX	SWNDXX07E	D	D	D	D	D	D	D	D	D	D	D				
10/18/2006	XX	SWNDXX062	D	D	D	D	D	D	D	D	D	D	D				
5/21/2007	XX	SWNDXX0AI	D	D		D	D	D	D	D	D	D	D				
8/8/2007	XX	SWNDXX0CB	D	D		D	D	D	D	D	D	D	D				
11/6/2007	XX	SWNDXX0E3	D	D		D	D	D	D	D	D	D	D				
6/11/2008	XX	SWNDXX0GB	0.2 U	0.5 U	0.12	200	5.5	21	150	105	110	21	2 U				
8/19/2008	XX	SWNDXX0IB	D	D	D	D	D	D	D	D	D	D	D				
10/22/2008	XX	SWNDXX0JJ	D	D	D	D	D	D	D	D	D	D	D				
5/18/2009	XX	SWNDXX11J	D	D		D	D	D	D	D	D	D	D				
8/17/2009	XX	SWNDXX13J	D	D	D	D	D	D	D	D	D	D	D				
10/29/2009	XX	SWNDXX157	D	D	D	D	D	D	D	D	D	D	D				
6/7/2010	XX	SWNDXX178	0.2 U	0.5 U	0.031	160	1.5	5.1	160	120	120	16	2 U				
8/18/2010	XX	SWNDXX199	D	D		D	D	D	D	D	D	D	D				
10/21/2010	XX	SWNDXX1AH	D	D		D	D	D	D	D	D	D	D				
5/18/2011	XX	SWXXXX1E9	0.2 U	0.5 U	0.02 U	86	5 U	4.2	86	89	89	5	2 U				
8/10/2011	XX	SWXXXX1G0	D	D	D	D	D	D	D	D	D	D	D				
11/2/2011	XX	SWXXXX1HB	D	D	D	D	D	D	D	D	D	D	D				
5/14/2012	XX	SWXXXX1J5	D	D	D	D	D	D	D	D	D	D	D				
8/14/2012	XX	SWXXXX20I	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6				
10/29/2012	XX	SWXXXX22C	D	D	D	D	D	D	D	D	D	D	D				
5/21/2013	XX	SWXXXX246	D	D	D	D	D	D	D	D	D	D	D				
7/24/2013	XX	SWXXXX260	D	D	D	D	D	D	D	D	D	D	D				
10/1/2013	XX	SWXXXX27E	D	D	D	D	D	D	D	D	D	D	D				
6/5/2014	XX	SWXXXX298	D	D	D	D	D	D	D	D	D	D	D				
8/21/2014	XX	SWXXXX2B2	D	D	D	D	D	D	D	D	D	D	D				
11/13/2014	XX	SWXXXX2CG	D	D	D	D	D	D	D	D	D	D	D				
6/4/2015	XX	SWXXXX2EC	D	D	D	D	D	D	D	D	D	D	D				
9/3/2015	XX	SWXXXX2G7	D	D	D	D	D	D	D	D	D	D	D				
11/5/2015	XX	SWXXXX2I1	I	I	I	I	I	I	I	I	I	I	I				
6/16/2016	XX	SWXXXX31B	D	D	D	D	D	D	D	D	D	D	D				
9/22/2016	XX	SWXXXX335	D	D	D	D	D	D	D	D	D	D	D				
11/10/2016	XX	SWXXXX34J	D	D	D	D	D	D	D	D	D	D	D				
6/15/2017	XX	SWXXXX36E	D	D	D	D	D	D	D	D	D	D	D				
8/31/2017	XX	SWXXXX388	D	D	D	D	D	D	D	D	D	D	D				
11/16/2017	XX	SWXXXX3A2	D	D	D	D	D	D	D	D	D	D	D				
6/21/2018	XX	SWXXXX3BH	D	D	D	D	D	D	D	D	D	D	D				
8/16/2018	XX	SWXXXX3CC	D	D	D	D	D	D	D	D	D	D	D				
6/6/2019	XX	SWXXXX3H0	D	D	D	D	D	D	D	D	D	D	D				
8/15/2019	XX	SWXXXX3HF	D	D	D	D	D	D	D	D	D	D	D				
10/24/2019	XX	SWXXXX408	I	I		I	I	I	I	I	I	I	I				
6/18/2020	XX	SWXXXX423	D	D	D	D	D	D	D	D	D	D	D				
8/6/2020	XX	SWXXXX42I	D	D	D	D	D	D	D	D	D	D	D				
10/22/2020	XX	SWXXXX45B	D	D		D	D	D	D	D	D	D	D				
6/24/2021	XX	SWXXXX476	D	D	D	D	D	D	D	D	D	D	D				
9/23/2021	XX	SWXXXX491	D	D	D	D	D	D	D	D	D	D	D				
6/30/2022	XX	SWXXXX4B3	D	D	D	D	D	D	D	D	D	D	D				

SEVEE & MAHER ENGINEERS, INC.
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(ND)			Ammonia (N)	Nitrate (N)	Total Phosphorus	Total Dissolved Solids	Total Suspended Solids	Sulfate	Ca-mg Hardness (CaCO3)	Bicarbonate Alkalinity (CaCO3)	Alkalinity (CaCO3)	Organic Carbon	Chloride				
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L				
10/20/2022	XX	SWXXXX4D0	D	D	D	D		D	D	D	D	D	D				
6/8/2023	XX	SWXXXX4F1	1	1.4	0.1 U	630	4 U	180	548	320	320	28	3.5				
10/19/2023	XX	SWXXXX4IG	D	D	D	D	D	D	D	D	D	D	D				
PBF																	
5/3/2000	XX	PBFXX36649	0.1 U	1 U	0.084	59	1	3.4	30.4	20	25.3	8.6	5.6				
8/9/2000	XX	PBFXX36747	0.1 U	1.7	0.018	328	4	10.7	192	145	187.9	7.4	50.2				
11/8/2000	XX	PBFXX36838	0.1 U	2.2	0.02	78	3	1.2	20.2	26	26.3	7.6	7.2				
5/16/2001	XX	PBFXX37027	0.1 U	1.9	0.012	378	4	16	230.5	215	236	5.8	53.8				
7/31/2001	XX	PBFXX37103	0.1 U	6	0.038	125	7	2.6	57.2	37	40	12.9	15.9				
10/23/2001	XX	PBFXX37187	0.1 U	1 U	0.034	408	4	14.1	175.1	232	246	6.6	57.7				
5/21/2002	XX	PBFXX37397	0.1 U	1 U	0.005	330	4	15.9	210.5	185	198	8.8	45.1				
8/8/2002	XX	PBFXX37476	0.1 U	1 U	0.055	105	21	4.2	42.6	38	42	11.5	9				
10/24/2002	XX	PBFXX37553	0.1 U	1 U	0.029	45	2	3.9	14.4	18	18	13.2	4.3				
6/26/2003	XX	PBFXX37798	0.2 U	2 U	0.1 U	41	2	2.1	30	24	24	11	2.9				
8/13/2003	XX	PBFXX37846	0.2 U	2 U	0.1 U	54	12	2.3	36	26	27	9.8	3.4				
10/23/2003	XX	PBFXX37917	0.2 U	2 U	0.1 U	54	4	5	40	26	27	14	3.9				
5/6/2004	XX	PBFXX38113	0.2 U	2 U	0.1 U	18	1 U	2.6	29	22	22	11	3.3				
7/27/2004	XX	PBFXX38195	0.2 U	0.5 U	0.1 U	79	2	10	73	62	65	7.3	4.6				
10/25/2004	XX	PBFXX38285	0.2 U	2 U	0.1 U	68	1 U	2.8	30	27	27	8.8	3.7				
5/12/2005	XX	SWPBFX017	0.2 U	2 U	0.1 U	66	2	4.4	29	23	23	8.7	2.7				
7/25/2005	XX	SWPBFX02J	0.2 U	2 U	0.1 U	86	2.5	2.8	25	22	23	13	3.5				
11/10/2005	XX	SWPBFX04B	0.2 U	2 U	0.1 U	42	1 U	4.3	24	18	18	8	2.5				
5/2/2006	XX	SWPBFX097	0.2 U	2 U	0.02 U	20	2.5	3.6	46	30	31	6.4	3.8				
8/3/2006	XX	SWPBFX07F	0.2 U	2 U	0.02 U	650	4	5.4	35	35	35	11	2.8				
10/18/2006	XX	SWPBFX063	0.2 U	2 U	0.02 U	59	1.1	7.4	38	37	37	8.6	3.6				
5/21/2007	XX	SWPBFX0AJ	0.95	2 U	0.02 U	43	2.9	4.4	31	30	30	5	3.1				
8/8/2007	XX	SWPBFX0CC	0.2 U	0.5 U	0.022	61	1 U	1.7	23	19	19	9.3	2 U				
11/6/2007	XX	SWPBFX0E4	0.2 U	0.5 U	0.02	67	2.6	9.2	26	22	22	8.6	3.3				
6/11/2008	XX	SWPBFX0GC	0.2 U	0.5 U	0.082	280	3.4	19	150	162	170	17	16				
8/19/2008	XX	SWPBFX0IC	0.2 U	0.5 U	0.026	81	1 U	2.2	34	35	35	9.6	2.5				
10/22/2008	XX	SWPBFX100	0.2 U	0.5 U	0.03	60	1.8	2.1	24	21	21	9.2	2 U				
5/7/2009	XX	SWPBFX120	0.2 U	0.5 U		34	1.7	1.9	19	21	21	6.3	1.3				
8/12/2009	XX	SWPBFX140	0.2 U	0.5 U	0.05 U	93	1.1	3.2	71	60	61	6.4	3.3				
10/27/2009	XX	SWPBFX158	0.2 U	0.5 U	0.02 U	84	1 U	8.9	32	30	30	6.4	4.4				
6/7/2010	XX	SWPBFX179	0.2 U	0.5 U	0.02 U	82	3.8	3	43	52	52	6	9.6				
8/18/2010	XX	SWPBFX19A	0.2 U	0.5 U	0.02 U	44	1.1 U	1 U	14	21	21	7.9	2 U				
10/21/2010	XX	SWPBFX1AI	0.2 U	0.5 U	0.024	1 U	1.4 U	3.2	17	15	15	7.3	2 U				
5/18/2011	XX	SWXXXX1E8	0.2 U	0.5 U	0.02 U	17	5 U	1.8	19	17	17	7.2	3				
8/10/2011	XX	SWXXXX1FJ	0.08 U	0.2 U	0.021	26	0.45 U	1.5	16	16	16	9	1.2 J				
8/10/2011	XD	LTDP3X1G9	0.08 U	0.2 U	0.016	33	0.46 U	1.5	16	16	16	9.2	1.3 J				
11/2/2011	XX	SWXXXX1HA	0.082 U	0.2 U	0.02	69	2.35 J	6.7	37	36	36	5	4.4				
PBFR																	
5/14/2012	XX	SWXXXX1J4	0.2 U	0.5 U	0.02 U	39	2.5 U	4.8	34	32	32	4.5	4.3				
8/14/2012	XX	SWXXXX20H	0.2 U	0.25 U	0.18	85	16	5.2	39	45	45	16.9	2.2				
10/29/2012	XX	SWXXXX22B	0.2 U	0.5	0.16	58	2.5 U	7.6	50	36	36	8	4.1				
10/29/2012	XD	SWDP2X230	0.2 U	0.25 U	0.03	58	2.5 U	5.9	48	32	32	7.8	3.8				
5/21/2013	XX	SWXXXX245	0.2 U	0.25 U	0.02 U	30	2.5 U	1.1	18	21	21	6.8	1				
5/21/2013	XD	SWDP2X24E	0.2 U	0.25 U	0.02 U	35	2.5 U	1	18	21	21	6.5	1				

DATA SUMMARY TABLE

Inorganics

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(PBFR)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
7/24/2013	XX	SWXXXX25J	0.2 U	0.25 U	0.03	33	2.7	0.82	16	22	22	9.1	1
7/24/2013	XD	SWDP2X268	0.2 U	0.25 U	0.02 U	23	2.5 U	0.83	15	21	21	9.5	1
10/1/2013	XX	SWXXXX27D	0.2 U	0.37	1.1	33	12	4.2	18	14	14	9.2	1.3
10/1/2013	XD	SWDP3X282	0.2 U	2	1.2	18	5 U	5.1	21	17	17	10	1.2
6/5/2014	XX	SWXXXX297	0.1 U	0.05 U	0.1 U	35	4 U	1 U	19	15	15	6.2	2.5
6/5/2014	XD	SWDP2X29G	0.1 U	0.05 U	0.1 U	36	4 U	1 U	18.3	16	16	6.2	2.2
8/21/2014	XX	SWXXXX2B1	0.1 U	0.05 U	0.1 U	41	7.2	1 U	20	20	20	6.6	2.8
8/21/2014	XD	SWDP2X2BA	0.1 U	0.05 U	0.1 U	32	4 U	1 U	19.8	22	22	6.7	2.8
11/13/2014	XX	SWXXXX2CF	0.1 U	0.36	0.1 U	61	6.8	12	23.5	15	15	6.8	4.4
11/13/2014	XD	SWDP3X2D4	0.1 U	0.05 U	0.1 U	50	4 U	4.5	23.1	16	16	6.7	4.1
6/4/2015	XX	SWXXXX2EB	0.1 U	0.05 U	0.1 U	72	8	4.9	37.1	38	38	3.9	4
6/4/2015	XD	SWDP2X2F0	0.1 U	0.05 U	0.1 U	61	13	4.8	36.4	39	39	4.1	3.6
9/3/2015	XX	SWXXXX2G6	0.1 U	0.05 U	0.1 U	47	4.8	1 U	29	27	27	8.4	3.6
9/3/2015	XD	SWDP2X2GF	0.1 U	0.05 U	0.1 U	57	4 U	1 U	28.4	25	25	8.4	3.7
11/5/2015	XX	SWXXXX2I0	0.1 U	0.05 U	0.1 U	71	4 U	1 U	25.4	23	23	8.1	2.8
11/5/2015	XD	SWDP3X2I9	0.1 U	0.05 U	0.1 U	64	10	1 U	27.2	22	22	7.8	3.7
6/16/2016	XD	SWDP2X31J	0.1 U	0.05 U	0.1 U	30	4 U	1 U	21.7	20	20	6	3.6
6/16/2016	XX	SWXXXX31A	0.1 U	0.05 U	0.1 U	45	4 U	1 U	22	20	20	6	5.1
9/22/2016	XD	SWDP2X33D	0.1 U	0.05 U	0.1 U	47	4 U	1 U	22.8	20	20	6.5	3.3
9/22/2016	XX	SWXXXX334	0.1 U	0.05 U	0.1 U	51	4 U	1 U	22.3	21	21	6.4	3
11/10/2016	XD	SWDP3X357	0.1 U	0.46	0.1 U	57	4 U	15	26	19	19	6.3	6.2
11/10/2016	XX	SWXXXX34I	0.1 U	0.45	0.1 U	51	4 U	14	25.7	17	17	6.3	6.3
6/15/2017	XD	SWDP2X372	0.1 U	0.05 U	0.1 U	43	4 U	1 U	23.7	18	18	9	2.6
6/15/2017	XX	SWXXXX36D	0.1 U	0.05 U	0.1 U	46	4 U	1 U	24.2	18	18	9.1	3.4
8/31/2017	XD	SWDP2X38G	0.1 U	0.05 U	0.1 U	69	8.8	1.5	35	28	28	9.9	3.6
8/31/2017	XX	SWXXXX387	0.1 U	0.5	0.1 U	72	18	1 U	31.2	22	22	9.7	3.1
11/16/2017	XD	SWDP3X3AA	0.1 U	0.77	0.18	97	76	37	38	7.4	7.4	11	3.7
11/16/2017	XX	SWXXXX3A1	0.1 U	0.86	0.16	99	190	25	37.8	5.1	5.1	11	4.3
6/21/2018	XD	SWDP2X3C5	0.1 U	0.05 U	0.1 U	83	4 U	1 U	22.8	18	18	7.9	2 U
6/21/2018	XX	SWXXXX3BG	0.1 U	0.05 U	0.1 U	94	4 U	1 U	22.7	17	17	7.9	2 U
8/16/2018	XD	SWDP2X3D0	0.1 U	0.05 U	0.1 U	56	4 U	1 U	23.4	17	17	8.8	2.1
8/16/2018	XX	SWXXXX3CB	0.1 U	0.12	0.1 U	76	4 U	1	24.4	19	19	8.9	2 U
11/29/2018	XD	SWDP3X3FD	0.1 U	0.5	0.1 U	200	20	89	150	53	53	6.4	5.8
11/29/2018	XX	SWXXXX3F4	0.1 U	1.9	0.1 U	200	14	89	144	40	40	6.9	5.7
6/6/2019	XD	SWDP2X3H8	0.1 U	0.05 U	0.1 U	48	4 U	1 U	27.1	23	23	8.6	2.3
6/6/2019	XX	SWXXXX3GJ	0.1 U	0.05 U	0.1 U	46	4 U	1 U	45.6	24	24	8.9	2.2
8/15/2019	XD	SWDP2X3I3	0.1 U	0.05 U	0.1 U	48	4 U	1 U	23.3	20	20	9	3.7
8/15/2019	XX	SWXXXX3HE	0.1 U	0.05 U	0.1 U	55	4.4	1 U	23.4	20	20	8.9	4
10/24/2019	XD	SWDP3X40G	0.1 U	0.14	0.1 U	70	4 U	11	38.1	25	25	13	4.3
10/24/2019	XX	SWXXXX407	0.1 U	0.14	0.1 U	62	4 U	11	37.4	25	25	13	4.1
6/18/2020	XD	SWDP2X42B	0.1 U	0.05 U	0.1 U	51	4 U	1 U	20.9	18	18	8.8	2 U
6/18/2020	XX	SWXXXX422	0.1 U	0.26	0.1 U	43	17	4.3	20.5	17	17	8.8	2 U
8/6/2020	XD	SWDP2X436	0.1 U	0.05 U	0.1 U	29	4 U	1.2	20.8	16	16	9.4	2 U
8/6/2020	XX	SWXXXX42H	0.1 U	0.05 U	0.1 U	55	4 U	1.1	20	16	16	9.4	2 U
10/22/2020	XD	SWDP3X45J	0.1 U	0.05 U	0.1 U	78	4 U	25	49.7	24	24	9.1	2.4
10/22/2020	XX	SWXXXX45A	0.1 U	0.05 U	0.1 U	79	4 U	16	51.1	26	26	9.5	2.2
6/24/2021	XX	SWXXXX475	0.1 U	0.09	0.1 U	36	4 U	1 U	23.3	20	20	11	2 U
6/24/2021	XD	SWDP2X47E	0.1 U	1.2	0.1 U	21	4 U	1 U	23.3	17	17	10	2.1
9/23/2021	XD	SWDP3X499	0.1 U	0.05 U	0.1 U	44	4 U	1 U	25.9	28	28	8.8	2 U

DATA SUMMARY TABLE

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(PBFR) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
9/23/2021	XX	SWXXXX490	0.1 U	0.05 U	0.1 U	31	4 U	1 U	26	28	28	8.7	2 U
6/30/2022	XD	SWDP2X4BB	0.1 U	0.05 U	0.1 U	19	4.4	2 U	24	23	23	9.5	2 U
6/30/2022	XX	SWXXXX4B2	0.1 U	0.05 U	0.1 U	46	4 U	2 U	23.3	22	22	9.2	2 U
10/20/2022	XD	SWDP3X4D8	0.1 U	0.12	0.12	74		5.2	54.2	36	36	11	3
10/20/2022	XD	SWDP3X4D8RR					25						
10/20/2022	XX	SWXXXX4CJ	0.1 U	0.15	0.15	99		12	47.2	38	38	11	2.6
10/20/2022	XX	SWXXXX4CJRR					18						
6/8/2023	XD	SWDP2X4F9	0.1 U	0.05 U	0.1 U	44	4 U	1 U	45.9	40	40	9.7	2 U
6/8/2023	XX	SWXXXX4F0	0.1 U	0.05 U	0.1 U	33	4 U	1 U	45.3	38	38	8.8	2 U
10/19/2023	XD	SWDP3X4J3	0.1 U	0.05 U	0.1 U	75	4 U	12	148	58	58	12	2 U
10/19/2023	XX	SWXXXX4IF	0.1 U	0.05 U	0.1 U	77	4 U	7.3	45	42	42	12	2 U
PBFB													
5/3/2000	XX	PBFBXX36649	0.1 U	1 U	0.068	37	3	3.2	16.8	12	13.1	16.7	3
8/9/2000	XX	PBFBXX36747	0.1 U	1 U	0.007	58	8	1 U	14.9	190	200	13.3	1.5
11/8/2000	XX	PBFBXX36838	0.1 U	1.1	0.003	47	5	3.2	10.2	5	5.1	9.1	2.9
5/16/2001	XX	PBFBXX37027	0.1 U	1.9	0.018	48	2	3.3	11.6	7	7	10.4	2.1
7/31/2001	XX	PBFBXX37103	0.1 U	1 U	0.016	54	12	5.7	13.4	14	14	11.2	3.8
10/24/2001	XX	PBFBXX37188	0.1 U	1 U	0.022	114	12	17.1	30.1	1 U	1 U	6.7	3.1
5/21/2002	XX	PBFBXX37397	0.1 U	1.2	0.009	57	2	5.1	12.9	2.58	4	10.4	1 U
8/6/2002	XX	PBFBXX37474	0.1 U	1 U	0.014	73	15	3.8	25	24	25	14	1.1
10/24/2002	XX	PBFBXX37553	0.1 U	1 U	0.016	41	1	11.4	10.6	8	8	9.7	2.2
6/26/2003	XX	PBFBXX37798	0.2 U	2 U	0.1 U	36	9	1 U	19	12	12	15	2 U
8/13/2003	XX	PBFBXX37846	0.2 U	2 U	0.1 U	34	2	2.1	21	14	14	11	2.4
10/23/2003	XX	PBFBXX37917	0.2 U	2 U	0.1 U	71	4	3.2	16	4	4	38	2
5/6/2004	XX	PBFBXX38113	0.2 U	2 U	0.1 U	29	1 U	2.4	24	16	16	13	2.8
7/27/2004	XX	PBFBXX38195	0.2 U	0.5 U	0.1 U	10	3	1.5	18	29	30	21	2 U
10/25/2004	XX	PBFBXX38285	0.2 U	2 U	0.1 U	67	1 U	5.3	19	11	11	10	2.8
5/12/2005	XX	SWPBFB018	0.2 U	2 U	0.1 U	51	1 U	3.5	21	17	17	8.6	2
7/25/2005	XX	SWPBFB030	0.2 U	2 U	0.1 U	70	2.5	2.3	26	21	22	13	3.2
11/10/2005	XX	SWPBFB04C	0.2 U	2 U	0.1 U	52	2.5	3.4	10	18	18	16	2 U
5/2/2006	XX	SWPBFB098	0.2 U	2 U	0.05	57	2	2	16	10	11	10	2 U
8/3/2006	XX	SWPBFB07G	0.2 U	2 U	0.03	42	3.3	1.3	23	20	20	13	2 U
10/18/2006	XX	SWPBFB064	0.2 U	2 U	0.02 U	43	1.7	4.2	10 U	11	11	14	2 U
5/21/2007	XX	SWPBFB0B0	0.98	2 U	0.025	20	1 U	2.4	13	8	7.9	7.1	2 U
8/8/2007	XX	SWPBFB0CD	0.2 U	0.5 U	0.03	65	2	1.2	25	23	23	11	2 U
11/6/2007	XX	SWPBFB0E5	0.2 U	0.5 U	0.02	83	1 U	5.6	10 U	2	3	21	2 U
6/11/2008	XX	SWPBFB0GD	0.2 U	0.5 U	0.032	77	1.2	2.5	12	4	4.7	23	2 U
8/19/2008	XX	SWPBFB0ID	0.2 U	0.5 U	0.023	66	1.4	1.6	24	21	21	11	2 U
10/22/2008	XX	SWPBFB101	0.2 U	0.5 U	0.05	76	3.4	2.6	23	16	16	14	2 U
5/7/2009	XX	SWPBFB121	0.2 U	0.5 U		51	1.2	1.3	14	12	12	8.4	2 U
8/12/2009	XX	SWPBFB141	0.2 U	0.5 U	0.05 U	90	3.3	1 U	26	22	22	22	2 U
10/27/2009	XX	SWPBFB159	0.2 U	0.5 U	0.02 U	87	1 U	5	10	6	5.7	14	2 U
6/7/2010	XX	SWPBFB17A	0.2 U	0.5 U	0.22	58	50	1.8	10 U	20	20	20	2 U
8/18/2010	XX	SWPBFB19B	0.2 U	0.5 U	0.021	49	9.6	1 U	20	27	27	11	2 U
10/21/2010	XX	SWPBFB1AJ	0.2 U	0.5 U	0.03	47	8	7.1	10 U	5	5.1	10	2 U
5/18/2011	XX	SWXXXX1E7	0.2 U	0.5 U	0.02 U	15	5 U	2	14	11	11	8.2	2 U
8/10/2011	XX	SWXXXX1FI	0.08 U	0.2 U	0.023	29	6.6	1.3	16	15	15	9.4	1.3 J
11/2/2011	XX	SWXXXX1H9	0.082 U	0.2 U	0.046	50	28	1.6	13	12	12	18	1.4 J
5/14/2012	XX	SWXXXX1J3	0.2 U	0.5 U	0.19	37	8.7	28	17	2 U	2 U	15	2 U

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(PBFB) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
8/14/2012	XX	SWXXXX20G	0.2 U	0.25 U	0.11	42	140	0.86	16	27	27	18.6	1.7				
10/29/2012	XX	SWXXXX22A	0.2 U	0.25 U	0.02 U	10	23	1.1	17	14	14	9.5	1.1				
5/21/2013	XX	SWXXXX244	0.2 U	0.25 U	0.02 U	8	2.5 U	2	10 U	13	13	7.5	1.1				
7/24/2013	XX	SWXXXX25I	0.2 U	0.25 U	0.02 U	36	2.5 U	0.67	16	20	20	10	0.96				
10/1/2013	XX	SWXXXX27C	0.2 U	0.25 U	0.02 U	21	2.5 U	0.76	17	2 U	2 U	9.3	0.86				
6/5/2014	XX	SWXXXX296	0.1 U	0.05 U	0.1 U	40	28	1 U	17	14	14	7.2	2.4				
8/21/2014	XX	SWXXXX2B0	0.1 U	0.05 U	0.1 U	40	5.2	1 U	17.6	18	18	6.6	3.9				
11/13/2014	XX	SWXXXX2CE	0.1 U	0.05 U	0.1 U	42	4 U	1 U	17.8	16	16	7.6	2.9				
6/4/2015	XX	SWXXXX2EA	0.1 U	0.18	0.1	22	4.4	1 U	13.7	13	13	7.3	2.9				
9/3/2015	XX	SWXXXX2G5	0.1 U	0.066	0.1 U	28	4 U	5.5	18.3	16	16	8.4	2 U				
11/5/2015	XX	SWXXXX2HJ	0.1 U	0.05 U	0.1 U	52	4 U	1 U	17.9	16	16	8.9	3				
6/16/2016	XX	SWXXXX319	0.1 U	0.05 U	0.1 U	67	4 U	1 U	18.4	16	16	6.3	4.1				
9/22/2016	XX	SWXXXX333	0.12	0.05 U	0.1 U	61	4 U	1 U	19.6	18	18	6.6	3.2				
11/10/2016	XX	SWXXXX34H	0.1 U	0.05 U	0.1 U	43	4 U	1 U	16.5	18	18	6.4	3.4				
6/15/2017	XX	SWXXXX36C	0.1 U	0.05 U	0.1 U	45	4 U	1 U	20.7	16	16	9.9	2 U				
8/31/2017	XX	SWXXXX386	0.1 U	0.073	0.1 U	58	4 U	1 U	22.6	18	18	9.1	3.1				
11/16/2017	XX	SWXXXX3A0	0.1 U	0.05 U	0.1 U	67	4 U	1 U	26.6	20	20	11	3.8				
6/21/2018	XX	SWXXXX3BF	0.1 U	0.05 U	0.1 U	54	10	1 U	19.6	15	15	8.6	2 U				
8/16/2018	XX	SWXXXX3CA	0.1 U	0.05 U	0.1 U	82	4 U	1 U	21.9	19	19	9.4	2 U				
11/29/2018	XX	SWXXXX3F3	0.1 U	0.3	0.1 U	57	4 U	9.9	26.4	13	13	11	3.5				
6/6/2019	XX	SWXXXX3GI	0.1 U	0.05 U	0.1 U	48	4 U	1 U	18.3	14	14	11	2 U				
8/15/2019	XX	SWXXXX3HD	0.1 U	0.05 U	0.1 U	51	4 U	1 U	17.4	18	18	9.1	3.2				
10/24/2019	XX	SWXXXX406	0.1 U	0.06	0.1 U	44	7.2	1 U	20.2	12	12	16	3.5				
6/18/2020	XX	SWXXXX421	0.1 U	0.05 U	0.1 U	57	15	1 U	18.3	16	16	9.4	2 U				
8/6/2020	XX	SWXXXX42G	0.1 U	1.1	0.1 U	41	4 U	3.4	18.8	9.1	9.1	9.5	2 U				
10/22/2020	XX	SWXXXX459	0.1 U	0.05 U	0.1 U	63	8.4	5.8	22.4	13	13	13	2 U				
6/24/2021	XX	SWXXXX474	0.1 U	0.05 U	0.1 U	45	6.8	1 U	20.5	18	18	10	2.3				
9/23/2021	XX	SWXXXX48J	0.1 U	0.05 U	0.1 U	46	16	1 U	21.6	18	18	15	2 U				
6/30/2022	XX	SWXXXX4B1	0.1 U	0.05 U	0.12	31	7.2	2 U	21.4	20	20	9.3	2 U				
10/20/2022	XX	SWXXXX4CI	0.1 U	0.05 U	0.1 U	51		1 U	18.5	14	14	14	2.6				
10/20/2022	XX	SWXXXX4CIRR					4 U										
6/8/2023	XX	SWXXXX4EJ	0.1 U	0.05 U	0.1 U	17	4 U	1 U	22.9	18	18	9.4	2 U				
10/19/2023	XX	SWXXXX4IE	0.1 U	0.05 U	0.1 U	55	4.8	1 U	42.9	23	23	15	2 U				
SPO																	
5/3/2000	XX	SPOXX36649	D		D			D	D			D	D				
8/9/2000	XX	SPOXX36747	D		D			D	D			D	D				
11/8/2000	XX	SPOXX36838	D		D			D	D			D	D				
5/16/2001	XX	SPOXX37027	D	D			D	D	D	D	D	D	D				
7/31/2001	XX	SPOXX37103	D	D			D	D	D	D	D	D	D				
10/23/2001	XX	SPOXX37187	D	D	D		D	D	D	D	D	D	D				
5/21/2002	XX	SPOXX37397	D	D	D	D	D	D	D	D	D	D	D				
7/30/2002	XX	SPOXX37467	D	D	D	D	D	D	D	D	D	D	D				
10/22/2002	XX	SPOXX37551	D	D	D	D	D	D	D	D	D	D	D				
6/23/2003	XX	SPOXX37795	D	D	D	D	D	D	D	D	D	D	D				
8/13/2003	XX	SPOXX37846	D	D	D	D	D	D	D	D	D	D	D				
10/20/2003	XX	SPOXX37914	D	D	D	D	D	D	D	D	D	D	D				
5/6/2004	XX	SPOXX38113	0.2 U	2 U	0.12	100	3	4.1	81	65	67	17	4.8				
7/27/2004	XX	SPOXX38195	D	D	D	D	D	D	D	D	D	D	D				
10/25/2004	XX	SPOXX38285	D	D	D	D	D	D	D	D	D	D	D				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SPO)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
5/12/2005	XX	SWSPOX01A	D	D	D	D	D	D	D	D	D	D	D				
7/25/2005	XX	SWSPOX032	D	D	D	D	D	D	D	D	D	D	D				
11/10/2005	XX	SWSPOX04E	0.2 U	2 U	0.1 U	140	3	15	110	75	77	12	6.8				
5/2/2006	XX	SWSPOX09A	0.2 U	2 U	0.05	98	1.5	2.3	86	67	69	15	19				
8/3/2006	XX	SWSPOX07I	0.2 U	2 U	0.12	130	7.5	1 U	76	74	75	17	4.8				
10/18/2006	XX	SWSPOX066	0.2 U	2 U	0.06	82	5.7	4.3	45	45	46	13	6.8				
5/21/2007	XX	SWSPOX0B2	0.2 U	2 U	0.042	92	2	3.2	58	54	55	9.3	13				
8/9/2007	XX	SWSPOX0CF	D	D		D	D	D	D	D	D	D	D				
11/6/2007	XX	SWSPOX0E7	0.2 U	0.5 U	0.03	94	2	14	30	21	21	13	2.1				
6/11/2008	XX	SWSPOX0GF	0.2 U	0.5 U	0.1	90	6.5	4.7	36	27	27	18	2 U				
8/19/2008	XX	SWSPOX0GJ	D	D	D	D	D	D	D	D	D	D	D				
10/22/2008	XX	SWSPOX103	D	D	D	D	D	D	D	D	D	D	D				
5/7/2009	XX	SWSPOX123	0.2 U	0.5 U		100	0.6 U	6.7	57	53	54	10	9.4				
8/17/2009	XX	SWSPOX127	D	D	D	D	D	D	D	D	D	D	D				
10/27/2009	XX	SWSPOX15B	0.2 U	0.5 U	0.02	70	1 U	10	33	27	27	10	3.7				
6/7/2010	XX	SWSPOX17C	0.2 U	0.5 U	0.038	80	2.1	2	35	36	36	16	7.4				
8/18/2010	XX	SWSPOX17H	D	D		D	D	D	D	D	D	D	D				
10/21/2010	XX	SWSPOX1B1	D	D		D	D	D	D	D	D	D	D				
5/18/2011	XX	SWXXXX1EA	0.2 U	0.5 U	0.02 U	43	5 U	9.2	39	29	29	13	3.9				
8/10/2011	XX	SWXXXX1G1	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6				
11/2/2011	XX	SWXXXX1HC	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6				
5/14/2012	XX	SWXXXX1J6	0.2 U	0.5 U	0.041	59	3.1	5.7	40	32	32	13	5.9				
8/14/2012	XX	SWXXXX20J	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6				
10/29/2012	XX	SWXXXX22D	0.2 U	0.25 U	0.12	80	26	3.6	42	33	33	16	6.6				
5/21/2013	XX	SWXXXX247	0.2 U	0.53	0.11	54	23	2.7	27	31	31	11	7.2				
7/24/2013	XX	SWXXXX261	0.21	0.25 U	0.083	69	37	3.9	21	38	38	12	4.7				
10/1/2013	XX	SWXXXX27F	I	I	I	I	I	I	I	I	I	I	I				
6/5/2014	XX	SWXXXX299	D	D	D	D	D	D	D	D	D	D	D				
8/21/2014	XX	SWXXXX2B3	I	I	I	I	I	I	I	I	I	I	I				
11/13/2014	XX	SWXXXX2CH	0.1 U	0.05 U	0.1 U	75	4 U	6.5	30	25	25	11	3.3				
6/4/2015	XX	SWXXXX2ED	0.1 U	0.05 U	0.1 U	79	24	1 U	40.2	41	41	11	3.7				
9/3/2015	XX	SWXXXX2G8	D	D	D	D	D	D	D	D	D	D	D				
11/5/2015	XX	SWXXXX2I2	0.1 U	0.05 U	0.1 U	82	4 U	6.2	36.2	28	28	9.8	2.5				
6/16/2016	XX	SWXXXX31C	D	D	D	D	D	D	D	D	D	D	D				
9/22/2016	XX	SWXXXX336	D	D	D	D	D	D	D	D	D	D	D				
11/10/2016	XX	SWXXXX350	I	I	I	I	I	I	I	I	I	I	I				
6/15/2017	XX	SWXXXX36F	I	I	I	I	I	I	I	I	I	I	I				
8/31/2017	XX	SWXXXX389	D	D	D	D	D	D	D	D	D	D	D				
11/16/2017	XX	SWXXXX3A3	D	D	D	D	D	D	D	D	D	D	D				
6/21/2018	XX	SWXXXX3BI	D	D	D	D	D	D	D	D	D	D	D				
8/16/2018	XX	SWXXXX3CD	D	D	D	D	D	D	D	D	D	D	D				
6/6/2019	XX	SWXXXX3H1	0.1 U	0.05 U	0.1 U	96	16	1 U	62.5	51	52	15	2.8				
8/15/2019	XX	SWXXXX3HG	D	D	D	D	D	D	D	D	D	D	D				
10/24/2019	XX	SWXXXX409	0.1 U	0.34	0.1 U	64	5.2	7.9	34.8	24	24	15	3.1				
6/18/2020	XX	SWXXXX424	D	D	D	D	D	D	D	D	D	D	D				
8/6/2020	XX	SWXXXX42J	I	I	I	I	I	I	I	I	I	I	I				
10/22/2020	XX	SWXXXX45C	I	I	I	I	I	I	I	I	I	I	I				
6/24/2021	XX	SWXXXX477	D	D	D	D	D	D	D	D	D	D	D				
9/23/2021	XX	SWXXXX492	D	D	D	D	D	D	D	D	D	D	D				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SPO) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
6/30/2022	XX	SWXXXX4B4	D	D	D	D	D	D	D	D	D	D	D				
10/20/2022	XX	SWXXXX4D1	0.1 U	0.072	0.15	70		5.1	38	27	27	7.8	2.5				
10/20/2022	XX	SWXXXX4D1RR					27										
6/8/2023	XX	SWXXXX4F2	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6				
10/19/2023	XX	SWXXXX4IH	2.1	0.05 U	0.1 U	550	15	300	378	83	83	11	9				
SPON																	
5/12/2005	XX	SWSPON01B	0.32	2 U	0.1 U	400	16	42	270	240	260	16	19				
7/25/2005	XX	SWSPON033	D	D		D	D	D	D	D	D	D	D				
11/10/2005	XX	SWSPON04F	0.2 U	2 U	0.1 U	380	2.5	28	360	260	290	9.5	24				
5/2/2006	XX	SWSPON09B	0.2 U	2 U	0.09	270	20	18	280	220	240	15	22				
8/3/2006	XX	SWSPON07J	2.3	2 U	0.05	960	3.6	80	750	640	670	30	41				
10/18/2006	XX	SWSPON067	2	2 U	0.06	440	6.2	41	320	270	290	13	33				
5/21/2007	XX	SWSPON0B3	0.46	2 U	0.033	360	1.4	50	260	220	240	12	20				
8/9/2007	XX	SWSPON0CG	D	D		D	D	D	D	D	D	D	D				
11/6/2007	XX	SWSPON0E8	0.2 U	1	0.06	310	8.9	74	130	105	110	16	6.3				
6/11/2008	XX	SWSPON0GG	0.2 U	0.5 U	0.15	230	13	29	150	115	120	22	4.4				
8/19/2008	XX	SWSPON0H0	0.3	0.5 U	0.13	330	6.9	1.9	250	270	290	22	9.3				
10/22/2008	XX	SWSPON104	0.78	0.5 U	0.12	480	4.1	12	430	360	380	18	25				
5/7/2009	XX	SWSPON124	0.2 U	0.5 U		380	3	5.4	290	300	320	14	25				
8/12/2009	XX	SWSPON128	0.2 U	0.5 U	0.05 U	270	3.1	3.3	240	210	230	12	8.6				
10/27/2009	XX	SWSPON15C	0.2 U	0.5 U	0.02 U	260	1 U	22	220	180	190	10	13				
6/7/2010	XX	SWSPON17D	0.2 U	0.5 U	0.02 U	190	1.3	5	180	140	140	15	2.9				
8/18/2010	XX	SWSPON17I	D	D		D	D	D	D	D	D	D	D				
10/21/2010	XX	SWSPON1B2	0.2 U	0.5 U	0.11	420	1.4 U	64	280	240	260	11	29				
5/18/2011	XX	SWXXXX1EB	0.2 U	0.5 U	0.022	170	5 U	7.3	150	150	150	9.2	9.6				
8/10/2011	XX	SWXXXX1G2	D	D	D	D	D	D	D	D	D	D	D				
11/2/2011	XX	SWXXXX1HD	1.6	0.2 U	0.059	470	1.46 J	17	360	400	400	14	49				
5/14/2012	XX	SWXXXX1J7	0.2 U	0.5 U	0.024	140	2.5 U	5.7	130	130	130	13	5.4				
8/14/2012	XX	SWXXXX210	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6				
10/29/2012	XX	SWXXXX22E	1.7	0.25 U	0.049	440	5 U	23	360	370	370	11	34				
5/21/2013	XX	SWXXXX248	0.2 U	0.25 U	0.04	420	2.5 U	5.3	300	340	340	15	36				
7/24/2013	XX	SWXXXX262	0.29	0.25 U	0.5	250	18	6.8	140	190	190	16	9.2				
10/1/2013	XX	SWXXXX27G	1.3	0.25 U	0.02 U	380	8.7	4.1	320	330	330	13	26				
6/5/2014	XX	SWXXXX29A	0.3	0.16	0.1 U	540	8.8	1 U	396	400	400	14	36				
8/21/2014	XX	SWXXXX2B4	0.28	0.05 U	0.1 U	410	13	32	232	270	270	12	30				
11/13/2014	XX	SWXXXX2CI	1.2	0.12	0.13	400	4 U	20	291	320	320	20	27				
6/4/2015	XX	SWXXXX2EE	0.87	0.05 U	0.1 U	440	30	1 U	289	330	330	15	29				
9/3/2015	XX	SWXXXX2G9	0.7	0.11	0.15	550	26	1 U	404	450	450	22	29				
11/5/2015	XX	SWXXXX2I3	1.2	0.18	0.1 U	390	4.8	1 U	286	320	320	11	31				
6/16/2016	XX	SWXXXX31D	0.14	0.9	0.1 U	450	24	1 U	350	330	330	16	38				
9/22/2016	XX	SWXXXX337	D	D	D	D	D	D	D	D	D	D	D				
11/10/2016	XX	SWXXXX351	0.1 U	18	0.1 U	890	4 U	380	640	240	240	21	25				
6/15/2017	XX	SWXXXX36G	0.1 U	0.096	0.1 U	440	4 U	77	378	300	300	17	13				
8/31/2017	XX	SWXXXX38A	D	D	D	D	D	D	D	D	D	D	D				
11/16/2017	XX	SWXXXX3A4	0.11	0.085	0.1 U	750	4 U	270	600	300	300	17	14				
6/21/2018	XX	SWXXXX3BJ	D	D	D	D	D	D	D	D	D	D	D				
8/16/2018	XX	SWXXXX3CE	D	D	D	D	D	D	D	D	D	D	D				
11/29/2018	XX	SWXXXX3F7	0.1 U	0.72	0.1 U	390	4 U	140	310	170	170	11	5.3				
6/6/2019	XX	SWXXXX3H2	0.26	0.093	0.1 U	400	5.6	34	336	310	310	15	11				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SPON)			Ammonia (N)	Nitrate (N)	Total Phosphorus	Total Dissolved Solids	Total Suspended Solids	Sulfate	Ca-mg Hardness (CaCO3)	Bicarbonate Alkalinity (CaCO3)	Alkalinity (CaCO3)	Organic Carbon	Chloride				
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L				
8/15/2019	XX	SWXXXX3HH	0.1 U	0.05 U	0.1 U	310	16	22	243	240	240	11	11				
10/24/2019	XX	SWXXXX40A	0.1 U	0.52	0.1 U	330	7.6	89	265	170	170	16	3.7				
6/18/2020	XX	SWXXXX425	D	D	D	D	D	D	D	D	D	D	D				
8/6/2020	XX	SWXXXX430	D	D	D	D	D	D	D	D	D	D	D				
10/22/2020	XX	SWXXXX45D	0.1 U	0.05 U	0.1 U	260	4 U	38	190	160	160	13	4.8				
6/24/2021	XX	SWXXXX478	D	D	D	D	D	D	D	D	D	D	D				
9/23/2021	XX	SWXXXX493	0.1 U	0.05 U	0.1 U	270	15	28	224	220	220	15	4				
6/30/2022	XX	SWXXXX4B5	0.4	0.05 U	0.17	350	24	2 U	307	340	340	14	2 U				
10/20/2022	XX	SWXXXX4D2	0.12	0.51	0.36	240		35	203	160	160	15	4.3				
10/20/2022	XX	SWXXXX4D2RR					9.2										
6/8/2023	XX	SWXXXX4F3	0.33	0.61	0.1 U	460	7.2	120	427	260	260	21	2.7				
10/19/2023	XX	SWXXXX4II	0.17	0.083	0.1 U	390	4 U	40	319	290	290	17	7				
SPOS																	
5/12/2005	XX	SWSPOS01C	0.2 U	2 U	0.13	93	1 U	5.8	190	43	44	8.5	2.5				
7/25/2005	XX	SWSPOS034	0.2 U	2 U	0.1 U	150	7	1.9	100	98	100	15	2.1				
11/10/2005	XX	SWSPOS04G	0.2 U	2 U	0.1 U	71	1 U	5.4	55	46	47	7.6	3				
5/2/2006	XX	SWSPOS09C	0.2 U	2 U	0.02 U	49	3	3.9	56	49	50	9.7	5.5				
8/3/2006	XX	SWSPOS080	0.2 U	2 U	0.02 U	120	1.2 U	1 U	89	82	83	13	2.9				
10/18/2006	XX	SWSPOS068	0.2 U	2 U	0.02 U	94	1 U	3.2	64	63	64	10	6.2				
5/21/2007	XX	SWSPOS0B4	0.2 U	2 U	0.02 U	66	1 U	3.8	44	40	41	8.8	6.3				
8/8/2007	XX	SWSPOS0CH	0.2 U	0.5 U	0.021	120	4.6	1 U	68	63	64	13	2 U				
11/6/2007	XX	SWSPOS0E9	0.2 U	0.5 U	0.02 U	92	1 U	8.8	46	34	34	12	3.9				
11/6/2007	XD	SWDP4X0F1	0.2 U	0.5 U	0.02 U	170	1 U	8.6	46		36	12	3.9				
6/11/2008	XX	SWSPOS0GH	0.2 U	0.5 U	0.034	97	1 U	4.3	50	40	40	15	3.4				
8/19/2008	XX	SWSPOS0H1	0.2 U	0.5 U	0.038	160	1 U	1 U	88	94	95	12	3				
10/22/2008	XX	SWSPOS105	0.2 U	0.5 U	0.03	140	1 U	3.2	83	73	74	8.8	11				
5/7/2009	XX	SWSPOS125	0.2 U	0.5 U		80	0.6 U	2.7	49	50	51	7.5	6				
8/12/2009	XX	SWSPOS129	0.2 U	0.5 U	0.05 U	130	0.6 U	1 U	94	80	81	12	3.1				
10/27/2009	XX	SWSPOS15D	0.2 U	0.5 U	0.02 U	16	1 U	5.4	41	35	36	12	3.1				
6/7/2010	XX	SWSPOS17E	0.2 U	0.5 U	0.02 U	78	1 U	2.5	44	52	52	11	4				
8/18/2010	XX	SWSPOS17J	D	D		D	D	D	D	D	D	D	D				
10/21/2010	XX	SWSPOS1B3	0.2 U	0.5 U	0.025	120	1.4 U	21	59	39	39	8.4	4.2				
10/21/2010	XD	SWDP4X1B7	0.2 U	0.5 U	0.022	140	1.4 U	22	59		39	8.4	4.2				
5/18/2011	XX	SWXXXX1EC	0.2 U	0.5 U	0.02 U	33	8.3 U	3.8	38	37	37	8.8	2.3				
8/10/2011	XX	SWXXXX1G3	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6				
11/2/2011	XX	SWXXXX1HE	0.082 U	0.2 U	0.0079 J	75	0.32 U	2.5	53	56	56	9.5	3				
5/14/2012	XX	SWXXXX1J8	0.2 U	0.5 U	0.02 U	62	2.5 U	3.1	45	41	41	12	2.3				
8/14/2012	XX	SWXXXX211	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6				
10/29/2012	XX	SWXXXX22F	0.2 U	0.25 U	0.02 U	78	2.5 U	6.2	63	56	56	7.8	3.7				
5/21/2013	XX	SWXXXX249	0.2 U	0.25 U	0.02 U	53	2.5 U	2	49	54	54	8.3	2.4				
7/24/2013	XX	SWXXXX263	0.2 U	0.25 U	0.02 U	79	2.5 U	2.4	53	52	52	14	1.1				
10/1/2013	XX	SWXXXX27H	0.2 U	0.25 U	0.02 U	88	2.5 U	0.58	83	87	87	11	1.4				
6/5/2014	XX	SWXXXX29B	0.1 U	0.05 U	0.1 U	110	4.4	1 U	83.4	91	91	7.3	2 U				
8/21/2014	XX	SWXXXX2B5	0.1 U	0.12	0.1 U	130	7.2	14	78.6	83	83	9.9	3.3				
11/13/2014	XX	SWXXXX2CJ	0.1 U	0.05 U	0.1 U	84	4 U	5	45.5	41	41	8.2	3				
6/4/2015	XX	SWXXXX2EF	0.1 U	0.05 U	0.1 U	73	4 U	1 U	44	45	45	7.6	2 U				
9/3/2015	XX	SWXXXX2GA	0.1 U	0.05 U	0.1 U	150	7.2	1 U	101	100	100	13	2.3				
11/5/2015	XX	SWXXXX2I4	0.1 U	0.05 U	0.1 U	88	4 U	1 U	48.8	45	45	8.6	2.8				
6/16/2016	XX	SWXXXX31E	D	D	D	D	D	D	D	D	D	D	D				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SPOS) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L				
9/22/2016	XX	SWXXXX338	D	D	D	D	D	D	D	D	D	D	D				
11/10/2016	XX	SWXXXX352	0.1 U	0.05 U	0.1 U	140	4 U	39	94	74	74	7.2	5.7				
6/15/2017	XX	SWXXXX36H	0.1 U	0.05 U	0.1 U	93	4 U	1 U	72	71	71	8.2	2 U				
8/31/2017	XX	SWXXXX38B	D	D	D	D	D	D	D	D	D	D	D				
11/16/2017	XX	SWXXXX3A5	0.1 U	0.05 U	0.1 U	82	4 U	7.6	55.2	43	43	8	4				
6/21/2018	XX	SWXXXX3C0	0.1 U	0.05 U	0.1 U	140	4 U	1 U	90.4	97	97	10	2 U				
8/16/2018	XX	SWXXXX3CF	0.1 U	0.05 U	0.1 U	120	4 U	1 U	75.6	78	78	10	2 U				
11/29/2018	XX	SWXXXX3F8	0.1 U	0.05 U	0.1 U	45	4 U	3	45	38	38	7.7	2.7				
6/6/2019	XX	SWXXXX3H3	0.1 U	0.05 U	0.1 U	80	4 U	1 U	56	54	54	9.2	2 U				
8/15/2019	XX	SWXXXX3HI	0.1 U	0.05 U	0.1 U	120	4 U	1 U	85.2	88	88	8.6	2.5				
10/24/2019	XX	SWXXXX40B	0.1 U	0.05 U	0.1 U	96	4 U	1 U	51.1	47	47	18	3.1				
6/18/2020	XX	SWXXXX426	0.1 U	0.35	0.1 U	120	6	1 U	88.7	100	100	10	2 U				
8/6/2020	XX	SWXXXX431	0.1 U	0.05 U	0.1 U	120	6.4	1 U	96.2	94	94	8.7	2 U				
10/22/2020	XX	SWXXXX45E	0.1 U	0.05 U	0.1 U	100	4 U	18	58.7	38	38	14	2 U				
6/24/2021	XX	SWXXXX479	0.1 U	0.05 U	0.1 U	98	4 U	1 U	69	75	75	9	2 U				
9/23/2021	XX	SWXXXX494	0.1 U	0.05 U	0.1 U	84	8.8	1 U	61.7	60	60	11	2 U				
6/30/2022	XX	SWXXXX4B6	0.28	0.05 U	0.1 U	110	5.6	2 U	92.4	98	98	9.8	2 U				
10/20/2022	XX	SWXXXX4D3	0.1 U	0.85	0.1 U	87		1 U	49.3	31	31	21	2.7				
10/20/2022	XX	SWXXXX4D3RR					4 U										
6/8/2023	XX	SWXXXX4F4	0.1 U	0.05 U	0.1 U	55	4 U	1 U	58.1	53	53	9.1	2 U				
10/19/2023	XX	SWXXXX4IJ	0.28	0.14	0.11	240	52	86	176	83	83	16	3.4				
UDLP																	
6/24/2021	XX	LFXXXX47J	0.19	0.098		540	4 U	24	452	420	420	6.9	30				
9/23/2021	XX	LFXXXX49F	0.16	0.096		310	4 U	13	282	310	310	4.2	13				
6/29/2022	XX	LFXXXX4A1	0.28	2.2		480	8.4	50	455	390	390	6.3	25				
10/20/2022	XX	LFXXXX4DE	0.12	0.36		370		16	329	330	330	4.4	17				
10/20/2022	XX	LFXXXX4DERR					5.6										
6/8/2023	XX	LFXXXX4DJ	0.3	0.11		390	4 U	17	368	360	360	5.1	17				
10/19/2023	XX	LFXXXX4J9	0.34	0.066		410	4 U	14	347	380	380	8.5	14				

DATA SUMMARY TABLE

Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(UDLP)			Ammonia (N)	Nitrate (N)	Total Phosphorus	Total Dissolved Solids	Total Suspended Solids	Sulfate	Ca-mg Hardness (CaCO3)	Bicarbonate Alkalinity (CaCO3)	Alkalinity (CaCO3)	Organic Carbon	Chloride
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

Units Abbreviations:

mg/L - MILLIGRAMS PER LITER

Notes: Sample Type XX = Environmental Sample, XD = Duplicate Sample
Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

! - The sampling location was damaged or destroyed.
A - The sampling location was inaccessible.
D - The sampling location was dry.
F6 - No flow. Sample not taken.
H - Analyzed outside U.S.EPA's recommended hold time.
I - The sampling location yielded insufficient quantity to collect a sample.
J - Analyte was positively identified/Associated value is an estimate.
U - Not Detected above the laboratory reporting limit.
UH - Not Detected above the laboratory reporting limit. Analyzed outside U.S.EPA's recommended hold time
Y4 - Laboratory instrument malfunction, therefore no data available to report.

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(103)			Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
Date	Type	Sample ID															
103																	
4/27/2000	XX	103XX36643				0.02 U		0.01 U	0.36	1.38							
8/1/2000	XX	103XX36739				0.058		0.01 U	0.3	1.49							
10/24/2000	XX	103XX36823				D				D							
5/8/2001	XX	103XX37019	0.008 U			0.119		0.01 U	0.24	1.2							
7/24/2001	XX	103XX37096	D			D		D	D	D							
10/16/2001	XX	103XX37180	D			D		D	D	D							
5/15/2002	XX	103XX37391	0.01 U	0.9		0.095	0.4	0.01 U	0.36	1.5							
7/29/2002	XX	103XX37466	0.01	1.3		0.034	0.4	0.01 U	0.28	1.5							
10/18/2002	XX	103XX37547	D	D		D	D	D	D	D							
6/18/2003	XX	103XX37790	0.005 U	2.8		0.032	1 U	0.01 U	1 U	1.3							
8/6/2003	XX	103XX37839	0.005 U	3.1		0.02	1 U	0.01 U	1 U	1.4							
10/6/2003	XX	103XX37900	0.005 U	3.5		0.031	1 U	0.01 U	1 U	1.8							
5/12/2004	XX	103XX38119	0.005 U	3.1		0.022	1 U	0.01 U	1 U	1 U							
8/19/2004	XX	103XX38218	0.005 U	3.5		0.031	1 U	0.01 U	1 U	1.9							
10/18/2004	XX	103XX38278	D	D		D	D	D	D	D							
5/24/2005	XX	GW103X004	0.005 U	2.9		0.03	1 U	0.01 U	1 U	1.2							
8/17/2005	XX	GW103X01G	0.005 U	2.8		0.02	1 U	0.01 U	1 U	1.6							
10/13/2005	XX	GW103X038	D	D		D	D	D	D	D							
5/15/2006	XX	GW103X084	0.005 U	3.7		0.02	1 U	0.01 U	1 U	1.7							
8/7/2006	XX	GW103X06C	0.005 U	4.1		0.02	1 U	0.01 U	1 U	1.8							
10/11/2006	XX	GW103X050	0.005 U	3.9		0.02 B	1 U	0.01 U	1 U	1.7							
5/22/2007	XX	GW103X09G	0.005 U	3.6		0.11	1 U	0.01 U	1 U	1.7							
8/21/2007	XX	GW103X0B9	D	D		D	D	D	D	D							
11/1/2007	XX	GW103X0D1	0.005 U	4.1		0.059	1 U	0.01 U	1 U	1.8							
5/28/2008	XX	GW103X0F9	0.005 U	3.8		0.024	1 U	0.01 U	1 U	1.6							
8/26/2008	XX	GW103X0H9	0.005 U	3.3		0.03	1 U	0.01 U	1 U	1.5							
10/28/2008	XX	GW103X0IH	0.005 U	4.3		0.043	1 U	0.01 U	1 U	1.8							
5/18/2009	XX	GW103X10H	0.005 U	2.9		0.017	1 U	0.01 U	1 U	1.4							
8/17/2009	XX	GW103X12H	0.005 U	3.4		0.072	1 U	0.01 U	1 U	1.3							
10/29/2009	XX	GW103X145	0.005 U	3		0.068	1 U	0.01 U	1 U	1.4							
6/10/2010	XX	GW103X166	0.005 U	3.2		0.019	1 U	0.01 U	1 U	1.4							
8/19/2010	XX	GW103X187	D	D		D	D	D	D	D							
10/26/2010	XX	GW103X19F	0.005 U	4		0.36	1 U	0.013	1 U	1.6							
9/20/2021	XX	GW103X49B	D	D		D	D	D	D	D							
104B																	
4/27/2000	XX	104BXX36643				0.049		0.132	1.12	4.25							
8/1/2000	XX	104BXX36739				0.043		0.08	1.01	4.05							
10/24/2000	XX	104BXX36823	0.008 U			0.189		0.08	1.01	4.2							
5/8/2001	XX	104BXX37019	0.008 U			0.329		0.09	1.14	4.6							
7/24/2001	XX	104BXX37096	0.008 U			0.063		0.08	1.12	4.3							
10/16/2001	XX	104BXX37180	0.01 U			0.064		0.06	1.04	4.1							
5/15/2002	XX	104BXX37391	0.01 U	9.6		0.13	1.8	0.07	1.177	4.7							
7/29/2002	XX	104BXX37466	0.01 U	10.2		0.036	1.7	0.07	1.03	4.1							
10/15/2002	XX	104BXX37544	0.01 U	9.1		0.062	1.6	0.06	1	3.8							
6/19/2003	XX	104BXX37791	0.005 U	26		0.016	2	0.08	1 U	4							
8/5/2003	XX	104BXX37838	0.005 U	24		0.01 U	1.9	0.064	1	3.5							
10/7/2003	XX	104BXX37901	0.005 U	22		0.01	1.8	0.056	1 U	3.6							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(104B)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
4/26/2004	XX	104BXX38103	0.005 U	25		0.01 U	2	0.063	1.2	5.1							
8/9/2004	XX	104BXX38208	0.005 U	22		0.044	1.8	0.063	1 U	3.5							
10/11/2004	XX	104BXX38271	0.005 U	23		0.024	1.8	0.063	1 U	3.7							
5/24/2005	XX	GW104B005	0.005 U	20		0.03	1.6	0.04	1 U	3.5							
8/1/2005	XX	GW104B01H	0.005 U	21		0.02	1.7	0.05	1 U	4.1							
10/25/2005	XX	GW104B039	0.005 U	24		0.03	1.7	0.04	1 U	4.1							
5/10/2006	XX	GW104B085	0.005 U	27		0.01 B	1.8	0.04	1 U	3.9							
7/24/2006	XX	GW104B06D	0.005 U	25		0.02 B	1.8	0.04	1.2	4.3							
10/10/2006	XX	GW104B051	0.005 U	23		0.04 B	1.8	0.05	1	4							
5/10/2007	XX	GW104B09H	0.005 U	23		0.041	1.7	0.032	1 U	3.6							
8/6/2007	XX	GW104B0BA	0.005 U	25		0.02	1.8	0.045	1.2	4.7							
10/24/2007	XX	GW104B0D2	0.005 U	22		0.01	1.7	0.04	1 U	4							
10/24/2007	XD	GWDP2X0EJ	0.005 U	23		0.01 U	1.7	0.04	1 U	4.2							
5/28/2008	XX	GW104B0FA	0.005 U	23		0.04	1.8	0.03	1	4.3							
8/11/2008	XX	GW104B0HA	0.005 U	19		0.011	1.6	0.03	1 U	3.8							
10/15/2008	XX	GW104B0II	0.005 U	20		0.02	1.6	0.03	1	3.7							
10/15/2008	XD	GWDP1X106	0.005 U	20		0.01 U	1.6	0.03	1	3.7							
5/6/2009	XX	GW104B10I	0.005 U	19		0.02	1.5	0.027	1 U	3.6							
8/4/2009	XX	GW104B12I	0.005 U	18		0.015	1.5	0.026	1 U	3.3							
10/19/2009	XX	GW104B146	0.005 U	21		0.02	1.7	0.03	1	4.3							
5/25/2010	XX	GW104B167	0.005 U	20		0.01 U	1.6	0.024	1.1	3.9							
5/25/2010	XD	GWDP1X15J	0.005 U	20		0.025	1.6	0.024	1.1	3.9							
8/2/2010	XX	GW104B188	0.005 U	20		0.025	1.6	0.022	1.1	3.8							
10/12/2010	XX	GW104B19G	0.005 U	20		0.16	2	0.022	1 U	3.5							
5/16/2011	XX	GW104B1DI	0.005 U	21		0.01 U	1.6	0.023	1.1	3.8							
5/16/2011	XD	GWXXXX1EG	0.005 U	21		0.01 U	1.7	0.024	1.1	4							
8/9/2011	XX	GW104B1F9	0.0016 U	21		0.017	1.7	0.028	1	4							
11/3/2011	XX	GW104B1H0	0.0016 U	20		0.011	1.6	0.031	0.91 J	3.9							
11/3/2011	XD	GWDP2X1HJ	0.0016 U	18		0.0088 J	1.5	0.027	0.86 J	3.6							
5/14/2012	XX	GW104B1IE	0.005 U	20		0.02	1.7	0.03	1.1	4.1							
5/14/2012	XD	GWXXXX1JC	0.005 U	21		0.014	1.7	0.03	1.1	4.1							
8/14/2012	XX	GW104B207	0.005 U	18		0.01	1.6	0.029	1 U	3.9							
8/14/2012	XD	GWDP1X215	0.005 U	18		0.029	1.5	0.03	1 U	3.9							
10/31/2012	XX	GW104B221	0.005 U	21		0.01 U	1.7	0.028	1.1	4.2							
5/22/2013	XX	GW104B23F	0.005 U	19		0.01 U	1.5	0.023	1 U	3.5							
5/22/2013	XD	GWDP3X24F	0.005 U	15		0.01 U	1.2	0.018	1 U	2.8							
7/23/2013	XX	GW104B259	0.005 U	22		0.01 U	1.6	0.021	1.3	4.1							
10/1/2013	XX	GW104B273	0.005 U	20		0.01 U	1.6	0.026	1 U	4.1							
6/4/2014	XX	GW104B28H	0.008 U	21.5		0.1 U	1.87	0.0176	1	4.29							
6/4/2014	XD	GWDP3X29H	0.008 U	21.6		0.1 U	1.89	0.0183	1 U	4.29							
8/19/2014	XX	GW104B2AB	0.008 U	22.5		0.1 U	1.7	0.0213	1 U	4.29							
11/12/2014	XX	GW104B2C5	0.008 U	20.7		0.1 U	1.71	0.0223	1 U	4.23							
6/3/2015	XX	GW104B2E1	0.008 U	20.4		0.1 U	1.77	0.019	1.05	4.16							
6/3/2015	XD	GWDP3X2F1	0.008 U	20		0.1 U	1.7	0.019	1 U	4.03							
9/2/2015	XX	GW104B2FG	0.008 U	22.4		0.1 U	1.83	0.014	1 U	4.66							
11/4/2015	XX	GW104B2HA	0.008 U	21.2		0.1 U	1.78	0.019	1.01	4.39							
6/14/2016	XD	GWDP3X320	0.008 U	21.8		0.1 U	1.84	0.021	1.1	4.4							
6/14/2016	XX	GW104B310	0.008 U	20.9		0.1 U	1.81	0.021	1.1	4.35							
9/20/2016	XX	GW104B32E	0.008 U	22		0.1 U	1.78	0.018	1	4.49							

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(104B)			Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
Date	Type	Sample ID															
11/8/2016	XX	GW104B348	0.008 U	22.6		0.1 U	1.61	0.016	1	4.54							
6/14/2017	XD	GWDP3X373	0.008 U	22.3		0.1 U	1.82	0.0223	1.15	4.41							
6/14/2017	XX	GW104B363	0.008 U	21.9		0.1 U	1.83	0.0277	1.22	4.32							
8/30/2017	XX	GW104B37H	0.008 U	22		0.297	1.76	0.0552	1.05	4.5							
11/15/2017	XX	GW104B39B	0.008 U	22.1		0.1 U	1.7	0.0166	1	4.51							
6/19/2018	XD	GWDP3X3C6	0.008 U	19.5		0.1 U	1.86	0.0253	1 U	3.95							
6/19/2018	XX	GW104B3B6	0.008 U	21		0.1 U	2.01	0.0273	1 U	4.22							
8/14/2018	XX	GW104B3DF	0.008 U	21.6		0.1 U	1.74	0.0172	1 U	4.26							
11/27/2018	XX	GW104B3EE	0.008 U	22.9		0.1 U	1.7	0.0197	1.12	4.65							
6/4/2019	XD	GWDP3X3H9	0.008 U	21.7		0.1 U	1.7	0.0123	1 U	4.18							
6/4/2019	XX	GW104B3G9	0.008 U	23.7		0.1 U	1.84	0.0132	1.04	4.62							
8/14/2019	XX	GW104B3II	0.008 U	22.5		0.1 U	1.78	0.0144	1 U	4.38							
10/22/2019	XX	GW104B3JH	0.008 U	22.1		0.1 U	1.78	0.0079	1.03	4.81							
6/16/2020	XD	GWDP3X42C	0.008 U	21.8		0.1 U	1.77	0.0137	1 U	4.35							
6/16/2020	XX	GW104B41C	0.008 U	22.1		0.1 U	1.75	0.0131	1 U	4.35							
8/4/2020	XX	GW104B441	0.008 U			0.1 U	1.9	0.019	1.02	4.68							
8/4/2020	XX	GW104B441R		24.4													
10/20/2020	XX	GW104B450	0.008 U	22.6		0.1 U	1.7	0.0159	1.1	4.65							
6/22/2021	XD	GWDP3X47F	0.008 U	23.5		0.135	1.96	0.0335	1.03	4.48							
6/22/2021	XX	GW104B46F	0.008 U	22.6		0.108	1.94	0.0302	1 U	4.29							
9/21/2021	XX	GW104B48A	0.008 U	21		1.01	2.05	0.057	1.12	4.56							
6/28/2022	XD	GWDP3X4BC	0.008 U	23.6		0.1 U	1.89	0.0329	1 U	4.57							
6/28/2022	XX	GW104B4AC	0.008 U	23.6		0.254	1.92	0.0384	1.03	4.75							
10/18/2022	XX	GW104B4C9	0.008 U	23.6		0.927	2.07	0.0563	1.02	4.94							
6/6/2023	XD	GWDP3X4FA	0.008 U	24.3		2.34	2.52	0.08	1.25	4.67							
6/6/2023	XX	GW104B4EA	0.008 U	23.9		0.255	1.95	0.0336	1 U	4.63							
10/17/2023	XX	GW104B4I5	0.008 U	21.5		0.443	1.9	0.0405	1.01	4.46							
107A																	
5/3/2000	XX	107AXX36649				0.02 U		0.951	1.98	37.35							
8/10/2000	XX	107AXX36748				0.75		0.94	1.86	31.9							
11/9/2000	XX	107AXX36839	0.008 U			1.669		0.99	1.48	25.8							
5/16/2001	XX	107AXX37027	0.008 U			0.366		0.94	1.68	30.2							
8/1/2001	XX	107AXX37104	0.008 U			0.87		12.96	2.56	67.1							
10/24/2001	XX	107AXX37188	0.008 U			1.85		24.96	3.12	93.2							
5/22/2002	XX	107AXX37398	0.01 U	370.2		1.74	131.7	7.05	2.751	89.2							
8/2/2002	XX	107AXX37470	0.03	307.2	0.01 U	1.22	133.3	13.92	3.6	90.9							
10/23/2002	XX	107AXX37552	0.043	226.2	0.01 U	1.007	123	13.17	2.43	73.8							
6/24/2003	XX	107AXX37796	0.005 U	270	0.003 U	1.2	140	17	4	57							
8/13/2003	XX	107AXX37846	0.005 U	220	0.011	0.9	120	15	3.8	56							
10/16/2003	XX	107AXX37910	0.005 U	210	0.003 U	0.65	120	16	4.3	64							
5/13/2004	XX	107AXX38120	0.005 U	130	0.005	0.36	67	0.79	2.9	46							
8/2/2004	XX	107AXX38201	0.005 U	98	0.0081	0.42	43	7.6	2.5	32							
10/19/2004	XX	107AXX38279	0.005 U	100	0.003 U	0.62	52	7.6	2.3	33							
5/10/2005	XX	GW107A006	0.005 U	160	0.003 U	0.36	100	20	3	38							
7/27/2005	XX	GW107A01I	0.005 U	160	0.003 U	0.46	110	9.8	3	45							
10/27/2005	XX	GW107A03A	0.005 U	130	0.003 U	0.94	76	14	2.3	37							
5/3/2006	XX	GW107A086	0.005 U	88	0.005 B	0.14	46	7.2	1.5	28							
8/1/2006	XX	GW107A06E	0.005 U	73	0.003 U	0.27	31	5.3	1.9	19							
10/25/2006	XX	GW107A052	0.005 U	50	0.003 U	0.16	19	4.4	1.1	12							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(107A)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
5/8/2007	XX	GW107A09I	0.005 U	62		0.12	32	6.1	1.4	18							
5/8/2007	XD	GWDP3X0EC	0.005 U	58		0.12	30	5.8	1.4	18							
8/7/2007	XX	GW107A0BB	0.005 U	75		0.26	37	11	1.9	18							
10/31/2007	XX	GW107A0D3	0.005 U	99		0.42	56	19	2.4	19							
5/28/2008	XX	GW107A0FB	0.005 U	90		0.2	51	18	2.9	20							
8/18/2008	XX	GW107A0HB	0.005 U	68		0.26	35	14	1.4	18							
10/23/2008	XX	GW107A0IJ	0.005 U	70		0.32	32	12	1.6	20							
5/12/2009	XX	GW107A10J	0.005 U	55		0.059	24	10	1.1	16							
5/12/2009	XD	GWDP3X10C	0.005 U	65		0.083	23	12	1.1	15							
8/11/2009	XX	GW107A12J	0.005 U	67		0.17	26	13	2	15							
10/26/2009	XX	GW107A147	0.005 U	57		0.24	29	13	2.3	15							
6/2/2010	XX	GW107A168	0.005 U	75		0.054	24	16	1.8	12							
8/5/2010	XX	GW107A189	0.005 U	79		0.17	25	22	3	14							
8/5/2010	XD	GWDP3X182	0.005 U	84		0.19	25	24	3	14							
10/18/2010	XX	GW107A19H	0.005 U	90		0.28	41	33	4.3	24							
5/18/2011	XX	GW107A1D8	0.005 U	100		0.12	46	39	3.3	28							
8/9/2011	XX	GW107A1EJ	0.0016 U	65		0.19	24	24	2.2	24							
11/2/2011	XX	GW107A1GA	0.0016 U	74		0.61	28	26	4	28							
5/17/2012	XX	GW107A1I4	0.005 U	92		0.15	37	36	3.7	27							
8/14/2012	XX	GW107A1JH	0.005 U	93		0.23	47	50	7.3	38							
10/31/2012	XX	GW107A21B	0.005 U	110		0.42	52	56	7.7	45							
5/21/2013	XX	GW107A235	0.005 U	120		0.22	52	61	5.8	44							
7/22/2013	XX	GW107A24J	0.005 U	110		0.3	40	51	5.5	37							
10/1/2013	XX	GW107A26D	0.005 U	94		0.41	37	41	5.2	34							
6/4/2014	XX	GW107A287	0.008 U	58.2		0.134	18.6	1.2	1.63	18.1							
8/19/2014	XX	GW107A2A1	0.008 U	96.6		0.178	35.2	26.4	2.26	29.8							
11/12/2014	XX	GW107A2BF	0.008 U	103		0.213	50.3	37.6	5	38							
6/3/2015	XX	GW107A2DB	0.008 U	106		0.387	59	45.5	3.78	37.7							
9/2/2015	XX	GW107A2F6	0.008 U	103		0.32	53.3	29.8	4.02	38.1							
11/4/2015	XX	GW107A2H0	0.04 U	106		0.5 U	66	54.5	4.49	48.7							
6/15/2016	XX	GW107A30A	0.008 U	70.6		0.349	33.7	12.3	2.5	26.8							
9/20/2016	XX	GW107A324	0.008 U	64.1		0.5	33.7	9.57	8.3	24.6							
11/8/2016	XX	GW107A33I	0.008 U	75.7		0.424	56	17.9	28.9	28							
6/14/2017	XX	GW107A35D	0.008 U	143		0.519	124	72.5	12.2	52.4							
8/29/2017	XX	GW107A377	0.008 U	126		0.678	98.2	43	13.6	47.3							
11/15/2017	XX	GW107A391	0.008 U	108		0.597	99.9	36.2	24	56							
6/19/2018	XX	GW107A3AG	0.008 U	77.1		0.283	68.8	14.6	10.7	32.1							
8/16/2018	XX	GW107A3D5	0.008 U	91.6		0.3	77.6	24.4	11.1	37.7							
11/28/2018	XX	GW107A3E4	0.008 U	78.2		0.487	61.4	13	18.4	33.7							
6/5/2019	XX	GW107A3FJ	0.008 U	74.3		0.1 U	56.6	8.16	10.6	27.1							
8/14/2019	XX	GW107A3I8	0.008 U	80.5		0.1 U	65.4	17	9.96	28.2							
10/23/2019	XX	GW107A3J7	0.008 U	84.3		0.197	63.9	18.6	15.6	32.3							
6/17/2020	XX	GW107A412	0.008 U	70		0.1 U	54.4	13.7	12.6	26.5							
8/4/2020	XX	GW107A43B	0.008 U			0.182	63.2	11.3	17.7	28.5							
8/4/2020	XX	GW107A43BR		74													
10/22/2020	XX	GW107A44A	0.02 U	99.8		0.212	129	22.6	59.2	51.2							
6/22/2021	XX	GW107A465	0.008 U	93.2		0.537	95.5	14.1	31.3	39.5							
9/21/2021	XX	GW107A480	0.008 U	101		0.576	129	26	45.8	55.4							
6/29/2022	XX	GW107A4A2	0.008 U	98		0.462	150	32	65	55.9							

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(107A) Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
10/20/2022	XX	GW107A4BJ	0.008 U	94.2		0.951	121	23.6	56.1	48.9							
6/6/2023	XX	GW107A4E0	0.008 U	82.2		0.462	70.6	6.62	30	36.2							
10/17/2023	XX	GW107A4HF	0.008 U	66.8		0.356	57.5	6.18	27	26.4							
113																	
4/27/2000	XX	113XX36643				40.65		7.1	6.53	11.77							
8/1/2000	XX	113XX36739				66.14		9.14	9.68	11.97							
11/8/2000	XX	113XX36838	0.107			54.75		7.95	9.8	10.9							
5/8/2001	XX	113XX37019	0.072			54.55		6.81	6.94	9.4							
7/24/2001	XX	113XX37096	0.096			76.6		9.64	9.51	9.5							
10/16/2001	XX	113XX37180	0.104			59.1		7.78	9.18	9.5							
5/15/2002	XX	113XX37391	0.094	116		61.38	62.3	7.8	7.48	10.7							
7/31/2002	XX	113XX37468	0.12	118.5	0.01 U	81.42	75.3	9.24	9.29	10.9							
10/18/2002	XX	113XX37547	0.21	102.6	0.014	65.2	69.7	7.05	9.09	9.6							
6/18/2003	XX	113XX37790	0.093	120	0.003 U	56	71	8.5	11	11							
8/6/2003	XX	113XX37839	0.005 U	130	0.003 U	60	78	9	10	12							
10/6/2003	XX	113XX37900	0.1	120	0.003 U	62	76	8.1	9.9	12							
5/12/2004	XX	113XX38119	0.078	130	0.005	58	70	8.3	20	15							
8/19/2004	XX	113XX38218	0.079	120	0.003 U	62	74	8.7	11	12							
10/18/2004	XX	113XX38278	0.1	110	0.003 U	68	79	8.8	14	11							
5/24/2005	XX	GW113X008	0.058	110	0.003 U	54	63	8.1	8.4	9.5							
8/17/2005	XX	GW113X020	0.1	77	0.003 U	38	44	6.5	7.8	8.2							
10/13/2005	XX	GW113X03C	0.097	120	0.008	71	81	10	10	11							
5/15/2006	XX	GW113X088	0.06	140	0.003 U	68	79	9.4	9.9	13							
8/7/2006	XX	GW113X06G	0.086	120	0.005 B	63	69	8.8	11	11							
10/11/2006	XX	GW113X054	0.097	130	0.003 U	79 B	78	9.9	12	11							
5/22/2007	XX	GW113X0A0	0.058	100		58	58	7.8	10	12							
8/21/2007	XX	GW113X0BD	0.092	110		70	64	9.1	10	9.3							
11/1/2007	XX	GW113X0D5	0.095	98		63	62	8.2	9	8.3							
11/1/2007	XD	GWDP1X0EI	0.097	100		66	65	8.7	9.3	8.6							
5/28/2008	XX	GW113X0FD	0.08	110		70	69	9.1	14	11							
8/26/2008	XX	GW113X0HD	0.069	110		72	56	9.6	9.4	9.2							
10/28/2008	XX	GW113X0J1	0.09	140		78	86	11	11	9.8							
5/18/2009	XX	GW113X111	0.049	140		59	71	10	8.9	9.5							
5/18/2009	XD	GWDP1X10A	0.045	150		76	62	11	8.5	9							
8/17/2009	XX	GW113X131	0.064	110		65	59	8.6	9.5	9.5							
10/29/2009	XX	GW113X149	0.07	94		54	52	7	7.9	8.2							
6/10/2010	XX	GW113X16A	0.066	130		78	70	11	9.3	7.8							
8/19/2010	XX	GW113X18B	0.078	97		68	58	8.9	8.8	6.7							
10/26/2010	XX	GW113X19J	0.082	78		56	45	6.8	8.8	6.7							
202AR																	
4/27/2000	XX	202ARXX36643				0.35		19.46	8.32	28.77							
8/2/2000	XX	202ARXX36740				1.047		15.03	9.42	27.22							
10/24/2000	XX	202ARXX36823	0.015			1.615		20.25	10.33	27.8							
5/9/2001	XX	202ARXX37020	0.011			0.882		18.78	9.13	26.2							
7/24/2001	XX	202ARXX37096	0.014			1.528		19.17	9.9	24.4							
10/16/2001	XX	202ARXX37180	0.015			1.834		22.32	12.15	29							
5/16/2002	XX	202ARXX37392	0.01 U	276.9		0.94	89.8	19.77	10.296	30							
7/31/2002	XX	202ARXX37468	0.045	122.8	0.01 U	0.898	39.5	16.83	8.8	24.7							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(202AR)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
7/31/2002	XD	202ARXD37468			0.01 U												
10/16/2002	XX	202ARXX37545	0.01 U	235.8	0.01 U	1.404	86.1	16.5	9.98	21.9							
6/17/2003	XX	202ARXX37789	0.071	290	0.003 U	0.76	94	20	11	34							
8/6/2003	XX	202ARXX37839	0.007	290	0.003 U	0.95	100	22	12	32							
10/8/2003	XX	202ARXX37902	0.056	290	0.003 U	0.99	95	20	12	30							
4/28/2004	XX	202ARXX38105	0.0095	320	0.003 U	1	100	22	14	34							
8/11/2004	XX	202ARXX38210	0.0076	260	0.0031	1.2	95	20	13	27							
10/12/2004	XX	202ARXX38272	0.012	280	0.003 U	1.3	100	19	11	27							
5/19/2005	XX	GW202A009	0.008	230	0.003 U	0.83	91	19	11	29							
8/4/2005	XX	GW202A021	0.01	220	0.003	1	82	18	13	28							
10/25/2005	XX	GW202A03D	0.011	270	0.003 U	1.2	92	19	13	29							
5/9/2006	XX	GW202A089	0.01	500	0.003 U	0.76	98	20	13	30							
7/25/2006	XX	GW202A06H	0.009	360	0.003 B	0.83 B	97	20	13	30							
10/19/2006	XX	GW202A055	0.012	260	0.003 U	1.2	89	19	14	26							
5/10/2007	XX	GW202A0A1	0.015	290		0.91	93	19	13	31							
8/6/2007	XX	GW202A0BE	0.013	310		1.3	96	21	17	32							
10/25/2007	XX	GW202A0D6	0.012	340		1.4	130	26	13	39							
5/29/2008	XX	GW202A0FE	0.009	260		0.94	93	19	12	30							
8/12/2008	XX	GW202A0HE	0.007	240		0.95	84	17	12	29							
8/12/2008	XD	GWDP1X0H2	0.007	230		0.98	79	17	11	28							
10/16/2008	XX	GW202A0J2	0.008	210		0.98	74	15	11	26							
5/4/2009	XX	GW202A112	0.005 U	300		0.96	100	21	14	27							
8/5/2009	XX	GW202A132	0.013	340		1	120	23	12	26							
8/5/2009	XD	GWDP1X12A	0.012	340		1	120	19	12	26							
10/20/2009	XX	GW202A14A	0.01	210		1.3	77	18	12	25							
5/26/2010	XX	GW202A16B	0.01	270		1.1	93	20	17	26							
8/2/2010	XX	GW202A18C	0.011	265		1.2	84	18	17	25							
10/12/2010	XX	GW202A1A0	0.0069	210		1.5	81	16	13	23							
5/17/2011	XX	GW202A1DJ	0.005 U	240		1	79	16	15	22							
8/10/2011	XX	GW202A1FA	0.0052	220		1.2	77	18	12	26							
8/10/2011	XD	GWDP1X1G7	0.0024	220		1.2	76	18	12	25							
11/3/2011	XX	GW202A1H1	0.0085	200		1.2	78	17	14	25							
5/16/2012	XX	GW202A1IF	0.005 U	200		1.1	78	16	14	26							
8/15/2012	XX	GW202A208	0.0086	190		1.2	72	16	12	24							
10/31/2012	XX	GW202A222	0.012	200		1.6	83	16	15	25							
5/20/2013	XX	GW202A23G	0.005 U	200		0.95	69	16	13	22							
7/23/2013	XX	GW202A25A	0.0065	200		1	70	16	15	23							
10/2/2013	XX	GW202A274	0.0085	200		1.3	71	16	14	22							
6/3/2014	XX	GW202A28I	0.012	205		1.39	74.2	14.6	12.3	22.8							
8/19/2014	XX	GW202A2AC	0.015	213		1.54	68.3	15.1	12.1	21.2							
11/12/2014	XX	GW202A2C6	0.018	212		2.04	77.2	15.6	13.3	22.5							
6/2/2015	XX	GW202A2E2	0.016	207		1.38	71.9	15.8	12.3	22.7							
9/2/2015	XX	GW202A2FH	0.013	217		1.83	78.3	15.8	13.2	22.8							
11/3/2015	XX	GW202A2HB	0.011	211		1.7	75.9	16.2	13	22.9							
6/14/2016	XX	GW202A311	0.016	205		1.87	73.8	14.5	12.8	23.1							
9/22/2016	XX	GW202A32F	0.015	202		1.84	71.6	14.9	12.4	22.5							
11/9/2016	XX	GW202A349	0.015	216		1.89	68	15.1	13.4	23							
6/13/2017	XX	GW202A364	0.0125	206		1.73	74.8	15.2	13.1	22.6							
8/30/2017	XX	GW202A37I	0.014	204		1.52	71	15.3	12.8	21.9							

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(202AR)			Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
Date	Type	Sample ID															
11/16/2017	XX	GW202A39C	0.014	209		1.75	72.8	15.5	13.1	23							
6/20/2018	XX	GW202A3B7	0.015	222		1.48	71.6	15.7	13.8	23.7							
8/14/2018	XX	GW202A3DG	0.012	204		1.6	71	14.8	12.8	21.5							
6/4/2019	XX	GW202A3GA	0.026	204		1.66	71.6	15	12.6	21.5							
8/13/2019	XX	GW202A3IJ	0.016	198		1.48	75	14.5	12.9	22.1							
10/24/2019	XX	GW202A3JI	0.014	190		1.58	75	14.5	12.7	21.6							
6/16/2020	XX	GW202A41D	0.008 U	203		0.559	70.1	13.7	13	21.9							
8/5/2020	XX	GW202A442	0.012	221		1.35	78.4	15.4	13.8	23							
10/22/2020	XX	GW202A451	0.013	220		1.82	76.6	16.3	14	22.7							
6/23/2021	XX	GW202A46G	0.008 U	219		0.666	72.8	14.1	13.8	23							
9/23/2021	XX	GW202A48B	0.012	200		2.01	71.3	14.7	12.8	20.7							
6/28/2022	XX	GW202A4AD	0.013	214		1.74	76.3	15.3	13.5	23.3							
10/19/2022	XX	GW202A4CA	0.015	225		2.16	79.7	16.7	14.2	23.2							
6/7/2023	XX	GW202A4EB	0.014	232		2.01	78.8	16.9	15.7	24.6							
10/19/2023	XX	GW202A4I6	0.013	203		2.14	81.4	15.3	14.6	22.6							
202B & 202BR																	
4/27/2000	XX	202BXX36643				0.02 U		8.14	4.32	17.37							
8/2/2000	XX	202BXX36740				0.552		9.06	7.18	30.35							
10/24/2000	XX	202BXX36823	0.008 U			1.861		15.96	10.26	38.3							
5/9/2001	XX	202BXX37020	0.008 U			0.266		10.35	6.17	21.8							
7/25/2001	XX	202BXX37097	0.008 U			1.099		15.75	11.14	33.8							
10/16/2001	XX	202BXX37180	0.01 U			0.201		9.33	10.8	30.2							
5/16/2002	XX	202BXX37392	0.01 U	140.6		0.043	72.3	8.24	7.958	23.5							
7/31/2002	XX	202BXX37468	0.031	183.2	0.01 U	0.142	102.5	10.96	10.15	30.2							
10/16/2002	XX	202BXX37545	0.01 U	188.5	0.011	0.36	102.6	8.82	11.52	29.2							
6/17/2003	XX	202BXX37789	0.031	25	0.03	1.9	69	8	9.9	20							
8/6/2003	XX	202BXX37839	0.005 U	190	0.003 U	0.14	110	11	11	32							
10/8/2003	XX	202BXX37902	0.005 U	180	0.004	0.051	100	11	13	32							
4/28/2004	XX	202BXX38105	0.005 U	160	0.0058	0.1	81	10	9.9	25							
8/11/2004	XX	202BXX38210	0.017	200	0.0089	0.41	120	14	13	31							
10/12/2004	XX	202BXX38272	0.005 U	230	0.003 U	0.46	130	14	13	35							
5/19/2005	XX	GW202B00A	0.005 U	110	0.005	1.1	62	7.5	9.1	18							
8/4/2005	XX	GW202B022	0.005 U	150	0.01	1.3	84	10	11	26							
10/25/2005	XX	GW202B03E	0.005 U	120	0.006	0.49	68	7.6	13 E	21							
5/9/2006	XX	GW202B08A	0.005 U	120	0.003 U	0.47	71	8.1	9.7	20							
7/25/2006	XX	GW202B06I	0.005 U	140	0.005 B	1 B	82	9.6	12 E	20							
10/19/2006	XX	GW202B056	0.005 U	170	0.008	2.4	98	9.7	13	26							
5/10/2007	XX	GW202B0A2	0.005 U	99		0.67	60	7.8	8.8	17							
5/10/2007	XD	GWDP1X0EA	0.005 U	97		0.97	58	7.5	8.6	17							
8/6/2007	XX	GW202B0BF	0.007	160		4.6	97	12	15	28							
10/25/2007	XX	GW202B0D7	0.005 U	130		3.1	76	8.8	9.5	24							
5/29/2008	XX	GW202B0FF	0.005 U	95		3	53	7.8	7.7	15							
8/26/2008	XX	GW202B0HF	0.005 U	87		0.59	48	7.4	8.2	16							
10/16/2008	XX	GW202B0J3	0.005 U	100		2.7	58	8.1	8	17							
5/4/2009	XX	GW202B113	0.005 U	120		1.3	68	10	8.5	14							
8/5/2009	XX	GW202B133	0.0057	130		1.6	73	11	8	15							
10/20/2009	XX	GW202B14B	0.005 U	100		4.1	57	8	8.2	16							
5/26/2010	XX	GW202B16C	0.005 U	100		1.1	58	8.8	11	15							
8/2/2010	XX	GW202B18D	0.005 U	33		1.2	22	3.1	4	6							

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(202B & 202BR)			Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
Date	Type	Sample ID															
10/12/2010	XX	GW202B1A1	0.005 U	99		0.22	48	4.6	9.1	15							
5/17/2011	XX	GW202B1E0	0.005 U	51		0.22	27	3.8	5.6	8.7							
8/10/2011	XX	GW202B1FB	0.0016 U	120		0.31	62	12	9.6	20							
11/3/2011	XX	GW202B1H2	0.0016 U	86		0.62	51	7.3	10	16							
5/16/2012	XX	GW202B1IG	0.005 U	74		0.28	43	6.8	9.1	13							
8/15/2012	XX	GW202B209	0.005 U	120		0.38	69	11	11	20							
10/31/2012	XX	GW202B223	0.005 U	83		0.2	47	6.1	11	16							
5/20/2013	XX	GW202B23H	0.005 U	76		0.6	40	6.3	8.8	12							
7/23/2013	XX	GW202B25B	0.005 U	87		0.39	45	6.9	10	14							
10/2/2013	XX	GW202B275	0.005 U	87		0.38	47	6.5	10	13							
6/3/2014	XX	GW202B28J	0.008 U	78.3		1.38	45.5	5.8	8.16	15.4							
8/19/2014	XX	GW202B2AD	0.008 U	135		3.07	74.4	10.2	13.2	19.4							
11/12/2014	XX	GW202B2C7	0.008 U	125		0.642	75.6	8.26	13.2	20.2							
6/2/2015	XX	GW202B2E3	0.008 U	72.2		10.6	40.6	5.52	8.54	19.1							
9/2/2015	XX	GW202B2FI	0.008 U	144		1.9	81	11	14.4	20.9							
11/3/2015	XX	GW202B2HC	0.008 U	117		1.1	65.3	8.72	12.5	20.7							
6/14/2016	XX	GW202B312	0.008 U	85.4		1.32	46.4	6.8	9	12.9							
9/22/2016	XX	GW202B32G	I	I		I	I	I	I	I							
11/9/2016	XX	GW202B34A	I	I		I	I	I	I	I							
6/13/2017	XX	GW202B365	0.008 U	101		2.86	53	7.08	11	15.2							
8/30/2017	XX	GW202B37J	I	I		I	I	I	I	I							
11/16/2017	XX	GW202B39D	0.008 U	141		3.11	78	8.42	15.2	26.4							
6/20/2018	XX	GW202B3B8	0.008 U	89.4		6.26	42.4	5.77	10.9	20.8							
8/14/2018	XX	GW202B3DH	0.008 U	143		2.74	77.3	9.8	15.3	20.3							
11/27/2018	XX	GW202B3EG	0.008 U	145		1.49	75.7	7.09	15.8	21.9							
6/4/2019	XX	GW202B3GB	0.008 U	70.8		1.68	34.8	4.66	9.12	15.8							
8/13/2019	XX	GW202B3J0	0.008 U	111		1.16	63.5	8.13	14.1	17.3							
10/24/2019	XX	GW202B3JJ	0.008 U	86.2		0.538	56.1	5.89	13.1	17							
6/16/2020	XX	GW202B41E	!	!		!	!	!	!	!							
8/5/2020	XX	GW202B443	!	!		!	!	!	!	!							
10/22/2020	XX	GW202B452	!	!		!	!	!	!	!							
6/23/2021	XX	GW202B46H	!	!		!	!	!	!	!							
9/23/2021	XX	GW202B48C	0.008 U	186		0.147	111	14.2	24.5	27.8							
6/28/2022	XX	GW202B4AE	0.008 U	115		0.33	56.6	8.18	13.5	16							
10/19/2022	XX	GW202B4CB	0.008 U	137		0.987	69.1	10.4	16.8	18.9							
6/7/2023	XX	GW202B4EC	0.008 U	82.5		1.3	37.2	6.39	10.8	10.9							
10/19/2023	XX	GW202B4I7	0.008 U	84.4		0.82	43.4	7.13	12.1	11.6							
205A																	
4/27/2000	XX	205AXX36643				0.538		1.11	1.44	14.13							
8/2/2000	XX	205AXX36740				2.492		0.84	1.83	20.3							
10/25/2000	XX	205AXX36824	0.008 U			2.124		0.93	1.66	16.7							
5/9/2001	XX	205AXX37020	0.008 U			1.848		1.07	1.62	18.5							
7/25/2001	XX	205AXX37097	0.008 U			2.28		1.29	1.76	17.2							
10/17/2001	XX	205AXX37181	0.01 U			2.18		0.94	1.98	19.7							
5/15/2002	XX	205AXX37391	0.01 U	104.9		3.326	28.9	1.35	2.079	23.4							
8/1/2002	XX	205AXX37469	0.016	80.5	0.01 U	2.806	22.2	1.17	1.83	20.5							
10/16/2002	XX	205AXX37545	0.01 U	76.5	0.01 U	2.84	20.4	1.11	1.81	16.4							
6/19/2003	XX	205AXX37791	0.005 U	140	0.003 U	2.5	31	1.5	2.6	26							
8/20/2003	XX	205AXX37853	0.005 U	98	0.012	2.2	23	1.2	2.8	22							

DATA SUMMARY TABLE

Metals

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(205A)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
10/9/2003	XX	205AXX37903	0.005 U	96	0.003 U	2.2	22	1.2	2.4	20							
4/27/2004	XX	205AXX38104	0.005 U	120	0.003 U	2	25	1.1	3.9	27							
8/12/2004	XX	205AXX38211	0.005 U	180	0.003 U	2.5	38	1.7	4.5	42							
10/14/2004	XX	205AXX38274	0.005 U	97	0.003 U	1.4	21	0.9	2.3	18							
5/17/2005	XX	GW205A00B	0.005 U	130	0.003 U	1.7	30	0.89	2.9	25							
8/4/2005	XX	GW205A023	0.005 U	130	0.003 U	1.4	29	1	2.6	28							
10/27/2005	XX	GW205A03F	0.005 U	120	0.003 U	1.4	26	0.93	2.9	28							
5/9/2006	XX	GW205A08B	0.005 U	140	0.003 U	1.8	32	0.97	3.4	30							
7/25/2006	XX	GW205A06J	0.005 U	170	0.003 U	1.7 B	39	1	3.7	32							
10/23/2006	XX	GW205A057	0.005 U	100	0.003 U	1.3 B	20	0.8	2.1	26							
5/14/2007	XX	GW205A0A3	0.009	130		2.3	33	0.97	3.9	37							
8/16/2007	XX	GW205A0BG	0.005 U	120		1.5	27	0.96	3	24							
8/16/2007	XD	GWDP1X0EE	0.005 U	110		1.5	26	0.97	3	23							
10/25/2007	XX	GW205A0D8	0.005 U	120		1.4	24	0.89	2.5	27							
5/29/2008	XX	GW205A0FG	0.005 U	150		1.7	33	1.1	2.6	33							
8/12/2008	XX	GW205A0HG	0.005 U	130		1.4	30	0.94	2.5	31							
10/16/2008	XX	GW205A0J4	0.005 U	120		1.3	28	0.91	2	30							
10/16/2008	XD	GWDP2X107	0.005 U	120		1.3	28	0.91	2	31							
5/4/2009	XX	GW205A114	0.005 U	160		1.8	29	0.93	3.8	29							
8/5/2009	XX	GW205A134	0.005 U	180		1.2	27	0.97	2.4	30							
10/20/2009	XX	GW205A14C	0.005 U	100		1.1	24	0.84	3.5	25							
5/26/2010	XX	GW205A16D	0.005 U	150		1.2	25	0.82	3.5	28							
5/26/2010	XD	GWDP2X160	0.005 U	120		1.2	24	0.81	3.3	28							
8/3/2010	XX	GW205A18E	0.005 U	100		0.82	24	0.8	3.5	28							
10/13/2010	XX	GW205A1A2	0.005 U	69		0.44	16	0.59	1.8	21							
5/17/2011	XX	GW205A1E1	0.005 U	110		0.4	25	1	3.6	23							
8/9/2011	XX	GW205A1FC	0.0016 U	73		0.86	17	0.75	2.3	20							
11/3/2011	XX	GW205A1H3	0.0016 U	85		0.79	22	0.79	3.4	25							
5/16/2012	XX	GW205A1IH	0.005 U	73		0.23	16	0.99	3.2	23							
8/16/2012	XX	GW205A20A	0.0079	80		1.1	18	1.2	3.5	25							
10/30/2012	XX	GW205A224	0.0057	78		0.88	17	0.9	3.6	22							
5/20/2013	XX	GW205A23I	0.005 U	64		0.18	13	0.75	2.9	20							
7/23/2013	XX	GW205A25C	0.005 U	72		0.68	15	1.2	3.4	21							
10/2/2013	XX	GW205A276	0.0094	57		1.7	12	1	2.5	19							
6/3/2014	XX	GW205A290	0.008 U	55.8		0.388	12	1.09	1.62	19.5							
8/19/2014	XX	GW205A2AE	0.012	70.8		0.821	13.9	1.09	1.8	22.1							
11/12/2014	XX	GW205A2C8	0.008	63.8		0.706	13.8	0.976	1.8	20.8							
6/2/2015	XX	GW205A2E4	0.008 U	61.9		0.385	13.8	0.734	1.71	20.7							
9/2/2015	XX	GW205A2FJ	0.008 U	64.2		0.366	13.5	1.16	1.74	21.9							
11/3/2015	XX	GW205A2HD	0.008 U	64.4		0.418	13.8	0.738	1.86	21.7							
6/14/2016	XX	GW205A313	0.008 U	68.6		0.168	15.1	0.807	2	24.6							
9/21/2016	XX	GW205A32H	0.008 U	60.3		0.449	13.5	1.1	2	22.4							
11/9/2016	XX	GW205A34B	0.008	66.2		0.715	13.2	0.97	2.1	23.6							
6/13/2017	XX	GW205A366	0.008 U	65.6		0.162	13.7	0.302	1.81	21.2							
8/30/2017	XX	GW205A380	0.008 U	68		0.175	14.3	1.28	1.9	22.4							
11/16/2017	XX	GW205A39E	0.008 U	63.6		0.378	13.2	0.816	1.9	21.9							
6/19/2018	XX	GW205A3B9	0.008 U	65.7		0.1 U	15.5	0.214	2.06	22.7							
8/14/2018	XX	GW205A3DI	0.008 U	62.7		0.119	13	0.631	1.82	22							
11/27/2018	XX	GW205A3EH	0.008 U	60.6		0.1 U	11.7	0.258	1.88	20.4							

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(205A) Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
6/4/2019	XX	GW205A3GC	0.008 U	64.7		0.1 U	13.6	0.16	1.82	21.5							
8/13/2019	XX	GW205A3J1	0.008 U	62.3		0.112	14.4	0.913	1.84	22.1							
10/23/2019	XX	GW205A400	0.008 U	63.3		0.138	13.1	0.911	1.98	22.1							
6/16/2020	XX	GW205A41F	0.008 U	65.3		0.108	13.6	0.247	1.9	23							
8/5/2020	XX	GW205A444	0.008 U	66.5		0.168	14.3	0.802	1.9	22.3							
10/20/2020	XX	GW205A453	0.008 U	64.5		0.387	13.2	0.989	1.93	21.5							
6/23/2021	XX	GW205A46I	0.008 U	65.1		0.202	13.4	0.197	1.9	21.9							
9/22/2021	XX	GW205A48D	0.008 U	55.7		0.217	12.2	0.785	1.85	20.3							
6/28/2022	XX	GW205A4AF	0.008 U	62.2		0.201	13.1	0.538	1.82	21.2							
10/18/2022	XX	GW205A4CC	0.008 U	57.5		0.56	11.6	1.27	1.64	19.6							
6/7/2023	XX	GW205A4ED	0.008 U	65.6		0.188	13	0.287	1.91	21.8							
10/18/2023	XX	GW205A4I8	0.008 U	58.3		0.362	12.7	0.812	1.93	20.4							
205B																	
4/27/2000	XX	205BXX36643				0.02 U		0.756	0.97	11.06							
8/2/2000	XX	205BXX36740				0.231		1.39	1.03	9.11							
10/25/2000	XX	205BXX36824	0.008 U			0.377		2.36	0.96	9.4							
5/9/2001	XX	205BXX37020	0.008 U			0.623		0.68	1.49	20							
7/25/2001	XX	205BXX37097	0.008 U			0.35		2.75	1.15	9.6							
10/17/2001	XX	205BXX37181	0.01 U			0.363		5.66	1.45	11.6							
5/15/2002	XX	205BXX37391	0.01 U	111.8		0.607	36.7	0.89	2.047	21.4							
8/1/2002	XX	205BXX37469	0.021	88.2	0.01 U	0.553	44.6	6.3	1.56	10.7							
10/16/2002	XX	205BXX37545	0.01 U	116.1	0.011	0.63	60.9	9.33	1.78	10.5							
10/16/2002	XD	205BXX37468			0.01 U												
6/19/2003	XX	205BXX37791	0.005 U	110	0.003 U	0.41	40	3	1.9	12							
8/19/2003	XX	205BXX37852	0.005 U	76	0.011	0.47	35	5.3	1.8	9.5							
10/9/2003	XX	205BXX37903	0.005 U	79	0.003 U	0.36	34	5.3	1.7	10							
4/27/2004	XX	205BXX38104	0.005 U	67	0.0032	0.26	22	1.9	1.8	11							
8/12/2004	XX	205BXX38211	0.005 U	50	0.003 U	0.2	22	3.1	1.2	7.4							
10/14/2004	XX	205BXX38274	0.005 U	54	0.0058	0.3	24	3.3	1.3	7.3							
5/17/2005	XX	GW205B00C	0.005 U	110	0.003 U	0.22	30	0.65	1.8	16							
8/4/2005	XX	GW205B024	0.005 U	46	0.003	0.16	13	1.1	1.4	7.1							
10/27/2005	XX	GW205B03G	0.005 U	140	0.003 U	0.47	36	0.82	2.4	27							
5/9/2006	XX	GW205B08C	0.005 U	97	0.003 U	0.11	22	0.41	1.8	15							
7/25/2006	XX	GW205B070	0.005 U	49	0.003 U	0.08 B	11	0.13	1.2	7.4							
10/19/2006	XX	GW205B058	0.005 U	26	0.003 U	0.11	9.8	1	1 U	4.8							
5/14/2007	XX	GW205B0A4	0.009	86		0.091	22	0.21	2.1	17							
8/16/2007	XX	GW205B0BH	0.005 U	68		0.14	18	0.58	1.8	12							
10/25/2007	XX	GW205B0D9	0.005 U	57		0.1	15	0.61	1.3	9.2							
5/27/2008	XX	GW205B0FH	0.005 U	66		0.2	16	0.31	1.4	12							
5/27/2008	XD	GWDP2X0F3	0.005 U	63		0.18	16	0.2	1.4	12							
8/12/2008	XX	GW205B0HH	0.005 U	79		0.2	20	0.15	1.8	16							
10/16/2008	XX	GW205B0J5	0.005 U	46		0.09	12	0.2	1	8							
5/4/2009	XX	GW205B115	0.005 U	96		0.16	17	0.24	1.9	12							
8/5/2009	XX	GW205B135	0.005 U	120		0.15	17	0.14	1.7	14							
10/20/2009	XX	GW205B14D	0.005 U	35		0.062	8.8	0.19	1.2	6.1							
10/20/2009	XD	GWDP1X15E	0.005 U	36		0.071	9.1	0.19	1.3	6.3							
5/26/2010	XX	GW205B16E	0.005 U	63		0.043	11	0.065	1.6	7.5							
8/3/2010	XX	GW205B18F	0.005 U	53		0.034	11	0.19	1.6	7.4							
8/3/2010	XD	GWDP1X180	0.005 U	47		0.028	10	0.16	1.6	7.3							

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(205B)			Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
Date	Type	Sample ID															
10/13/2010	XX	GW205B1A3	0.005 U	33		0.096	9.6	0.66	1.1	5.9							
5/17/2011	XX	GW205B1E2	0.005 U	54		0.16	13	0.11	1.8	9.6							
8/9/2011	XX	GW205B1FD	0.0016 U	27		0.11	7.3	0.23	1.2	4.4							
11/3/2011	XX	GW205B1H4	0.0016 U	31		0.02	7.8	0.15	1.1	5.6							
5/16/2012	XX	GW205B1II	0.005 U	33		0.01 U	8.4	0.069	1.2	5.9							
8/16/2012	XX	GW205B20B	0.005 U	29		0.01 U	7.4	0.15	1.3	4.7							
10/30/2012	XX	GW205B225	0.005 U	54		0.032	13	0.31	2.2	9.4							
5/20/2013	XX	GW205B23J	0.005 U	30		0.063	6.8	0.3	1	4.2							
7/23/2013	XX	GW205B25D	0.005 U	35		0.027	7.7	0.13	1.4	5.3							
10/2/2013	XX	GW205B277	0.005 U	31		0.024	7.8	0.35	1.2	4.8							
6/3/2014	XX	GW205B291	0.008 U	55.6		0.1 U	13.4	0.451	1.19	8.2							
8/19/2014	XX	GW205B2AF	0.008 U	37.9		0.27	8.2	1.07	1 U	4.49							
11/12/2014	XX	GW205B2C9	0.008 U	44.2		0.1 U	11.5	0.305	1.19	6.55							
6/2/2015	XX	GW205B2E5	0.008 U	34.1		0.1 U	8.45	0.228	1 U	5.01							
9/2/2015	XX	GW205B2G0	0.008 U	29.4		0.1 U	8.39	0.534	1 U	4.21							
11/3/2015	XX	GW205B2HE	0.008 U	43.6		0.1 U	10.8	0.201	1.19	6.48							
6/14/2016	XX	GW205B314	0.008 U	33.2		0.1 U	7.57	0.127	1	4.57							
9/21/2016	XX	GW205B32I	0.008 U	23.8		0.164	6.86	0.737	1	4.47							
11/9/2016	XX	GW205B34C	0.008 U	25.8		0.179	6.98	0.94	1	3.84							
6/13/2017	XX	GW205B367	0.008 U	48.4		0.1 U	10.9	0.227	1.18	6.93							
8/30/2017	XX	GW205B381	0.008 U	30.1		0.1 U	6.89	0.232	1 U	4.09							
11/16/2017	XX	GW205B39F	0.008 U	48.2		0.1 U	11	0.145	1.3	6.46							
6/19/2018	XX	GW205B3BA	0.008 U	38.2		0.1 U	9.57	0.137	1.17	5.1							
8/14/2018	XX	GW205B3DJ	0.008 U	34		0.1 U	7.76	0.126	1 U	4.1							
11/27/2018	XX	GW205B3EI	0.008 U	50		0.1 U	11	0.0761	1.28	6.17							
6/4/2019	XX	GW205B3GD	0.008 U	58.5		0.1 U	13.5	0.14	1.24	9.01							
8/13/2019	XX	GW205B3J2	0.008 U	27.3		0.1 U	6.88	0.0924	1 U	3.64							
10/23/2019	XX	GW205B401	0.008 U	43		0.1 U	9.89	0.205	1.16	4.93							
6/16/2020	XX	GW205B41G	0.008 U	39		0.1 U	8.72	0.118	1 U	4.4							
8/5/2020	XX	GW205B445	0.008 U	34.2		0.1 U	8.02	0.26	1.02	3.96							
10/20/2020	XX	GW205B454	0.008 U	27.4		0.142	7.04	0.479	1.09	3.73							
6/23/2021	XX	GW205B46J	0.008 U	37.1		0.174	7.89	0.443	1.04	4.14							
9/22/2021	XX	GW205B48E	0.008 U	37.4		0.1 U	9.91	0.21	1.15	4.21							
6/28/2022	XX	GW205B4AG	0.008 U	37.9		0.1 U	8.76	0.116	1.04	4.03							
10/18/2022	XX	GW205B4CD	0.008 U	52.2		0.1 U	12	0.181	1.08	5.14							
6/7/2023	XX	GW205B4EE	0.008 U	47.8		0.3	9.68	0.599	1.03	4.77							
10/18/2023	XX	GW205B4I9	0.008 U	40.6		0.1 U	8.94	0.0574	1.15	4.34							
206A																	
4/27/2000	XX	206AXX36643				8.51		3.92	49.8	23.2							
8/2/2000	XX	206AXX36740				29.14		7.66	103.5	52.47							
10/25/2000	XX	206AXX36824	0.236			28.38		6.92	116	58.7							
5/8/2001	XX	206AXX37019	0.176			21.58		5.1	83.8	39.7							
7/25/2001	XX	206AXX37097	0.237			37.5		7.95	119.3	56.9							
10/17/2001	XX	206AXX37181	0.267			35.92		5.64	110.6	58.2							
5/16/2002	XX	206AXX37392	0.051	88.6		15.64	144.8	7.88	70.1	34.4							
8/1/2002	XX	206AXX37469	0.19	107.6	0.01 U	31.32	215.8	6.98	90.2	48.8							
10/17/2002	XX	206AXX37546	0.45	121.6	0.01 U	40.36	275.2	6.22	115.2	57.6							
6/19/2003	XX	206AXX37791	0.24	88	0.003 U	25	190	6	81	44							
8/18/2003	XX	206AXX37851	0.22	92	0.012	27	190	6.5	79	45							

DATA SUMMARY TABLE

Metals

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(206A)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
10/13/2003	XX	206AXX37907	0.21	89	0.003 U	24	180	5.2	84	44							
4/29/2004	XX	206AXX38106	0.2	89	0.003 U	27	220	6.7	91	41							
8/16/2004	XX	206AXX38215	0.18	120	0.0037	42	250	7.9	110	53							
10/12/2004	XX	206AXX38272	0.25	120	0.003 U	37	250	6.7	96	49							
5/17/2005	XX	GW206A00D	0.17	88	0.003 U	31	190	6	84	36							
8/15/2005	XX	GW206A025	0.25	120	0.003 U	37	230	7.9	110	51							
10/24/2005	XX	GW206A03H	0.26	110	0.003 U	33	210	6.6	86	48							
5/11/2006	XX	GW206A08D	0.21	130	0.003 U	32	290	8.4	110	51							
7/26/2006	XX	GW206A071	0.2	100	0.003 U	35 B	120	9	100	39							
10/23/2006	XX	GW206A059	0.24	92	0.003 U	34 B	190	6	90	38							
5/14/2007	XX	GW206A0A5	0.2	94		33	180	6.6	170	41							
5/14/2007	XD	GWDP2X0EB	0.19	92		31	170	6.3	100	39							
8/16/2007	XX	GW206A0BI	0.25	47		16	86	2.9	35	16							
10/29/2007	XX	GW206A0DA	0.26	140		48	270	8.2	120	49							
5/27/2008	XX	GW206A0FI	0.19	110		33	180	8.3	100	39							
5/27/2008	XD	GWDP1X0F2	0.18	91		30	170	7.5	88	34							
8/13/2008	XX	GW206A0HI	0.17	85		29	140	5.6	76	30							
10/20/2008	XX	GW206A0J6	0.23	100		38	170	8.4	93	36							
5/5/2009	XX	GW206A116	0.17	99		33	160	6.3	92	30							
8/6/2009	XX	GW206A136	0.16	110		48	230	7.5	110	26							
8/6/2009	XD	GWDP2X12B	0.15	140		38	230	8.9	130	24							
10/21/2009	XX	GW206A14E	0.23	99		36	160	5.8	91	34							
5/27/2010	XX	GW206A16F	0.12	85		29	120	7.2	82	26							
8/3/2010	XX	GW206A18G	0.28	110		39	180	6.2	82	34							
10/13/2010	XX	GW206A1A4	0.18	65		26	110	3.9	66	24							
10/13/2010	XD	GWDP1X1B4	0.2	71		28	120	4.2	71	23							
5/17/2011	XX	GW206A1E3	0.12	70		21	110	4.1	58	20							
8/9/2011	XX	GW206A1FE	0.25	110		45	180	6.2	98	37							
11/3/2011	XX	GW206A1H5	0.24	85		31	140	4	89	30							
5/16/2012	XX	GW206A1IJ	0.18	72		28	120	4.2	72	24							
8/15/2012	XX	GW206A20C	0.25	98		37	170	5.5	81	34							
10/30/2012	XX	GW206A226	0.21	93		27	140	4	86	30							
5/20/2013	XX	GW206A240	0.19	82		32	130	3.9	70	25							
7/23/2013	XX	GW206A25E	0.19	73		27	100	3.5	68	24							
10/2/2013	XX	GW206A278	0.27	97		38	150	4.1	77	28							
6/3/2014	XX	GW206A292	0.062	54.9		15.8	79.7	2.04	66.5	19.3							
8/20/2014	XX	GW206A2AG	0.333	126		44.4	177	4.69	97.7	35.6							
11/11/2014	XX	GW206A2CA	0.039	17.2		2.84	15.6	0.52	14	4.28							
6/2/2015	XX	GW206A2E6	0.224	82.6		30	132	3.3	82.5	26.5							
9/2/2015	XX	GW206A2G1	0.302	122		44.1	190	4.08	108	38.3							
11/3/2015	XX	GW206A2HF	0.059	38.6		7.09	51.1	1.6	47.6	13.8							
6/15/2016	XX	GW206A315	0.231	93.4		39.5	136	4.03	81.4	25.8							
9/21/2016	XX	GW206A32J	0.324	121		47.6	193	4.72	103	37.5							
11/9/2016	XX	GW206A34D	0.323	146		52.2	212	5.4	132	51.2							
6/13/2017	XX	GW206A368	0.177	89.6		29.9	135	3.69	81.9	26.5							
8/30/2017	XX	GW206A382	0.308	124		44.9	188	4.75	100	37.7							
11/15/2017	XX	GW206A39G	0.291	129		41.8	218	3.97	115	42.8							
6/19/2018	XX	GW206A3BB	0.252	91.3		35.8	154	4.08	82.5	26.9							
8/14/2018	XX	GW206A3E0	0.251	120		43	179	4.33	99.8	35.2							

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(206A) Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
11/27/2018	XX	GW206A3EJ	0.177	91.7		26.1	133	2.67	92.6	30.8							
6/4/2019	XX	GW206A3GE	0.122	70.5		19.6	106	2.62	66.2	20.1							
8/13/2019	XX	GW206A3J3	0.309	111		45.4	179	3.95	101	33.9							
10/23/2019	XX	GW206A402	0.316	147		49.2	232	4.19	129	44.3							
6/16/2020	XX	GW206A41H	0.286	92		40.4	127	3.34	90.4	25.8							
8/5/2020	XX	GW206A446	0.303	112		43.7	159	3.89	105	32.4							
10/20/2020	XX	GW206A455	0.273	146		52.3	226	4.7	128	44.2							
6/23/2021	XX	GW206A470	0.27	119		42.8	161	3.85	104	33.6							
9/22/2021	XX	GW206A48F	0.307	135		46.6	212	4.37	119	41.8							
6/28/2022	XX	GW206A4AH	0.282	106		41	146	3.84	86.6	27							
10/18/2022	XX	GW206A4CE	0.202	83.4		28.4	116	3.18	74.8	22.1							
6/7/2023	XX	GW206A4EF	0.26	84.7		39.1	99.1	3.21	77.2	19.1							
10/17/2023	XX	GW206A4IA	0.216	73		32.4	88	2.98	69.3	18.2							
206B																	
4/27/2000	XX	206BXX36643				0.02 U		0.12	3.18	2.42							
8/2/2000	XX	206BXX36740				D		D	D	D							
10/25/2000	XX	206BXX36824				D		D	D	D							
5/8/2001	XX	206BXX37019	0.008 U			0.171		0.01	3.03	1.9							
7/25/2001	XX	206BXX37097	D			D		D	D	D							
10/17/2001	XX	206BXX37181	D			D		D	D	D							
5/16/2002	XX	206BXX37392	0.01 U	6.1		0.166	7.9	0.03	3.964	4.2							
7/29/2002	XX	206BXX37466	D	D		D	D	D	D	D							
10/15/2002	XX	206BXX37544	D	D		D	D	D	D	D							
6/17/2003	XX	206BXX37789	0.005 U	16		0.24	12	0.03	5.4	4.4							
8/18/2003	XX	206BXX37851	0.005 U	13		0.22	8.6	0.04	4	3.9							
10/13/2003	XX	206BXX37907	0.005 U	9.2		0.087	5.6	0.018	3.8	3.5							
4/29/2004	XX	206BXX38106	0.005 U	17		0.082	11	0.011	4.6	3.3							
8/16/2004	XX	206BXX38215	D	D		D	D	D	D	D							
10/12/2004	XX	206BXX38272	D	D		D	D	D	D	D							
5/17/2005	XX	GW206B00E	0.005 U	13		0.04	8.8	0.01 U	3.9	2.9							
8/15/2005	XX	GW206B026	D	D		D	D	D	D	D							
10/24/2005	XX	GW206B03I	0.005 U	8.4		0.08	2.7	0.01	3.9	4							
5/11/2006	XX	GW206B08E	0.005 U	14		0.03	8.1	0.01	5	2.5							
7/26/2006	XX	GW206B072	0.005 U	16		1.5 B	9.4	0.06	6.1	2.6							
10/23/2006	XX	GW206B05A	0.005 U	9.7		0.07	3.1	0.01	4	2.4							
5/14/2007	XX	GW206B0A6	0.005 U	17		0.34	9.7	0.022	6.4	3.1							
8/16/2007	XX	GW206B0BJ	D	D		D	D	D	D	D							
10/29/2007	XX	GW206B0DB	D	D		D	D	D	D	D							
5/27/2008	XX	GW206B0FJ	D	D		D	D	D	D	D							
8/13/2008	XX	GW206B0HJ	0.005 U	17		0.06	8.7	0.02	7	2.8							
10/20/2008	XX	GW206B0J7	D	D		D	D	D	D	D							
5/5/2009	XX	GW206B117	0.005 U	17		0.09	8.4	0.013	5.7	2.5							
8/6/2009	XX	GW206B137	0.005 U	15		0.039	7	0.01 U	5.8	2.2							
10/21/2009	XX	GW206B14F	0.005 U	19		0.29	9.1	0.062	7.5	2.8							
5/27/2010	XX	GW206B16G	D	D		D	D	D	D	D							
8/3/2010	XX	GW206B18H	D	D		D	D	D	D	D							
10/13/2010	XX	GW206B1A5	0.005 U	10		0.54	2.6	0.065	4.7	1.1							
5/17/2011	XX	GW206B1E4	0.005 U	9		0.02	1.4	0.01 U	3.6	1.3							
8/9/2011	XX	GW206B1FF	D	D		D	D	D	D	D							

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(206B)			Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
Date	Type	Sample ID															
11/4/2011	XX	GW206B1H6	0.0016 U	16		0.032	6.6	0.013	6.1	2.1							
5/16/2012	XX	GW206B1J0	0.005 U	12		0.014	3.1	0.01 U	4	1.7							
8/15/2012	XX	GW206B20D	I	I		I	I	I	I	I							
10/30/2012	XX	GW206B227	0.005 U	15		0.064	4.3	0.036	5.2	1.8							
5/20/2013	XX	GW206B241	0.005 U	8.6		0.18	3.3	0.03	3	1 U							
7/24/2013	XX	GW206B25F	0.005 U	15		0.41	5.9	0.051	5.6	1.6							
10/2/2013	XX	GW206B279	0.005 U	14		0.41	5.6	0.05	5.8	1.6							
6/3/2014	XX	GW206B293	0.008 U	18.3		0.174	7.33	0.0144	5.85	1.97							
8/20/2014	XX	GW206B2AH	D	D		D	D	D	D	D							
11/11/2014	XX	GW206B2CB	0.008 U	7.48		0.243	1.69	0.0178	3.5	2.45							
6/2/2015	XX	GW206B2E7	0.008 U	9.95		0.439	2.64	0.036	3.32	1.05							
9/2/2015	XX	GW206B2G2	I	I		I	I	I	I	I							
11/3/2015	XX	GW206B2HG	0.008 U	10		0.1 U	2	0.015	3.73	2.34							
6/15/2016	XX	GW206B316	0.008 U	14		0.362	5.69	0.042	5.2	1.51							
9/21/2016	XX	GW206B330	D	D		D	D	D	D	D							
11/9/2016	XX	GW206B34E	D	D		D	D	D	D	D							
6/13/2017	XX	GW206B369	0.008 U	13.4		0.1 U	4.51	0.009	4.73	1.55							
8/30/2017	XX	GW206B383	I	I		I	I	I	I	I							
11/15/2017	XX	GW206B39H	0.008 U	18.5		0.35	7.06	0.0368	6.5	2.1							
6/19/2018	XX	GW206B3BC	0.008 U	16.3		0.374	6.89	0.0924	5.51	1.9							
8/14/2018	XX	GW206B3E1	I	I		I	I	I	I	I							
11/27/2018	XX	GW206B3F0	0.008 U	10.5		0.192	2.03	0.0161	3.56	1.42							
6/4/2019	XX	GW206B3GF	0.008 U	14.4		0.1 U	4.12	0.0182	4.2	1.54							
8/13/2019	XX	GW206B3J4	0.008 U	15.3		2.43	6.24	0.194	5.56	1.93							
10/23/2019	XX	GW206B403	D	D		D	D	D	D	D							
6/16/2020	XX	GW206B41I	0.008 U	18.6		1.61	6.84	0.102	5.75	2.66							
8/5/2020	XX	GW206B447	I	I		I	I	I	I	I							
10/22/2020	XX	GW206B456	D	D		D	D	D	D	D							
6/23/2021	XX	GW206B471	0.008 U	20		1.18	7.18	0.135	6.22	2.21							
9/22/2021	XX	GW206B48G	D	D		D	D	D	D	D							
6/28/2022	XX	GW206B4AI	0.008 U	17		1.65	6.12	0.0747	5.3	2.01							
10/18/2022	XX	GW206B4CF	0.008 U	12.1		0.307	3.19	0.017	4.26	1.99							
6/7/2023	XX	GW206B4EG	0.008 U	18.8		0.497	6.27	0.113	5.84	1.82							
10/17/2023	XX	GW206B4IB	0.008 U	16		2.46	5.26	0.0768	5.93	1.64							
301																	
5/3/2000	XX	301XX36649				0.02 U		0.128	0.98	5.93							
8/9/2000	XX	301XX36747				0.051		0.38	1.29	6.94							
11/8/2000	XX	301XX36838	0.008 U			0.049		0.21	1.07	6.4							
5/16/2001	XX	301XX37027	0.008 U			0.02 U		0.77	1.19	8.2							
7/31/2001	XX	301XX37103	0.008 U			0.037		0.77	1.18	8.5							
10/23/2001	XX	301XX37187	0.008 U			0.02 U		0.94	1.66	11							
5/21/2002	XX	301XX37397	0.01 U	41.9		0.043	9	0.93	1.449	10.6							
8/2/2002	XX	301XX37470	0.01 U	44.1	0.01 U	0.038	9.1	0.7	1.45	10.7							
10/23/2002	XX	301XX37552	0.01 U	67.7	0.01 U	0.047	9	0.63	1.83	10.1							
6/24/2003	XX	301XX37796	0.005 U	110	0.003 U	0.042	11	0.74	1.7	11							
8/12/2003	XX	301XX37845	0.005 U	110	0.009	0.03	11	0.4	1.9	12							
10/16/2003	XX	301XX37910	0.005 U	110	0.003 U	0.089	11	0.43	1.9	12							
5/5/2004	XX	301XX38112	0.005 U	120	0.003 U	0.029	13	0.21	2.2	15							
8/9/2004	XX	301XX38208	0.005 U	110	0.0043	0.041	12	0.034	1.9	14							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(301)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
10/20/2004	XX	301XX38280	0.005 U	110	0.003 U	0.048	13	0.64	2.3	18							
5/11/2005	XX	GW301X00F	0.005 U	120	0.003	0.1	14	0.47	1.7	16							
7/27/2005	XX	GW301X027	0.005 U	140	0.003 U	0.05	14	0.47	2.4	19							
11/7/2005	XX	GW301X03J	0.005 U	150	0.003 U	0.03	14	0.32	2.8	18							
5/1/2006	XX	GW301X08F	0.005 U	150	0.006 B	0.03	18	0.72	2.1	24							
7/31/2006	XX	GW301X073	0.005 U	170	0.007 B	0.05 B	18	0.78	3.6	29							
10/26/2006	XX	GW301X05B	0.005 U	130	0.003 U	0.05 B	17	0.52	3.5	26							
5/9/2007	XX	GW301X0A7	0.005 U	170		0.09	18	0.67	2.5	26							
8/9/2007	XX	GW301X0C0	0.005 U	190		0.087	20	0.68	3.9	31							
10/30/2007	XX	GW301X0DC	0.005 U	220		0.076	29	0.85	2.5	31							
10/30/2007	XD	GWDP3X0F0	0.005 U	220		0.066	29	0.84	2.5	30							
6/3/2008	XX	GW301X0G0	0.005 U	220		0.17	30	1.1	4.5	29							
8/14/2008	XX	GW301X0I0	0.005 U	190		0.1	22	0.82	2.3	25							
8/14/2008	XD	GWDP3X0H4	0.005 U	210		0.11	24	0.86	2.5	27							
10/21/2008	XX	GW301X0J8	0.005 U	270		0.2	27	1.1	4.4	27							
5/11/2009	XX	GW301X118	0.005 U	260		0.4	28	1.2	2.2	28							
8/10/2009	XX	GW301X138	0.005 U	320		0.2	26	0.85	2.4	27							
10/22/2009	XX	GW301X14G	0.005 U	230		0.15	28	0.83	4.2	29							
10/22/2009	XD	GWDP3X15G	0.005 U	280		0.15	27	0.83	4.1	28							
6/1/2010	XX	GW301X16H	0.005 U	240		0.22	28	0.56	3.9	28							
8/5/2010	XX	GW301X18I	0.005 U	260		0.11	28	0.55	4.2	28							
10/18/2010	XX	GW301X1A6	0.005 U	200		0.43	29	0.92	2.8	30							
5/18/2011	XX	GW301X1D9	0.005 U	230		0.13	34	0.56	4.1	28							
8/9/2011	XX	GW301X1F0	0.0016 U	240		0.093	32	0.55	4.1	30							
11/2/2011	XX	GW301X1GB	0.0016 U	210		0.24	32	0.53	4.6	30							
5/15/2012	XX	GW301X1I5	0.005 U	220		0.26	32	0.48	4.4	27							
8/14/2012	XX	GW301X1JI	0.005 U	200		0.14	29	0.4	4.4	30							
10/30/2012	XX	GW301X21C	0.005 U	260		0.15	34	0.43	5.4	31							
5/22/2013	XX	GW301X236	0.005 U	240		0.24	34	0.49	4.5	27							
7/25/2013	XX	GW301X250	0.005 U	260		0.54	40	0.95	5.8	37							
10/1/2013	XX	GW301X26E	0.005 U	240		0.83	35	0.47	4.6	31							
6/4/2014	XX	GW301X288	0.008 U	290		0.565	47.9	1.1	2.74	40							
8/20/2014	XX	GW301X2A2	0.008 U	321		0.423	49.9	0.91	3.14	45.1							
11/11/2014	XX	GW301X2BG	0.008 U	270		0.179	43.3	0.496	2.98	38.7							
6/3/2015	XX	GW301X2DC	0.008 U	276		0.209	45.7	0.572	2.55	37.5							
9/1/2015	XX	GW301X2F7	0.008 U	318		0.216	57.4	0.692	3.33	56.7							
11/4/2015	XX	GW301X2H1	0.008 U	292		0.137	49.2	0.521	3.1	44.4							
6/15/2016	XX	GW301X30B	0.008 U	290		0.101	55.8	0.625	2.8	51.4							
9/20/2016	XX	GW301X325	0.008 U	290		0.136	59.8	0.58	3	60.7							
11/10/2016	XX	GW301X33J	0.008 U	296		0.302	64.6	0.761	3.1	62.9							
6/14/2017	XX	GW301X35E	0.008 U	328		0.161	64.4	0.48	3.2	60.8							
8/29/2017	XX	GW301X378	0.008 U	305		0.1 U	61.8	0.481	3.19	65.5							
11/14/2017	XX	GW301X392	0.008 U	286		0.1 U	57	0.306	3	58.6							
6/19/2018	XX	GW301X3AH	0.008 U	268		0.161	73.8	0.57	2.86	65.4							
8/14/2018	XX	GW301X3D6	0.008 U	297		0.163	66.6	0.468	3.08	67.3							
11/28/2018	XX	GW301X3E5	0.008 U	313		0.349	64.6	0.35	3.18	64.4							
6/5/2019	XX	GW301X3G0	0.008 U	288		0.197	77.8	0.709	2.85	72.6							
8/13/2019	XX	GW301X3I9	0.008 U	269		0.106	79.4	0.597	3.2	82.3							
10/23/2019	XX	GW301X3J8	0.008 U	282		0.166	77	0.631	3.2	80.8							

SEVEE & MAHER ENGINEERS, INC.
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(301) Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
6/16/2020	XX	GW301X413	0.008 U	277		0.106	70.9	0.552	2.77	74.6							
8/4/2020	XX	GW301X43C	0.008 U			0.1 U	75.9	0.581	3.05	81.2							
8/4/2020	XX	GW301X43CR		274													
10/21/2020	XX	GW301X44B	0.008 U	301		0.114	79.9	0.51	3.42	80.9							
6/22/2021	XX	GW301X466	0.008 U	259		0.143	79.9	0.685	2.92	77.6							
9/22/2021	XX	GW301X481	0.008 U	255		0.17	75	0.55	3.12	77.8							
6/29/2022	XX	GW301X4A3	0.008 U	302		0.1 U	73.8	0.354	2.89	75.1							
10/19/2022	XX	GW301X4C0	0.008 U	288		0.235	80.8	1.01	3.14	81.5							
6/6/2023	XX	GW301X4E1	0.008 U	278		0.261	85.8	1.22	3.08	77.6							
10/18/2023	XX	GW301X4HG	0.008 U	285		0.227	90.5	1.3	3.57	83.2							
302B																	
5/3/2000	XX	302BXX36649				0.02 U		1.118	1.16	7.03							
8/9/2000	XX	302BXX36747				0.069		1.87	1.41	7.07							
11/8/2000	XX	302BXX36838	0.008 U			0.202		1.54	1.3	6.5							
5/16/2001	XX	302BXX37027	0.008 U			0.021		1.88	1.24	7.1							
7/31/2001	XX	302BXX37103	0.008 U			0.039		1.42	1.54	7.5							
10/23/2001	XX	302BXX37187	0.008 U			0.149		1.15	1.53	7.3							
5/21/2002	XX	302BXX37397	0.01 U	92		0.039	7.3	3.32	1.48	11.3							
8/7/2002	XX	302BXX37475	0.01 U	100.8	0.01 U	0.02 U	8.9	2.68	1.45	9.7							
10/23/2002	XX	302BXX37552	0.012	82.2	0.01 U	0.063	9.8	1.36	1.63	8.1							
6/23/2003	XX	302BXX37795	0.005 U	160	0.003 U	0.012	14	4.7	2.2	18							
8/12/2003	XX	302BXX37845	0.005 U	130	0.02	0.034	11	3.7	1.8	13							
10/20/2003	XX	302BXX37914	0.005 U	160	0.007	0.021	15	4.8	2.4	22							
5/4/2004	XX	302BXX38111	0.005 U	180	0.0035	0.036	21	6.2	3.8	26							
8/5/2004	XX	302BXX38204	0.005 U	160	0.0044	0.064	14	9.5	2.3	19							
10/20/2004	XX	302BXX38280	0.005 U	170	0.003 U	0.028	16	4.1	2.8	20							
5/11/2005	XX	GW302B00G	0.005 U	170	0.004	0.02	17	8.1	2	25							
7/27/2005	XX	GW302B028	0.005 U	200	0.003 U	0.01	17	6.3	2.7	26							
11/7/2005	XX	GW302B040	0.005 U	180	0.003 U	0.13	17	7.8	3.4	26							
5/1/2006	XX	GW302B08G	0.005 U	220	0.009 B	0.02	21	9.7	2.2	34							
7/31/2006	XX	GW302B074	0.005 U	210	0.006 B	0.03 B	26	11	3.7	35							
10/25/2006	XX	GW302B05C	0.005 U	220	0.003 U	0.02	18	9	3.1	27							
5/9/2007	XX	GW302B0A8	0.005 U	180		0.017	19	7.4	2.8	38							
8/9/2007	XX	GW302B0C1	0.005 U	190		0.031	19	1.6	3.7	31							
10/30/2007	XX	GW302B0DD	0.005 U	220		0.03	19	11	2	29							
6/2/2008	XX	GW302B0G1	0.005 U	170		0.019	25	13	3.7	31							
8/14/2008	XX	GW302B0I1	0.005 U	190		0.02	23	14	2	34							
10/21/2008	XX	GW302B0J9	0.005 U	220		0.03	22	16	3.2	27							
10/21/2008	XD	GWDP3X108	0.005 U	230		0.02	22	16	3.3	28							
5/11/2009	XX	GW302B119	0.005 U	230		0.21	36	24	1.8	39							
8/10/2009	XX	GW302B139	0.005 U	230		0.019	23	16	1.7	31							
8/10/2009	XD	GWDP3X12C	0.005 U	230		0.012	25	17	3.2	35							
10/22/2009	XX	GW302B14H	0.005 U	170		0.014	23	9.2	3.3	29							
6/1/2010	XX	GW302B16I	0.005 U	200		0.011	26	15	3.2	31							
8/4/2010	XX	GW302B18J	0.005 U	190		0.013	23	13	3.1	30							
10/14/2010	XX	GW302B1A7	0.005 U	160		0.033	21	13	2	31							
5/18/2011	XX	GW302B1DA	0.005 U	150		0.024	34	17	3.3	38							
8/8/2011	XX	GW302B1F1	0.0016 U	90		0.01	18	14	1.6	20							
11/1/2011	XX	GW302B1GC	0.0016 U	200		0.022	36	20	4.3	43							

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(302B)			Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
Date	Type	Sample ID															
5/15/2012	XX	GW302B1I6	0.005 U	190		0.01	39	21	4	40							
8/16/2012	XX	GW302B1JJ	0.005 U	160		0.01 U	34	14	4.2	40							
10/30/2012	XX	GW302B21D	0.005 U	220		0.12	34	20	4.7	42							
5/21/2013	XX	GW302B237	0.005 U	120		0.017	27	16	2.5	27							
7/25/2013	XX	GW302B251	0.005 U	200		0.02	41	22	4.6	43							
10/1/2013	XX	GW302B26F	0.005 U	200		0.015	38	22	4	43							
6/3/2014	XX	GW302B289	0.008 U	193		0.1 U	41.9	22.3	2.01	43.1							
8/20/2014	XX	GW302B2A3	0.008 U	223		0.1 U	38.8	23.8	2.1	42.6							
11/11/2014	XX	GW302B2BH	0.008 U	200		0.1 U	34.8	19.9	2.19	40.7							
6/3/2015	XX	GW302B2DD	0.008 U	206		0.1 U	47.7	27.9	2.16	44							
9/1/2015	XX	GW302B2F8	0.008 U	230		0.1 U	47.4	28.7	2.5	51.3							
11/4/2015	XX	GW302B2H2	0.02 U	224		0.2 U	45.2	25.6	2.51	49.2							
6/15/2016	XX	GW302B30C	0.008 U	220		0.1 U	52.3	30.6	2.7	50.7							
9/21/2016	XX	GW302B326	0.008 U	198		0.1 U	44.3	24.6	2.5	44.5							
11/8/2016	XX	GW302B340	0.008 U	213		0.1 U	42.1	19.7	2.6	43.5							
6/13/2017	XX	GW302B35F	0.008 U	217		0.146	53.6	33.8	2.88	54.6							
8/29/2017	XX	GW302B379	0.008 U	212		0.1 U	46.3	24.6	2.79	50							
11/14/2017	XX	GW302B393	0.008 U	219		0.1 U	46.5	28	2.9	52.6							
6/19/2018	XX	GW302B3AI	0.008 U	203		0.151	60.8	35.6	3.37	55.8							
8/14/2018	XX	GW302B3D7	0.008 U	209		0.1 U	51.5	30.6	3.41	51.1							
11/28/2018	XX	GW302B3E6	0.008 U	224		0.1 U	47.4	27.6	3.4	53.5							
6/5/2019	XX	GW302B3G1	0.008 U	230		0.1 U	63.6	35.5	4.22	61.1							
8/13/2019	XX	GW302B3IA	0.008 U	234		0.1 U	67.7	39.8	5.06	65.2							
10/23/2019	XX	GW302B3J9	0.008 U	247		0.1 U	59.3	37.5	4.85	60.6							
6/17/2020	XX	GW302B414	0.008 U	231		0.1 U	56.1	37	4.2	62.4							
8/5/2020	XX	GW302B43D	0.04 U	610		0.5 U	156	89.5	12.4	152							
10/21/2020	XX	GW302B44C	0.008 U	137		0.1 U	31.5	18.4	2.64	32.4							
6/22/2021	XX	GW302B467	0.008 U	244		0.1 U	68.7	38.4	5.8	64.3							
9/22/2021	XX	GW302B482	0.008 U	254		0.1 U	66.6	38.4	7	69.7							
6/29/2022	XX	GW302B4A4	0.008 U	266		0.1 U	79.3	45.4	9.36	76.7							
10/19/2022	XX	GW302B4C1	0.008 U	271		0.124	73.5	39.8	7.95	75							
6/7/2023	XX	GW302B4E2	0.008 U	258		0.158	71.2	35.4	9.56	73.8							
10/18/2023	XX	GW302B4HH	0.008 U	247		0.1 U	70.9	37.8	10	73.5							
302C																	
5/3/2000	XX	302CXX36649				0.02 U		0.171	1.19	6.98							
8/9/2000	XX	302CXX36747				1.039		0.62	1.6	9.74							
11/8/2000	XX	302CXX36838	0.008 U			0.873		0.51	1.32	7.7							
5/16/2001	XX	302CXX37027	0.008 U			0.534		0.45	1.42	9.9							
7/31/2001	XX	302CXX37103	0.008 U			2.442		1.03	1.51	8.8							
10/23/2001	XX	302CXX37187	0.008 U			1.818		1.01	1.81	9.8							
5/21/2002	XX	302CXX37397	0.01 U	93.3		0.037	9.2	0.59	1.454	11.7							
8/7/2002	XX	302CXX37475	0.01 U	90.4	0.01 U	1.365	13.9	0.97	1.85	16.4							
10/23/2002	XX	302CXX37552	0.012	94.7	0.01 U	1.069	15.3	0.76	2.28	16.1							
6/23/2003	XX	302CXX37795	0.005 U	120	0.004	0.38	18	2.2	2.3	20							
8/12/2003	XX	302CXX37845	0.005 U	170	0.015	0.95	24	2.3	3.4	29							
10/20/2003	XX	302CXX37914	0.005 U	110	0.006	0.26	17	2.7	2.6	23							
5/4/2004	XX	302CXX38111	0.005 U	130	0.0056	0.26	22	4.1	3.5	25							
8/5/2004	XX	302CXX38204	0.005 U	240	0.0058	1.2	22	8	2.9	47							
10/20/2004	XX	302CXX38280	0.005 U	140	0.003 U	2.3	18	3.8	2.7	24							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(302C)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
5/11/2005	XX	GW302C00H	0.005 U	120	0.005	0.08	23	5.9	2	28							
7/27/2005	XX	GW302C029	0.005 U	180	0.003 U	1.6	30	8.2	3.2	34							
11/7/2005	XX	GW302C041	0.005 U	150	0.003	0.4	29	9.8	3.5	33							
5/1/2006	XX	GW302C08H	0.005 U	160	0.01 B	0.41	35	13	2.1	38							
7/31/2006	XX	GW302C075	0.005 U	190	0.004 B	1.2 B	34	15	4.4	41							
10/25/2006	XX	GW302C05D	0.005 U	120	0.003 U	0.28	20	11	2.5	38							
5/9/2007	XX	GW302C0A9	0.005 U	130		0.21	30	14	2.7	36							
8/9/2007	XX	GW302C0C2	0.005 U	160		2.3	22	12	3.4	32							
8/9/2007	XD	GWDP3X0EG	0.005 U	160		2.2	21	12	3.5	30							
10/30/2007	XX	GW302C0DE	0.005 U	160		0.86	31	17	2.1	34							
6/2/2008	XX	GW302C0G2	0.005 U	180		1	37	20	4	38							
6/2/2008	XD	GWDP3X0F4	0.005 U	170		1	35	19	3.9	36							
8/14/2008	XX	GW302C0I2	0.005 U	140		0.21	29	18	2	38							
10/21/2008	XX	GW302C0JA	0.005 U	190		1.2	27	22	3.8	33							
5/11/2009	XX	GW302C11A	0.005 U	160		0.21	35	25	1.8	38							
8/10/2009	XX	GW302C13A	0.005 U	140		0.18	32	21	1.9	37							
10/22/2009	XX	GW302C14I	0.005 U	140		0.64	26	19	3.3	30							
6/1/2010	XX	GWXXXX17F	0.005 U	210		0.7	31	28	3.2	33							
6/1/2010	XD	GWDP3X161	0.005 U	220		0.72	31	30	3.2	34							
8/4/2010	XX	GW302C190	0.005 U	150		0.83	27	20	3.2	31							
10/14/2010	XX	GW302C1A8	0.005 U	130		0.4	31	19	2	36							
5/18/2011	XX	GW302C1DB	0.005 U	72		0.049	24	11	1.9	23							
5/18/2011	XD	GWXXXX1EH	0.005 U	72		0.045	23	11	1.9	22							
8/8/2011	XX	GW302C1F2	0.0016 U	150		0.6	38	25	3	41							
11/1/2011	XX	GW302C1GD	0.0016 U	150		0.17	44	25	4	42							
11/1/2011	XD	GWDP1X1HI	0.0016 U	160		0.19	47	27	4.3	46							
5/15/2012	XX	GW302C1I7	0.005 U	100		0.096	32	18	2.6	26							
5/15/2012	XD	GWDP2X1JD	0.005 U	98		0.11	31	18	2.6	27							
8/16/2012	XX	GW302C200	0.005 U	160		0.68	45	30	4.8	47							
8/16/2012	XD	GWDP2X216	0.005 U	170		0.69	47	30	4.6	50							
10/30/2012	XX	GW302C21E	0.005 U	180		0.03	49	28	5	46							
10/30/2012	XD	GWDP3X231	0.005 U	160		0.32	47	28	4.6	44							
5/21/2013	XX	GW302C238	0.005 U	180		0.42	49	30	4.3	45							
7/25/2013	XX	GW302C252	0.005 U	180		0.56	48	31	5	48							
7/25/2013	XD	GWDP1X267	0.005 U	180		0.51	47	30	5.1	46							
10/1/2013	XX	GW302C26G	0.005 U	170		0.49	47	29	4.3	46							
10/1/2013	XD	GWDP1X281	0.005 U	170		0.49	45	28	4.2	45							
6/3/2014	XX	GW302C28A	0.008 U	173		0.505	49.3	29.9	2.17	44.6							
8/20/2014	XX	GW302C2A4	0.008 U	165		0.702	39.6	28.8	2.26	39							
8/20/2014	XD	GWDP3X2BB	0.008 U	158		0.684	38.1	29.1	2.16	37.5							
11/11/2014	XX	GW302C2BI	0.008 U	155		0.192	50.3	35.8	2.81	45.9							
11/11/2014	XD	GWDP1X2D3	0.008 U	153		0.175	50.3	36.3	2.79	45.7							
6/3/2015	XX	GW302C2DE	0.008 U	159		0.229	57	42	2.69	43.9							
9/1/2015	XX	GW302C2F9	0.008 U	168		0.534	47.7	31.5	2.72	47.3							
9/1/2015	XD	GWDP3X2GG	0.008 U	158		0.488	44.2	29.6	2.6	44.8							
11/4/2015	XX	GW302C2H3	0.02 U	170		0.2 U	58.8	39.2	3.62	51.6							
11/4/2015	XD	GWDP1X2I8	0.02 U	176		0.2 U	60.6	40.4	3.68	54							
6/15/2016	XX	GW302C30D	0.008 U	196		0.606	58.7	36.6	3.1	54							
9/21/2016	XD	GWDP3X33E	0.008 U	157		0.724	46.4	32.8	2.8	47.3							

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(302C)			Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
Date	Type	Sample ID															
9/21/2016	XX	GW302C327	0.008 U	152		0.705	44.8	33	2.8	45.9							
11/8/2016	XD	GWDP1X356	0.008 U	180		0.752	45.2	37.4	3.6	44.1							
11/8/2016	XX	GW302C341	0.008 U	192		0.796	46.9	40	3.8	44							
6/13/2017	XX	GW302C35G	0.008 U	191		0.444	61	43.6	3.99	56.4							
8/29/2017	XD	GWDP3X38H	0.008 U	169		0.68	48.9	34.6	3.23	51.3							
8/29/2017	XX	GW302C37A	0.008 U	170		0.687	48.9	34.8	3.23	51.6							
11/14/2017	XD	GWDP1X3A9	0.008 U	144		0.242	50.5	37	5.8	48.1							
11/14/2017	XX	GW302C394	0.008 U	150		0.251	52.4	37.8	6	50.1							
6/19/2018	XX	GW302C3AJ	0.008 U	184		0.572	68.8	45.3	5.06	57.6							
8/14/2018	XD	GWDP3X3D1	0.008 U	172		0.575	54.6	36.4	5.56	52.7							
8/14/2018	XX	GW302C3D8	0.008 U	176		0.585	53.3	36	5.72	53.7							
11/28/2018	XD	GWDP1X3FC	0.008 U	191		0.22	71.8	53	10.7	61.8							
11/28/2018	XX	GW302C3E7	0.008 U	188		0.223	69.5	50.5	10.5	60.8							
6/5/2019	XX	GW302C3G2	0.008 U	185		0.167	74	55	11.4	60.7							
8/13/2019	XD	GWDP3X3I4	0.008 U	178		1	62.1	0.01 U	4.25	56.9							
8/13/2019	XX	GW302C3IB	0.008 U	187		1.11	65.2	44.7	4.49	60.1							
10/23/2019	XD	GWDP1X40F	0.008 U	178		0.598	60.1	44.9	8.28	55.2							
10/23/2019	XX	GW302C3JA	0.008 U	173		0.673	55.7	41.3	4.75	51.6							
6/17/2020	XX	GW302C415	0.008 U	208		0.693	68.1	57.5	8.06	65.4							
8/5/2020	XD	GWDP3X437	0.04 U	202		0.99	66	47	6	60							
8/5/2020	XX	GW302C43E	0.04 U	191		0.88	62.5	45.4	7.3	57.5							
10/21/2020	XD	GWDP1X45I	0.008 U	198		0.314	80.5	60.5	19.8	61.6							
10/21/2020	XX	GW302C44D	0.008 U	186		0.306		60.5	18.5	57.1							
10/21/2020	XX	GW302C44DR					62.9										
6/22/2021	XX	GW302C468	0.008 U	243		0.832	89.7	60	10.8	77.6							
9/22/2021	XD	GWDP1X498	0.008 U	191		0.658	74.1	52	16.2	67							
9/22/2021	XX	GW302C483	0.008 U	200		0.763	76	52	16.2	69.4							
6/29/2022	XX	GW302C4A5	0.008 U	239		0.892	90.1	56.5	15.6	81.9							
10/19/2022	XD	GWDP1X4D7	0.008 U	190		0.59	75.5	56	29.2	66							
10/19/2022	XX	GW302C4C2	0.008 U	182		0.54	74.7	54	28.9	66.1							
6/7/2023	XX	GW302C4E3	0.008 U	230		0.855	87.7	54	26	76.1							
10/18/2023	XD	GWDP1X4J2	0.008 U	175		0.409	73.5	43.2	29	63.8							
10/18/2023	XX	GW302C4HI	0.008 U	182		0.455	76.8	46.8	29.1	66.5							
303A																	
4/27/2000	XX	303AXX36643				0.071		8.8	38	31.88							
8/2/2000	XX	303AXX36740				0.634		10.06	41.1	29.21							
10/25/2000	XX	303AXX36824	0.008 U			0.579		15.36	54.6	48							
5/9/2001	XX	303AXX37020	0.008 U			0.023		17.73	60.5	54.3							
7/25/2001	XX	303AXX37097	0.008 U			0.942		11.91	47.1	37.8							
10/17/2001	XX	303AXX37181	0.01 U			0.02 U		17.34	67.1	53.1							
5/16/2002	XX	303AXX37392	0.01 U	125.7		0.25	125.1	11.61	50.48	34							
8/1/2002	XX	303AXX37469	0.022	130.4	0.01 U	0.316	97.8	9.36	44.4	30.7							
10/17/2002	XX	303AXX37546	0.01 U	142.6	0.01 U	0.158	123.2	11.67	48.2	32.6							
6/23/2003	XX	303AXX37795	0.005 U	120	0.003	0.42	98	9.7	39	30							
8/19/2003	XX	303AXX37852	0.005 U	140	0.013	0.49	110	11	52	37							
10/14/2003	XX	303AXX37908	0.005 U	180	0.003 U	0.15	130	12	53	42							
5/3/2004	XX	303AXX38110	0.005 U	170	0.003 U	0.84	140	13	56	39							
8/17/2004	XX	303AXX38216	0.005 U	150	0.0036	0.016	150	14	52	37							
10/19/2004	XX	303AXX38279	0.005 U	160	0.0043	0.2	190	16	71	43							

DATA SUMMARY TABLE

Metals

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(303A)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
5/18/2005	XX	GW303A00I	0.005 U	150	0.003 U	0.09	160	13	62	40							
8/15/2005	XX	GW303A02A	0.005 U	120	0.003 U	0.26	100	10	57	30							
11/3/2005	XX	GW303A042	0.005 U	140	0.007	0.08	150	14	71	40							
5/11/2006	XX	GW303A08I	0.005 U	110	0.005 B	0.05	100	12	47	26							
7/26/2006	XX	GW303A076	0.005 U	100	0.003 U	0.19 B	94	11	46	26							
10/24/2006	XX	GW303A05E	0.005 U	96	0.005	0.25 B	97	15	47	26							
5/15/2007	XX	GW303A0AA	0.005 U	100		0.084	100	12	50	36							
8/15/2007	XX	GW303A0C3	0.005 U	94		0.3	75	9.8	34	20							
8/15/2007	XD	GWDP2X0EF	0.005 U	94		0.29	75	9.9	34	20							
10/29/2007	XX	GW303A0DF	0.005 U	140		0.22	160	21	62	36							
6/2/2008	XX	GW303A0G3	0.005 U	100		0.48	96	12	43	28							
8/13/2008	XX	GW303A0I3	0.005 U	73		0.42	63	9.8	35	19							
10/20/2008	XX	GW303A0JB	0.005 U	81		0.56	66	9.9	34	18							
5/5/2009	XX	GW303A11B	0.005 U	130		0.3	110	17	48	24							
8/6/2009	XX	GW303A13B	0.005 U	110		0.39	91	14	34	17							
10/21/2009	XX	GW303A14J	0.005 U	72		0.67	50	8.8	32	17							
5/27/2010	XX	GW303A170	0.005 U	91		0.51	74	12	41	16							
8/4/2010	XX	GW303A191	0.005 U	87		0.35	76	13	40	16							
10/14/2010	XX	GW303A1A9	0.005 U	95		2.3	73	13	33	23							
5/17/2011	XX	GW303A1E5	0.005 U	75		0.89	57	9.4	31	17							
8/9/2011	XX	GW303A1FG	0.0016 U	53		0.062	43	8.2	28	12							
11/3/2011	XX	GW303A1H7	0.0016 U	64		0.023	68	12	33	17							
5/17/2012	XX	GW303A1J1	0.005 U	73		0.013	64	11	32	18							
8/15/2012	XX	GW303A20E	0.005 U	68		0.52	56	9.8	28	15							
11/1/2012	XX	GW303A228	0.005 U	77		0.066	76	15	44	20							
5/21/2013	XX	GW303A242	0.005 U	74		0.43	50	7.9	23	14							
7/24/2013	XX	GW303A25G	0.005 U	61		0.58	40	7.1	27	13							
10/2/2013	XX	GW303A27A	0.005 U	68		0.64	42	7.7	25	12							
6/3/2014	XX	GW303A294	0.008 U	57.3		0.1 U	59.4	9.04	30.6	13.1							
8/20/2014	XX	GW303A2AI	0.008 U	61.4		0.1 U	51	9.04	31.6	11.2							
11/12/2014	XX	GW303A2CC	0.008 U	75.5		0.1 U	78.4	12.5	40.4	17							
6/3/2015	XX	GW303A2E8	0.008 U	47.3		0.1 U	49.5	8.48	29.3	10.8							
9/1/2015	XX	GW303A2G3	0.008 U	45.8		0.1 U	46.3	7.41	31.8	10.6							
11/3/2015	XX	GW303A2HH	0.008 U	60.5		0.1 U	60.8	10.6	36.5	13.9							
6/15/2016	XX	GW303A317	0.008 U	42.1		0.1 U	36.5	6	25.3	8.37							
9/20/2016	XX	GW303A331	0.008 U	50.6		0.1 U	47	9.21	31.9	10.1							
11/8/2016	XX	GW303A34F	0.008 U	74.4		0.121	60.3	11.8	34.8	14.4							
6/13/2017	XX	GW303A36A	0.008 U	47.7		0.1 U	45	7.41	27.9	10.9							
8/30/2017	XX	GW303A384	0.008 U	49.9		0.637	40	6.72	27.6	9.95							
11/15/2017	XX	GW303A39I	0.008 U	75.2		0.554	66.4	11.8	35.6	14.7							
6/20/2018	XX	GW303A3BD	0.008 U	55		0.865	37.5	6.66	28.3	10.4							
8/15/2018	XX	GW303A3E2	0.008 U	46		0.561	36	5.88	25.1	8.54							
11/27/2018	XX	GW303A3F1	0.008 U	92.6		0.56	82.2	13.3	38.4	19.1							
6/4/2019	XX	GW303A3GG	0.008 U	43.8		0.1 U	43	6.83	27.1	9.84							
8/14/2019	XD	GWDP1X3I2	0.008 U	40		0.1 U	34.1	5.58	26.2	8.22							
8/14/2019	XX	GW303A3J5	0.008 U	37.2		0.1 U	31.2	5.11	23.9	7.6							
10/22/2019	XX	GW303A404	0.008 U	50.9		0.1 U	49.2	8.19	31.5	9.56							
6/16/2020	XX	GW303A41J	0.008 U	48.6		0.1 U	47.6	7.47	30.5	10.9							
8/4/2020	XD	GWDP1X435	0.008 U			0.1 U	48.1	7.14	30.6	10.4							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
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(303A) Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
8/4/2020	XD	GWDP1X435R		51.5													
8/4/2020	XX	GW303A448	0.008 U			0.1 U	48.6	7.21	30.5	10.4							
8/4/2020	XX	GW303A448R		51.2													
10/20/2020	XX	GW303A457	0.008 U	72		0.1 U	68.6	11.3	37	13.5							
6/22/2021	XX	GW303A472	0.008 U	52.3		0.109	48.6	7.27	30.5	10.5							
9/21/2021	XX	GW303A48H	0.008 U	60.6		0.376	57	8.56	31.6	11.7							
6/28/2022	XX	GW303A4AJ	0.008 U	41.9		0.134	40.1	5.66	26.9	8.74							
10/18/2022	XX	GW303A4CG	0.008 U	65.1		2.84	62.4	9.6	35.8	12.4							
6/6/2023	XX	GW303A4EH	0.008 U	52.3		0.3	49.8	7.58	32.2	10.6							
10/17/2023	XX	GW303A4IC	0.008 U	54.9		0.998	55.7	8.49	31	11.6							
303B																	
4/27/2000	XX	303BXX36643				0.02 U		6.1	23.7	16.36							
8/2/2000	XX	303BXX36740				0.035		11.9	37.3	29.06							
10/25/2000	XX	303BXX36824	0.008 U			0.182		17.96	51.9	59.3							
5/9/2001	XX	303BXX37020	0.008 U			0.03		11.61	41.1	35							
7/25/2001	XX	303BXX37097	0.008 U			0.025		16.44	56.3	37							
10/17/2001	XX	303BXX37181	0.01 U			0.03		19.32	69.3	59.8							
5/16/2002	XX	303BXX37392	0.01 U	77.5		0.027	75.7	9.09	37.06	22.3							
8/2/2002	XX	303BXX37470	0.021	71.1	0.01 U	0.02 U	68.6	9.22	37.2	19.5							
10/17/2002	XX	303BXX37546	0.01 U	144.5	0.01 U	0.041	155	28.06	47.9	41.3							
6/23/2003	XX	303BXX37795	0.005 U	65	0.003 U	0.011	70	6.7	31	19							
8/19/2003	XX	303BXX37852	0.005 U	110	0.014	0.072	120	11	51	37							
10/14/2003	XX	303BXX37908	0.005 U	150	0.003	0.01 U	170	13	56	46							
5/3/2004	XX	303BXX38110	0.005 U	79	0.003	0.06	110	10	46	27							
8/17/2004	XX	303BXX38216	0.005 U	110	0.0051	0.011	170	13	51	35							
10/19/2004	XX	303BXX38279	0.005 U	140	0.0043	0.02	190	13	67	47							
5/18/2005	XX	GW303B00J	0.005 U	55	0.003 U	0.05	10 U	7.2	37	18							
8/15/2005	XX	GW303B02B	0.005 U	54	0.003	0.01 U	68	8.3	44	16							
11/3/2005	XX	GW303B043	0.005 U	110	0.007	0.01	150	13	65	38							
5/11/2006	XX	GW303B08J	0.005 U	76	0.004 B	0.01 U	93	13	39	24							
7/26/2006	XX	GW303B077	0.005 U	58	0.003 U	0.01 B	72	10	37	17							
10/24/2006	XX	GW303B05F	0.005 U	120	0.006	0.02 B	150	18	48	34							
5/15/2007	XX	GW303B0AB	0.005 U	54		0.017	63	8.5	36	19							
8/15/2007	XX	GW303B0C4	0.005 U	69		0.039	78	12	33	18							
10/29/2007	XX	GW303B0DG	0.005 U	150		0.036	190	18	59	38							
6/3/2008	XX	GW303B0G4	0.005 U	52		0.02	63	9.1	37	17							
8/13/2008	XX	GW303B0I4	0.005 U	42		0.01	42	8.4	28	13							
10/20/2008	XX	GW303B0JC	0.005 U	65		0.01	69	11	31	17							
5/5/2009	XX	GW303B11C	0.005 U	60		0.01	62	9.9	24	14							
8/6/2009	XX	GW303B13C	0.005 U	37		0.01 U	37	9.8	23	10							
10/21/2009	XX	GW303B150	0.005 U	53		0.01 U	55	7.6	32	14							
5/27/2010	XX	GW303B171	0.005 U	45		0.011	37	7.5	27	9.2							
8/4/2010	XX	GW303B192	0.005 U	83		0.02	83	14	39	18							
8/4/2010	XD	GWDP2X181	0.005 U	64		0.014	66	11	31	18							
10/14/2010	XX	GW303B1AA	0.005 U	79		0.02	80	7.6	30	22							
5/17/2011	XX	GW303B1E6	0.005 U	34		0.01 U	32	5.8	21	8.6							
8/9/2011	XX	GW303B1FH	0.0016 U	28		0.016	26	5.5	19	6.8							
11/3/2011	XX	GW303B1H8	0.0016 U	59		0.0039 J	62	8.9	25	16							
5/17/2012	XX	GW303B1J2	0.005 U	44		0.01 U	44	7.4	24	12							

SEVEE & MAHER ENGINEERS, INC.
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(303B)			Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
Date	Type	Sample ID															
8/15/2012	XX	GW303B20F	0.005 U	44		0.01 U	45	8.2	23	12							
11/1/2012	XX	GW303B229	0.005 U	89		0.01 U	86	12	40	23							
5/21/2013	XX	GW303B243	0.005 U	35		0.01 U	34	5.7	18	7.3							
7/24/2013	XX	GW303B25H	0.005 U	31		0.01 U	28	5.3	20	7.8							
10/2/2013	XX	GW303B27B	0.005 U	48		0.01 U	43	7.4	23	11							
6/3/2014	XX	GW303B295	0.008 U	37.9		0.1 U	35.1	5.08	21.1	8.04							
8/20/2014	XX	GW303B2AJ	0.008 U	56.9		0.1 U	44.6	8.09	28.4	11							
11/12/2014	XX	GW303B2CD	0.008 U	89.5		0.129	84.6	7.47	36	18.9							
6/3/2015	XX	GW303B2E9	0.008 U	35.8		0.1 U	33.8	5.76	22.1	7.98							
9/1/2015	XX	GW303B2G4	0.008 U	42.2		0.1 U	39.5	5.54	27.1	9.93							
11/3/2015	XX	GW303B2HI	0.008 U	54.2		0.1 U	51.7	7.8	28.7	12.3							
6/15/2016	XX	GW303B318	0.008 U	24.6		0.1 U	23.3	4.07	17.5	4.96							
9/20/2016	XX	GW303B332	0.008 U	62.9		0.1 U	59	10.5	30.8	14.4							
11/8/2016	XX	GW303B34G	0.008 U	86.7		0.1 U	74.5	12.7	34.1	16.7							
6/13/2017	XX	GW303B36B	0.008 U	32.1		0.1 U	27	4.3	19.5	6.59							
8/30/2017	XX	GW303B385	0.008 U	37.7		0.1 U	30.6	5.36	21.9	6.8							
11/15/2017	XX	GW303B39J	0.008 U	90.9		0.1 U	79.3	7.99	33.8	19.3							
6/20/2018	XX	GW303B3BE	0.008 U	28.8		0.1 U	23.3	4.14	20.7	5.94							
8/15/2018	XX	GW303B3E3	0.008 U	39.8		0.1 U	37.2	4.96	25.4	7.46							
11/27/2018	XX	GW303B3F2	0.008 U	90.7		0.1 U	82.1	8.85	34.9	19.6							
6/4/2019	XX	GW303B3GH	0.008 U	29.1		0.1 U	26.5	4.24	19.9	6.37							
8/14/2019	XX	GW303B3J6	0.008 U	28.8		0.1 U	25.7	4.34	21	5.46							
10/22/2019	XX	GW303B405	0.008 U	63.7		0.1 U	62.2	10.1	33.8	13.9							
6/16/2020	XX	GW303B420	0.008 U	33.2		0.1 U	29.7	4.61	22.2	6.49							
8/4/2020	XX	GW303B449	0.008 U			0.1 U	44.9	6.64	29.8	8.2							
8/4/2020	XX	GW303B449R		46.4													
10/20/2020	XX	GW303B458	0.008 U	81.4		0.1 U	73.9	11.1	38.8	17.2							
6/22/2021	XX	GW303B473	0.008 U	36.5		0.1 U	33.5	5.06	21.8	7.02							
9/21/2021	XX	GW303B48I	0.008 U	71.1		0.187	69.7	9.45	33.2	15.5							
6/28/2022	XX	GW303B4B0	0.008 U	32.3		0.1 U	29	4.28	21.6	5.83							
10/18/2022	XX	GW303B4CH	0.008 U	64		0.1 U	60.1	6.97	31.2	13.4							
6/6/2023	XX	GW303B4EI	0.008 U	43.4		0.1 U	40.3	5.48	23.8	8.33							
10/17/2023	XX	GW303B4ID	0.008 U	59		0.1 U	53.3	7.27	27.2	11.8							
304A																	
5/3/2000	XX	304AXX36649				0.02 U		0.01 U	1.11	17.08							
8/9/2000	XX	304AXX36747				0.02		0.02	1.14	14.52							
11/9/2000	XX	304AXX36839	0.008 U			0.039		0.07	1.21	15.7							
5/16/2001	XX	304AXX37027	0.008 U			0.02 U		0.01	1.08	15.3							
7/31/2001	XX	304AXX37103	0.008 U			0.042		0.02	1.14	14.6							
10/23/2001	XX	304AXX37187	0.008 U			0.03		0.17	1.55	17							
5/21/2002	XX	304AXX37397	0.01 U	55.5		0.043	10.4	0.01 U	1.268	16.5							
7/30/2002	XX	304AXX37467	0.01 U	28.8		0.022	9	0.02	1.18	15.4							
10/22/2002	XX	304AXX37551	0.01 U	36.3		0.032	11.5	0.06	1.54	15.2							
6/24/2003	XX	304AXX37796	0.005 U	75		0.012	10	0.14	1.7	12							
8/7/2003	XX	304AXX37840	0.005 U	65		0.021	11	0.14	1.8	15							
10/21/2003	XX	304AXX37915	0.005 U	77		0.01 U	13	0.24	2	18							
5/10/2004	XX	304AXX38117	0.005 U	68		0.034	11	0.043	1.7	14							
7/28/2004	XX	304AXX38196	0.005 U	59		0.01	11	0.07	1.3	16							
10/21/2004	XX	304AXX38281	0.005 U	75		0.031	13	0.15	1.7	18							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
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(304A)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
5/10/2005	XX	GW304A010	0.005 U	93		0.02	7.4	0.05	2	7							
7/28/2005	XX	GW304A02C	0.005 U	61		0.02	8.3	0.01 U	1.7	12							
11/8/2005	XX	GW304A044	0.005 U	37		0.02	9.8	0.01 U	2.1	13							
5/3/2006	XX	GW304A090	0.005 U	64		0.03	9.3	0.01 U	1.4	13							
8/1/2006	XX	GW304A078	0.005 U	82		2.1	9	0.12	2.4	11							
10/26/2006	XX	GW304A05G	0.005 U	59		0.07 B	7.9	0.01	1.9	12							
5/8/2007	XX	GW304A0AC	0.005 U	68		0.097	5.5	0.014	1.1	8.7							
8/7/2007	XX	GW304A0C5	0.005 U	58		0.026	8.5	0.019	1.9	14							
8/7/2007	XD	GWDP4X0EH	0.005 U	59		0.017	8.6	0.019	1.9	14							
10/31/2007	XX	GW304A0DH	0.005 U	93		0.01 U	9.9	0.034	1.5	14							
6/3/2008	XX	GW304A0G5	0.005 U	52		0.024	8.2	0.01 U	1.7	11							
8/18/2008	XX	GW304A0I5	0.005 U	47		0.02	8.7	0.01 U	1.2	13							
10/23/2008	XX	GW304A0JD	0.005 U	56		0.02	8.8	0.01 U	1.3	12							
10/23/2008	XD	SWDP4X109	0.005 U	53		0.02	8.7	0.01 U	1.3	12							
5/12/2009	XX	GW304A11D	0.005 U	44		0.015	8.4	0.01 U	1	12							
8/11/2009	XX	GW304A13D	0.005 U	54		0.14	8.4	0.011	1.6	11							
10/26/2009	XX	GW304A151	0.005 U	49		0.038	8.3	0.01 U	1.8	12							
6/2/2010	XX	GW304A172	0.005 U	54		0.068	8.4	0.01 U	1.6	11							
8/5/2010	XX	GW304A193	0.005 U	52		0.049	8.2	0.01 U	1.6	12							
10/18/2010	XX	GW304A1AB	0.005 U	40		0.023	7.8	0.01 U	1.2	11							
5/19/2011	XX	GW304A1DC	0.005 U	40		0.015	8	0.01 U	1.6	12							
8/8/2011	XX	GW304A1F3	0.0016 U	28		0.014	5	0.0069	0.89	7.7							
8/8/2011	XD	GWDP2X1G8	0.0016 U	40		0.034	7.2	0.0071	1.4	11							
11/2/2011	XX	GW304A1GE	0.0016 U	39		0.0054 J	7.8	0.0072 J	1.7	12							
5/15/2012	XX	GW304A1I8	0.005 U	41		0.016	7	0.01 U	1.5	9.6							
5/15/2012	XD	GWDP3X1JE	0.005 U	42		0.018	7.4	0.01 U	1.7	9.9							
8/15/2012	XX	GW304A201	0.005 U	34		0.01 U	6.9	0.01 U	2.1	11							
10/31/2012	XX	GW304A21F	0.005 U	39		0.016	7.7	0.01 U	1.8	11							
10/31/2012	XD	GWDP1X22J	0.005 U	38		0.046	8	0.01 U	1.8	12							
5/21/2013	XX	GW304A239	0.005 U	37		0.032	6.8	0.01 U	1.4	9.6							
5/21/2013	XD	GWDP1X24D	0.005 U	38		0.041	6.8	0.01 U	1.4	9.4							
7/25/2013	XX	GW304A253	0.005 U	38		0.018	6.8	0.01 U	1.6	10							
7/25/2013	XD	GWDP3X269	0.005 U	37		0.016	6.6	0.01 U	1.5	10							
10/2/2013	XX	GW304A26H	0.005 U	35		0.011	6.8	0.01 U	1.5	10							
10/2/2013	XD	GWDP2X283	0.005 U	36		0.018	7.2	0.01 U	1.5	11							
6/4/2014	XX	GW304A28B	0.008 U	36		0.1 U	7.55	0.005 U	1.03	11.2							
6/4/2014	XD	GWDP1X29F	0.008 U	35.1		0.1 U	7.35	0.005 U	1 U	10.8							
8/20/2014	XX	GW304A2A5	0.008 U	36.8		0.105	7.03	0.0124	1.07	10.7							
8/20/2014	XD	GWDP1X2B9	0.008 U	36.2		0.122	6.99	0.0136	1.03	10.7							
11/12/2014	XX	GW304A2BJ	0.008 U	31.7		0.217	5.88	0.0139	1.07	9.12							
11/12/2014	XD	GWDP2X2D5	0.008 U	32.4		0.534	6.04	0.034	1.1	8.88							
6/3/2015	XX	GW304A2DF	0.008 U	32.7		0.205	7.32	0.012	1 U	10.3							
6/3/2015	XD	GWDP1X2EJ	0.008 U	31.7		0.145	7.08	0.01	1 U	9.99							
9/2/2015	XX	GW304A2FA	0.008 U	34.8		0.1 U	7.42	0.005 U	1	11.2							
9/2/2015	XD	GWDP1X2GE	0.008 U	37.4		0.1 U	7.72	0.005 U	1.04	12.1							
11/4/2015	XX	GW304A2H4	0.008 U	36		0.1 U	7.51	0.007	1.2	10.7							
11/4/2015	XD	GWDP2X2IA	0.008 U	34.7		0.1 U	7.24	0.009	1.07	10.1							
6/16/2016	XD	GWDP1X31I	0.008 U	33.1		0.1 U	7.58	0.005 U	1 U	10.8							
6/16/2016	XX	GW304A30E	0.008 U	32.4		0.1 U	7.45	0.005 U	1	10.6							

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(304A)			Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
Date	Type	Sample ID															
9/21/2016	XD	GWDP1X33C	0.008 U	31.1		0.1 U	7.04	0.005 U	1	11.1							
9/21/2016	XX	GW304A328	0.008 U	32.1		0.1 U	7.1	0.005 U	1	11.6							
11/8/2016	XD	GWDP2X358	0.008 U	36		0.1 U	6.66	0.005	1.1	10.6							
11/8/2016	XX	GW304A342	0.008 U	36.2		0.1 U	6.64	0.005	1.1	10.6							
6/14/2017	XD	GWDP1X371	0.008 U	34.6		0.116	7.33	0.0109	1.16	11.1							
6/14/2017	XX	GW304A35H	0.008 U	36		0.1 U	7.62	0.0083	1.17	11.5							
8/29/2017	XD	GWDP1X38F	0.008 U	32.4		0.181	6.57	0.0196	1.02	10.7							
8/29/2017	XX	GW304A37B	0.008 U	33.4		0.205	6.76	0.0186	1.06	11							
11/14/2017	XD	GWDP2X3AB	0.008 U	33.6		0.1 U	6.15	0.0089	1.1	10.3							
11/14/2017	XX	GW304A395	0.008 U	31.5		0.156	6.24	0.0139	1.1	10.3							
6/21/2018	XD	GWDP1X3C4	0.008 U	33.9		0.171	6.88	0.0215	1.08	10							
6/21/2018	XX	GW304A3B0	0.008 U	38.2		0.217	7.29	0.0302	1.47	10.1							
8/15/2018	XD	GWDP1X3CJ	0.008 U	32		0.762	6.99	0.069	1.05	10.6							
8/15/2018	XX	GW304A3D9	0.008 U	32.7		0.945	7.09	0.0829	1.14	11							
11/30/2018	XD	GWDP2X3FE	0.008 U	35.9		0.1 U	6.78	0.005 U	1.12	11							
11/30/2018	XX	GW304A3E8	0.008 U	36.4		0.1 U	6.83	0.005 U	1.16	11							
6/5/2019	XD	GWDP1X3H7	0.008 U	32.6		0.1 U	7	0.0066	1 U	10.7							
6/5/2019	XX	GW304A3G3	0.008 U	31.6		0.1 U	6.75	0.0057	1 U	10.4							
8/14/2019	XX	GW304A3IC				0.134			1	11.2							
8/14/2019	XX	GW304A3ICR	0.008 U	33.7			7.95	0.0327									
10/24/2019	XD	GWDP2X40H	0.008 U	31.1		0.114	7.2	0.0233	1.03	11							
10/24/2019	XX	GW304A3JB	0.008 U	32.5		0.13	7.49	0.0264	1.1	11.3							
6/17/2020	XD	GWDP1X42A	0.008 U	34.1		0.1 U	6.97	0.0086	1.04	12.3							
6/17/2020	XX	GW304A416	0.008 U	31.5		0.1 U	6.55	0.0081	1 U	11.4							
8/5/2020	XX	GW304A43F	0.008 U	33.5		0.1 U	7.12	0.0175	1 U	11.4							
10/22/2020	XD	GWDP2X460	0.008 U	39.7		0.1 U	7.05	0.0158	1.3	13.1							
10/22/2020	XX	GW304A44E	0.008 U	40		0.1 U	7.07	0.0175	1.35	13.4							
6/22/2021	XD	GWDP1X47D	0.008 U	32		0.279	7.26	0.0422	1 U	10.7							
6/22/2021	XX	GW304A469	0.008 U	33.5		0.349	7.26	0.0465	1.02	11.2							
9/22/2021	XD	GWDP2X49A	0.008 U	39.6		0.312	7.7	0.0444	1.26	12.5							
9/22/2021	XX	GW304A484	0.008 U	38.4		0.377	7.56	0.0491	1.24	12.2							
6/29/2022	XD	GWDP1X4BA	0.008 U	39.7		0.538	7.69	0.073	1.07	12.9							
6/29/2022	XX	GW304A4A6	0.008 U	40.4		0.321	7.75	0.0482	1.08	13.1							
10/18/2022	XD	GWDP2X4D9	0.008 U	39.4		0.21	7.86	0.0207	1 U	12.5							
10/18/2022	XX	GW304A4C3	0.008 U	39		0.123	7.87	0.0209	1 U	12.4							
6/6/2023	XD	GWDP1X4F8	0.008 U	40.4		0.361	8.24	0.0403	1.04	13.3							
6/6/2023	XX	GW304A4E4	0.008 U	39		0.493	7.77	0.0508	1.05	12.7							
10/17/2023	XD	GWDP2X4J4	0.008 U	39.8		0.199	7.9	0.0325	1.19	11.9							
10/17/2023	XX	GW304A4HJ	0.008 U	39.9		0.207	8.38	0.034	1.28	12							
304B																	
5/3/2000	XX	304BXX36649				0.658		0.012	0.44	3.15							
8/9/2000	XX	304BXX36747				0.239		0.03	0.91	14.67							
11/9/2000	XX	304BXX36839	0.008 U			0.099		0.01	0.89	16.9							
5/16/2001	XX	304BXX37027	0.008 U			0.09		0.01 U	0.85	19.1							
7/31/2001	XX	304BXX37103	D			D		D	D	D							
10/23/2001	XX	304BXX37187	0.008 U			0.518		0.15	1.29	21							
5/21/2002	XX	304BXX37397	0.01 U	29.9		0.061	3	0.01 U	0.911	13.3							
7/30/2002	XX	304BXX37467	0.01 U	20.9		0.076	4	0.03	1	15.8							
10/22/2002	XX	304BXX37551	0.01 U	22.6		0.104	4.2	0.01 U	1.07	13							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
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(304B)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
6/24/2003	XX	304BXX37796	0.005 U	43		0.028	5	0.01 U	1 U	11							
8/7/2003	XX	304BXX37840	0.005 U	38		0.021	4.2	0.01 U	1.1	12							
10/21/2003	XX	304BXX37915	0.005 U	35		0.042	4.1	0.012	1.1	13							
5/10/2004	XX	304BXX38117	0.005 U	29		0.033	3.5	0.01 U	1 U	11							
7/28/2004	XX	304BXX38196	0.005 U	25		0.035	2.9	0.01	1 U	9.4							
10/21/2004	XX	304BXX38281	0.005 U	31		0.043	3.5	0.01 U	1 U	11							
5/10/2005	XX	GW304B011	0.005 U	20		0.02	2.3	0.01 U	1 U	7							
7/28/2005	XX	GW304B02D	0.005 U	39		0.03	4	0.01 U	1.1	12							
11/8/2005	XX	GW304B045	0.005 U	34		0.03	3.4	0.01 U	1.1	12							
5/3/2006	XX	GW304B091	0.005 U	21		0.02	2.4	0.01 U	1 U	9.4							
8/1/2006	XX	GW304B079	0.005 U	29		0.02	3	0.01 U	1.2	11							
10/26/2006	XX	GW304B05H	0.005 U	26		0.01 B	2.9	0.01 U	1.1	12							
5/8/2007	XX	GW304B0AD	0.005 U	25		0.02	2.7	0.01 U	1 U	14							
8/7/2007	XX	GW304B0C6	0.005 U	34		0.13	3.3	0.025	1.4	16							
10/31/2007	XX	GW304B0DI	0.005 U	29		0.021	3.1	0.01 U	0.92	12							
6/5/2008	XX	GW304B0G6	0.005 U	18		0.022	2	0.01 U	1 U	8.5							
6/5/2008	XD	LTDP4X0F5	0.005 U	19		0.018	2.1	0.01 U	1 U	8.8							
8/18/2008	XX	GW304B0I6	0.005 U	12		0.03	1.3	0.05	1 U	6.8							
10/23/2008	XX	GW304B0JE	0.005 U	17		0.28	1.9	0.05	1 U	8.9							
5/12/2009	XX	GW304B11E	0.005 U	8.2		0.07	1 U	0.01 U	1 U	4.3							
8/11/2009	XX	GW304B13E	0.005 U	24		0.17	2.1	0.06	1.1	7.5							
10/26/2009	XX	GW304B152	0.005 U	15		0.42	1.7	0.03	1 U	6.6							
6/2/2010	XX	GW304B173	0.005 U	13		0.1	1.4	0.02	1 U	7.1							
8/5/2010	XX	GW304B194	0.005 U	16		0.44	1.8	0.13	1	8.4							
10/18/2010	XX	GW304B1AC	0.005 U	13		0.24	1.4	0.015	1 U	8.1							
10/18/2010	XD	GWDP3X1B6	0.005 U	12		0.23	1.3	0.017	1 U	7.6							
5/19/2011	XX	GW304B1DD	0.005 U	7.6		0.067	1 U	0.012	1 U	5.1							
8/8/2011	XX	GW304B1F4	0.0016 U	9.7		0.03	1	0.0061	0.53	6.3							
11/2/2011	XX	GW304B1GF	0.0016 U	15		0.043	1.6	0.0089 J	0.9 J	7.7							
5/15/2012	XX	GW304B1I9	0.005 U	9.9		0.035	1.1	0.01 U	1 U	4.5							
8/15/2012	XX	GW304B202	0.005 U	23		0.035	2.6	0.01 U	1.9	12							
10/31/2012	XX	GW304B21G	0.005 U	18		0.078	1.9	0.013	1 U	10							
5/21/2013	XX	GW304B23A	0.005 U	11		0.01 U	1.2	0.04	1 U	6.7							
7/25/2013	XX	GW304B254	0.005 U	14		0.034	1.5	0.01 U	1 U	9.3							
10/2/2013	XX	GW304B26I	0.005 U	12		0.01 U	1.4	0.01 U	1 U	8.6							
6/4/2014	XX	GW304B28C	0.008 U	12.6		0.1 U	1.42	0.0059	1 U	9.13							
8/20/2014	XX	GW304B2A6	0.008 U	12.6		0.127	1.3	0.0184	1 U	8.88							
11/12/2014	XX	GW304B2C0	0.008 U	8.95		0.197	1.02	0.0158	1 U	6.15							
6/3/2015	XX	GW304B2DG	0.008 U	6.78		0.189	0.8	0.023	1 U	4.15							
9/2/2015	XX	GW304B2FB	0.008 U	12.2		0.127	1.34	0.022	1 U	9.19							
11/4/2015	XX	GW304B2H5	0.008 U	9.09		0.1 U	1.06	0.005 U	1 U	6.24							
6/16/2016	XX	GW304B30F	0.008 U	9.69		0.122	1.21	0.033	1 U	7.47							
9/21/2016	XX	GW304B329	0.008 U	11		0.312	1.37	0.034	1 U	10.9							
11/8/2016	XX	GW304B343	0.008 U	18.1		0.204	1.69	0.037	1 U	12.7							
6/14/2017	XX	GW304B35I	0.008 U	12.6		0.1 U	1.4	0.0295	1 U	9.68							
8/29/2017	XX	GW304B37C	0.008 U	9.5		0.202	1	0.0647	1 U	7.31							
11/14/2017	XX	GW304B396	0.008 U	13.1		0.103	1.26	0.0242	1 U	8.1							
6/21/2018	XX	GW304B3B1	0.008 U	12.4		0.101	1.41	0.0304	1 U	8.79							
8/15/2018	XX	GW304B3DA	0.008 U	13.6		0.206	1.51	0.169	1 U	9.24							

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
(304B)																	
11/30/2018	XX	GW304B3E9	0.008 U	6.34		0.429	0.584	0.048	1 U	1.89							
6/5/2019	XX	GW304B3G4	0.008 U	12.4		0.1 U	1.39	0.015	1 U	8.54							
8/14/2019	XX	GW304B3ID	0.008 U	14.2		0.198	1.67	0.0337	1 U	9.81							
10/24/2019	XX	GW304B3JC	0.008 U	12.4		0.952	1.66	0.108	1 U	8.36							
6/17/2020	XX	GW304B417	0.008 U	13.6		0.226	1.5	0.0709	1 U	9.37							
8/5/2020	XX	GW304B43G	0.008 U	16.6		2.48	2.26	0.315	1.11	11							
10/22/2020	XX	GW304B44F	0.008 U	7.68		0.777	0.833	0.11	1 U	3.15							
6/22/2021	XX	GW304B46A	0.008 U	20.4		0.334	2.39	0.0574	1 U	10.8							
9/22/2021	XX	GW304B485	0.008 U	32.1		1.22	3.68	0.154	1.2	14							
6/29/2022	XX	GW304B4A7	0.008 U	35		0.371	3.62	0.0604	1	14.2							
10/18/2022	XX	GW304B4C4	0.008 U	13.9		0.79	1.56	0.0868	1 U	4.36							
6/6/2023	XX	GW304B4E5	0.008 U	14.8		0.959	1.75	0.0805	1 U	6.72							
10/17/2023	XX	GW304B4I0	0.008 U	18.6		0.364	1.99	0.0522	1 U	9.25							
401A																	
5/3/2000	XX	401AXX36649				0.047		0.016	1.43	9.71							
8/10/2000	XX	401AXX36748				0.027		0.01 U	1.46	9.47							
11/9/2000	XX	401AXX36839	0.09			0.044		0.08	1.19	8.2							
5/17/2001	XX	401AXX37028	0.08			0.067		0.01 U	1.35	9.2							
8/1/2001	XX	401AXX37104	0.11			0.027		0.01 U	1.47	9.3							
10/24/2001	XX	401AXX37188	0.12			0.02 U		0.01 U	1.72	9.5							
5/22/2002	XX	401AXX37398	0.13	14.9		0.066	5.5	0.01	1.544	9.6							
7/30/2002	XX	401AXX37467	0.15	15.8		0.023	4.9	0.01 U	1.27	8.3							
10/22/2002	XX	401AXX37551	0.18	15.5		0.039	5.4	0.01 U	1.53	7.8							
6/25/2003	XX	401AXX37797	0.19	34		0.01 U	6	0.01 U	1.7	8.6							
8/11/2003	XX	401AXX37844	0.18	31		0.016	5.7	0.01 U	1.5	8.1							
10/21/2003	XX	401AXX37915	0.19	33		0.01 U	6.2	0.01 U	1.6	9							
5/10/2004	XX	401AXX38117	0.16	33		0.022	6.3	0.01 U	1.7	10							
7/29/2004	XX	401AXX38197	0.15	29		0.017	5.6	0.01 U	1.4	8.9							
10/21/2004	XX	401AXX38281	0.18	33		0.048	6.2	0.01 U	1.5	9.1							
5/9/2005	XX	GW401A012	0.17	31		0.01 U	5.7	0.01 U	1.7	9.1							
7/28/2005	XX	GW401A02E	0.2	40		0.01	6.3	0.01 U	1.8	10							
11/8/2005	XX	GW401A046	0.2	36		0.02	6.1	0.01 U	1.7	9.8							
5/4/2006	XX	GW401A092	0.18	36		0.01	6.3	0.01 U	1.7	10							
8/2/2006	XX	GW401A07A	0.2	32		0.02	5.9	0.01 U	1.7	9.8							
10/30/2006	XX	GW401A05I	0.23	33		0.01	6.2	0.01 U	2.1	10							
5/7/2007	XX	GW401A0AE	0.21	33		0.01 U	6.5	0.01 U	1.8	10							
8/14/2007	XX	GW401A0C7	0.18	27		0.019	5	0.01 U	1.8	8.4							
11/5/2007	XX	GW401A0DJ	0.29	42		0.019	6.4	0.01 U	2.1	11							
6/5/2008	XX	GW401A0G7	0.22	34		0.32	6.4	0.01 U	2.3	9.9							
8/20/2008	XX	GW401A0I7	0.19	34		0.02	5.5	0.01 U	1.9	8.1							
10/27/2008	XX	GW401A0JF	0.22	38		0.01	6	0.01 U	1.9	8.7							
5/13/2009	XX	GW401A11F	0.17	30		0.018	5.6	0.01 U	1.5	9.6							
8/13/2009	XX	GW401A13F	0.2	35		0.035	5.9	0.01 U	2	8.7							
10/28/2009	XX	GW401A153	0.17	28		0.01 U	5.4	0.01 U	1.4	8.6							
10/28/2009	XD	SWDP4X15H	0.17	27		0.01 U	5.4	0.01 U	1.4	8.4							
6/3/2010	XX	GW401A174	0.18	37		0.01 U	5.9	0.01 U	2.1	9.1							
8/17/2010	XX	GW401A195	0.19	28		0.01	5.6	0.01 U	1.7	8.8							
10/19/2010	XX	GW401A1AD	0.18	27		0.018	6.1	0.012	1.5	9.2							
5/16/2011	XX	GW401A1DE	0.19	30		0.01 U	6.4	0.01 U	2.2	9.3							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(401A) Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
8/8/2011	XX	GW401A1F5	0.12	22		0.012	4.2	0.00039	1.1	6.6							
11/1/2011	XX	GW401A1GG	0.19	34		0.012	6.7	0.0002 J	2.3	10							
5/14/2012	XX	GW401A1IA	0.18	32		0.011	6.5	0.01 U	2.4	9.8							
8/14/2012	XX	GW401A203	0.18	30		0.01 U	5.9	0.01 U	2	9.7							
11/1/2012	XX	GW401A21H	0.19	32		0.01 U	7.3	0.01 U	2.4	12							
5/21/2013	XX	GW401A23B	0.15	31		0.01 U	5.7	0.01 U	2	8.7							
7/22/2013	XX	GW401A255	0.16	32		0.01 U	5.8	0.01 U	2	9.7							
9/30/2013	XX	GW401A26J	0.11	24		0.01 U	4.4	0.01 U	1.3	7.1							
6/4/2014	XX	GW401A28D	0.164	33.7		0.1 U	6.96	0.005 U	1.63	10.2							
8/19/2014	XX	GW401A2A7	0.151	34.2		0.171	6.65	0.0113	1.59	10							
11/11/2014	XX	GW401A2C1	0.151	31.5		0.238	6.59	0.01	1.59	9.63							
6/2/2015	XX	GW401A2DH	0.159	32		0.359	6.91	0.014	1.6	9.84							
9/1/2015	XX	GW401A2FC	0.166	36.2		0.1 U	7.54	0.005 U	1.74	11.6							
11/3/2015	XX	GW401A2H6	0.167	35		0.147	7.35	0.006	1.73	10.8							
6/14/2016	XX	GW401A30G	0.157	36.8		0.1 U	7.61	0.005 U	1.9	11.3							
9/20/2016	XX	GW401A32A	0.164	36.6		0.1 U	7.43	0.005 U	1.6	10.8							
11/9/2016	XX	GW401A344	0.165	35.8		0.307	7.24	0.008	1.8	11.5							
6/14/2017	XX	GW401A35J	0.159	35.8		0.164	7.24	0.0073	1.76	10.5							
8/29/2017	XX	GW401A37D	0.158	36.3		0.1 U	7.11	0.0089	1.68	10.7							
11/14/2017	XX	GW401A397	0.138	35.5		0.1 U	6.47	0.0099	1.6	9.87							
6/20/2018	XX	GW401A3B2	0.131	37.9		0.1 U	6.69	0.005 U	1.7	11.1							
8/15/2018	XX	GW401A3DB	0.144	35.5		0.1 U	7.37	0.0054	1.67	10.5							
11/30/2018	XX	GW401A3EA	0.144	36.6		0.1 U	7.04	0.005 U	1.73	10.4							
6/5/2019	XX	GW401A3G5	0.141	34.8		0.1 U	7.19	0.005 U	1.7	10.1							
8/14/2019	XX	GW401A3IE	0.148	37.5		0.1 U	7.6	0.0055	1.78	11							
10/22/2019	XX	GW401A3JD	0.135	38.5		0.1 U	7.53	0.0053	1.71	10.5							
6/17/2020	XX	GW401A418	0.138	36.2		0.1 U	7.21	0.005 U	1.7	10.7							
8/4/2020	XX	GW401A43H	0.152			0.1 U	8.08	0.005 U	1.82	11.3							
8/4/2020	XX	GW401A43HR		38.6													
10/21/2020	XX	GW401A44G	0.15	40.7		0.1 U	8.18	0.005 U	1.86	11.3							
6/23/2021	XX	GW401A46B	0.138	38		0.1 U	7.28	0.0053	1.71	10.4							
9/21/2021	XX	GW401A486	0.142	35.8		0.1 U	7.75	0.0246	1.74	10.6							
6/28/2022	XX	GW401A4A8	0.142	39.3		0.1 U	7.87	0.0089	1.69	10.8							
10/19/2022	XX	GW401A4C5	0.148	41.8		0.1 U	8.44	0.0129	1.6	11.5							
6/7/2023	XX	GW401A4E6	0.148	43.2		0.1 U	8.12	0.005 U	1.84	11.7							
10/18/2023	XX	GW401A4I1	0.149	39.5		0.1 U	8.17	0.005 U	1.73	11							
401B																	
5/3/2000	XX	401BXX36649				0.023		0.135	1.44	12.24							
8/10/2000	XX	401BXX36748				0.02		0.22	1.51	12.4							
11/9/2000	XX	401BXX36839	0.008 U			0.052		0.35	1.34	11.5							
5/17/2001	XX	401BXX37028	0.008 U			0.689		0.32	1.53	11.8							
8/1/2001	XX	401BXX37104	0.008 U			0.033		0.24	1.56	12.9							
10/24/2001	XX	401BXX37188	0.008 U			0.731		0.35	1.65	12							
5/22/2002	XX	401BXX37398	0.01 U	23.6		0.119	6.4	0.32	1.544	12.6							
7/30/2002	XX	401BXX37467	0.01 U	26.4		0.02 U	6.6	0.26	1.44	12.7							
10/22/2002	XX	401BXX37551	0.015	25		0.027	6.2	0.4	1.55	10.8							
6/25/2003	XX	401BXX37797	0.005 U	52		0.01 U	7	0.26	3.8	12							
8/11/2003	XX	401BXX37844	0.005 U	47		0.01 U	6.8	0.26	1.7	12							
10/21/2003	XX	401BXX37915	0.005 U	51		0.01 U	7.3	0.27	1.9	13							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(401B)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
5/10/2004	XX	401BXX38117	0.005 U	51		0.029	7.7	0.081	1.8	15							
7/29/2004	XX	401BXX38197	0.005 U	46		0.021	6.9	0.33	1.5	14							
10/21/2004	XX	401BXX38281	0.005 U	52		0.048	7.5	0.34	1.8	14							
5/9/2005	XX	GW401B013	0.005 U	51		0.01 U	7	0.14	1.8	13							
7/28/2005	XX	GW401B02F	0.005 U	57		0.01	7.2	0.27	2	14							
11/8/2005	XX	GW401B047	0.005 U	49		0.02	6.2	0.22	1.7	12							
5/4/2006	XX	GW401B093	0.005 U	57		0.01 U	7.7	0.01 U	2	16							
8/2/2006	XX	GW401B07B	0.005 U	53		0.02	7.2	0.26	2.3	15							
10/30/2006	XX	GW401B05J	0.005 U	45		0.01 U	6.4	0.29	2	14							
5/7/2007	XX	GW401B0AF	0.005 U	55		0.01 U	7.9	0.056	2	15							
8/14/2007	XX	GW401B0C8	0.005 U	51		0.015	6.6	0.26	2.2	14							
11/5/2007	XX	GW401B0E0	0.005 U	70		0.017	7.4	0.35	2.4	17							
6/5/2008	XX	GW401B0G8	0.005 U	52		0.013	7.6	0.23	2.5	14							
8/20/2008	XX	GW401B0I8	0.005 U	54		0.02	6.8	0.33	2.2	12							
10/27/2008	XX	GW401B0JG	0.005 U	66		0.01 U	7.2	0.39	2.4	14							
5/13/2009	XX	GW401B11G	0.005 U	49		0.018	7.1	0.048	1.6	14							
8/13/2009	XX	GW401B13G	0.005 U	61		0.01 U	7.1	0.29	2.3	13							
10/28/2009	XX	GW401B154	0.005 U	48		0.011	7.1	0.34	1.7	14							
6/3/2010	XX	GW401B175	0.005 U	58		0.01 U	7	0.21	2.3	13							
8/17/2010	XX	GW401B196	0.005 U	54		0.01 U	7.1	0.38	2.1	14							
10/19/2010	XX	GW401B1AE	0.005 U	46		0.014	7.2	0.35	1.8	14							
5/16/2011	XX	GW401B1DF	0.005 U	50		0.01 U	7.4	0.087	2.3	14							
8/8/2011	XX	GW401B1F6	0.0016 U	49		0.027	7.2	0.54	2	14							
11/1/2011	XX	GW401B1GH	0.0016 U	52		0.005 J	7.6	0.47	2.7	15							
5/14/2012	XX	GW401B1IB	0.005 U	52		0.01 U	7.8	0.041	2.7	14							
8/14/2012	XX	GW401B204	0.005 U	46		0.025	7.1	0.36	2.4	14							
11/1/2012	XX	GW401B21I	0.005 U	54		0.012	8.7	0.48	3.1	17							
5/21/2013	XX	GW401B23C	0.005 U	51		0.031	6.9	0.086	2.5	13							
7/22/2013	XX	GW401B256	0.005 U	53		0.01 U	7.2	0.3	2.7	14							
9/30/2013	XX	GW401B270	0.005 U	54		0.01 U	7.4	0.48	2.6	15							
6/4/2014	XX	GW401B28E	0.008 U	56.8		0.1 U	8.42	0.0641	1.81	14.7							
8/19/2014	XX	GW401B2A8	0.008 U	56.5		0.151	8.16	0.509	1.88	14.4							
11/11/2014	XX	GW401B2C2	0.008 U	50.1		0.164	7.71	0.399	1.87	14.2							
6/2/2015	XX	GW401B2DI	0.008 U	52.2		0.373	8.45	0.278	1.79	13.4							
9/1/2015	XX	GW401B2FD	0.008 U	60.2		0.1 U	9.36	0.488	2.06	16.6							
11/3/2015	XX	GW401B2H7	0.008 U	59.6		0.1 U	9.06	0.507	2.07	15.6							
6/14/2016	XX	GW401B30H	0.008 U	61.3		0.112	9.16	0.185	2.1	15.6							
9/20/2016	XX	GW401B32B	0.008 U	61.1		0.1 U	9.37	0.39	1.8	15.4							
11/9/2016	XX	GW401B345	0.008 U	59.1		0.1 U	9.08	0.401	2	14.5							
6/14/2017	XX	GW401B360	0.008 U	63.1		0.1 U	9.68	0.24	2	14.7							
8/29/2017	XX	GW401B37E	0.008 U	58.7		0.1 U	8.83	0.366	1.85	14							
11/14/2017	XX	GW401B398	0.008 U	58.3		0.138	8.37	0.534	1.9	13.5							
6/20/2018	XX	GW401B3B3	0.008 U	69.8		0.1 U	8.59	0.162	2.05	15.8							
8/15/2018	XX	GW401B3DC	0.008 U	63.8		0.1 U	9.95	0.429	2.01	14.7							
11/30/2018	XX	GW401B3EB	0.008 U	64.2		0.1 U	9.19	0.0642	2.08	14.3							
6/5/2019	XX	GW401B3G6	0.008 U	61.6		0.1 U	9.64	0.085	1.88	13.4							
8/14/2019	XX	GW401B3IF	0.008 U	61.8		0.1 U	9.59	0.383	1.91	13.8							
10/22/2019	XX	GW401B3JE	0.008 U	65.1		0.1 U	10.3	0.606	2.11	15.2							
6/17/2020	XX	GW401B419	0.008 U	64.8		0.1 U	9.72	0.23	1.96	14.7							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(401B) Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
8/4/2020	XX	GW401B43I	0.008 U			0.1 U	10	0.279	1.92	14.1							
8/4/2020	XX	GW401B43IR		67.4													
10/21/2020	XX	GW401B44H	0.008 U	69.3		0.136	10.8	0.873	2.23	15.4							
6/23/2021	XX	GW401B46C	0.008 U	66		0.1 U	9.65	0.27	1.96	13.9							
9/21/2021	XX	GW401B487	0.008 U	62		0.1 U	10.3	0.416	2.03	14.1							
6/28/2022	XX	GW401B4A9	0.008 U	70.4		0.128	10.5	1.03	1.98	14.8							
10/19/2022	XX	GW401B4C6	0.008 U	67.1		0.1 U	10.4	0.522	1.91	14.7							
6/7/2023	XX	GW401B4E7	0.008 U	69.8		0.1 U	10.1	0.477	1.97	14.4							
10/18/2023	XX	GW401B4I2	0.008 U	62.4		0.1 U	9.82	0.0774	1.99	13.7							
402A																	
5/3/2000	XX	402AXX36649				0.02 U		0.063	0.58	6.98							
8/10/2000	XX	402AXX36748				0.053		0.13	0.59	6.63							
11/9/2000	XX	402AXX36839	0.008 U			0.07		0.08	0.53	6.4							
5/17/2001	XX	402AXX37028	0.008 U			0.077		0.11	0.53	6.5							
8/1/2001	XX	402AXX37104	0.008 U			0.102		0.11	0.58	6.7							
10/24/2001	XX	402AXX37188	0.008 U			0.117		0.1	0.67	6.9							
5/22/2002	XX	402AXX37398	0.019	14.3		0.06	6.8	0.04	0.591	6.6							
7/30/2002	XX	402AXX37467	0.01 U	16.2		0.039	6.9	0.12	0.53	6.5							
10/22/2002	XX	402AXX37551	0.015	15.4		0.086	5.6	0.13	0.76	9.7							
6/25/2003	XX	402AXX37797	0.005 U	32		0.027	8	0.24	1 U	5.9							
8/11/2003	XX	402AXX37844	0.005 U	29		0.036	7.4	0.32	1 U	5.8							
10/22/2003	XX	402AXX37916	0.005 U	28		0.085	7.1	0.22	1 U	5.6							
5/11/2004	XX	402AXX38118	0.005	32		0.096	8.6	0.096	1 U	7.3							
7/29/2004	XX	402AXX38197	0.005 U	28		0.069	7.6	0.09	1 U	6.7							
10/26/2004	XX	402AXX38286	0.005 U	31		0.099	8.2	0.1	1 U	6.1							
5/9/2005	XX	GW402A014	0.005 U	31		0.08	7.5	0.09	1 U	6.5							
8/1/2005	XX	GW402A02G	0.005	35	0.003 U	0.08	7.5	0.09	1 U	6.9							
11/9/2005	XX	GW402A048	0.005	36		0.08	8.2	0.08	1 U	6							
5/4/2006	XX	GW402A094	0.005	36		0.06	8.3	0.1	1 U	7.5							
8/2/2006	XX	GW402A07C	0.005 U	31		0.05	7.7	0.07	1 U	7							
10/30/2006	XX	GW402A060	0.005	33		0.07	8.4	0.1	1 U	7.6							
5/7/2007	XX	GW402A0AG	0.007	33		0.14	8.4	0.12	0.7	7.2							
8/14/2007	XX	GW402A0C9	0.005 U	28		0.074	7	0.048	1 U	6.5							
11/5/2007	XX	GW402A0E1	0.005 U	48		0.11	8.5	0.11	1 U	7.6							
6/5/2008	XX	GW402A0G9	0.0052	33		0.15	8.6	0.14	1 U	7.3							
8/20/2008	XX	GW402A0I9	0.005 U	35		0.1	7.2	0.09	1 U	5.9							
10/27/2008	XX	GW402A0JH	0.005 U	38		0.13	8.7	0.13	1 U	6.9							
5/13/2009	XX	GW402A11H	0.005 U	30		0.16	7.9	0.16	1 U	7.2							
5/13/2009	XD	LTDP4X10D	0.005 U	30		0.16	7.9	0.15	1 U	7.2							
8/13/2009	XX	GW402A13H	0.005 U	39		0.12	7.8	0.1	1 U	6.4							
10/28/2009	XX	GW402A155	0.005 U	28		0.11	7.2	0.1	1 U	6.4							
6/3/2010	XX	GW402A176	0.005 U	33		0.18	8.1	0.11	1 U	6.9							
8/17/2010	XX	GW402A197	0.005 U	30		0.092	8.2	0.1	1 U	7.1							
10/19/2010	XX	GW402A1AF	0.005 U	30		0.079	9	0.12	1 U	7.2							
5/16/2011	XX	GW402A1DG	0.005 U	34		0.14	9	0.19	1	7.6							
8/8/2011	XX	GW402A1F7	0.0037	32		0.098	8	0.12	0.71	7							
11/1/2011	XX	GW402A1GI	0.0035 J	34		0.088	8.9	0.13	0.83 J	7.2							
5/16/2012	XX	GW402A1IC	0.005 U	34		0.1	9.6	0.14	1 U	7.9							
8/15/2012	XX	GW402A205	0.005 U	33		0.078	9.2	0.14	1	7.6							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
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(402A) Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
10/31/2012	XX	GW402A21J	0.0056	37		0.22	11	0.15	1	8.4							
5/20/2013	XX	GW402A23D	0.005 U	30		0.062	8.1	0.1	1 U	7.1							
7/22/2013	XX	GW402A257	0.005 U	36		0.08	9.2	0.13	1	7.8							
9/30/2013	XX	GW402A271	0.005 U	38		0.089	9.6	0.14	1 U	7.8							
6/4/2014	XX	GW402A28F	0.008 U	42.5		0.127	12.4	0.144	1 U	8.49							
8/19/2014	XX	GW402A2A9	0.008 U	41.9		0.143	10.7	0.148	1 U	8.06							
11/11/2014	XX	GW402A2C3	0.008 U	35.8		0.136	10	0.128	1 U	7.67							
6/4/2015	XX	GW402A2DJ	0.008 U	39.2		0.159	11.2	0.149	1 U	7.85							
9/1/2015	XX	GW402A2FE	0.008 U	42.4		0.1 U	11.8	0.143	1 U	9.04							
11/3/2015	XX	GW402A2H8	0.008 U	41.1		0.1 U	11.6	0.15	1 U	8.48							
6/14/2016	XX	GW402A30I	0.008 U	44.6		0.119	12.2	0.152	1 U	8.98							
9/20/2016	XX	GW402A32C	0.008 U	47.2		0.119	12.8	0.164	1 U	9							
11/9/2016	XX	GW402A346	0.008 U	50.7		0.138	13	0.189	1 U	9.33							
6/14/2017	XX	GW402A361	0.008 U	46.1		0.121	12.5	0.166	1 U	9.04							
8/29/2017	XX	GW402A37F	0.008 U	47.8		0.116	12.7	0.167	1 U	9.09							
11/15/2017	XX	GW402A399	0.008 U	46.6		0.121	12.5	0.159	1 U	8.89							
6/20/2018	XX	GW402A3B4	0.008 U	51.9		0.12	12.8	0.17	1 U	9.52							
8/15/2018	XX	GW402A3DD	0.008 U	47.2		0.102	13.2	0.161	1 U	8.86							
11/28/2018	XX	GW402A3EC	0.008 U	47		0.122	12.7	0.161	1 U	8.99							
6/5/2019	XX	GW402A3G7	0.008 U	50.5		0.143	14	0.176	1 U	9.19							
8/13/2019	XX	GW402A3IG	0.008 U	48.4		0.228	14.4	0.175	1 U	9.38							
10/22/2019	XX	GW402A3JF	0.008 U	48.4		0.12	13.6	0.164	1 U	9.16							
6/17/2020	XX	GW402A41A	0.008 U	49.6		0.124	13	0.166	1 U	9.52							
8/4/2020	XX	GW402A43J	0.008 U			0.139	15	0.178	1 U	9.71							
8/4/2020	XX	GW402A43JR		57.7													
10/21/2020	XX	GW402A44I	0.008 U	55.5		0.137	15.8	0.186	1 U	9.86							
6/23/2021	XX	GW402A46D	0.008 U	58.9		0.322	15.6	0.201	1 U	10							
9/21/2021	XX	GW402A488	0.008 U	54.8		0.175	16.1	0.179	1 U	9.94							
6/28/2022	XX	GW402A4AA	0.008 U	58.9		0.141	16	0.169	1 U	10.7							
10/19/2022	XX	GW402A4C7	0.008 U	62.1		0.166	16.9	0.197	1 U	10.7							
6/7/2023	XX	GW402A4E8	0.008 U	69.3		0.191	17.3	0.212	1 U	11.3							
10/17/2023	XX	GW402A4I3	0.008 U	56.7		0.166	16.5	0.188	1 U	10.3							
402B																	
5/3/2000	XX	402BXX36649				0.02 U		1.79	3.43	56.98							
8/10/2000	XX	402BXX36748				0.078		0.18	4.48	84.14							
11/9/2000	XX	402BXX36839	0.008 U			0.073		1.54	10.85	65.2							
5/17/2001	XX	402BXX37028	0.008 U			0.106		0.07	3.57	74.4							
8/1/2001	XX	402BXX37104	0.008 U			0.059		0.09	4.42	79.2							
10/24/2001	XX	402BXX37188	0.008 U			0.042		2.36	21.6	76.5							
5/22/2002	XX	402BXX37398	0.01 U	266.8		0.047	71	0.28	6.175	62.1							
8/7/2002	XX	402BXX37475	0.01 U	214.2	0.01 U	0.032	80.6	2.07	22	59.2							
10/24/2002	XX	402BXX37553	0.044	235	0.01 U	0.062	85.2	0.83	16.2	53.8							
6/25/2003	XX	402BXX37797	0.005 U	230	0.003 U	0.023	84	1.3	17	46							
8/11/2003	XX	402BXX37844	0.005 U	190	0.019	0.024	88	2.9	33	54							
10/22/2003	XX	402BXX37916	0.005 U	200	0.003 U	0.033	98	3	35	49							
5/11/2004	XX	402BXX38118	0.005 U	160	0.007	0.0879	67	1.1	15	41							
8/2/2004	XX	402BXX38201	0.005 U	160	0.0083	0.063	75	2.1	27	44							
10/26/2004	XX	402BXX38286	0.005 U	190	0.003 U	0.27	85	1.6	17	52							
5/9/2005	XX	GW402B015	0.005 U	150	0.003 U	0.02	65	0.67	13	36							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
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(402B)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
8/1/2005	XX	GW402B02H	0.005 U	200	0.003 U	0.03	90	0.16	7.3	57							
11/9/2005	XX	GW402B049	0.005 U	220	0.003 U	0.01	98	0.14	5.6	60							
5/5/2006	XX	GW402B095	0.005 U	170	0.004 B	0.02	81	1.1	15	47							
8/2/2006	XX	GW402B07D	0.005 U	200	0.003 U	0.03	78	0.68	6.3	52							
10/30/2006	XX	GW402B061	0.005 U	140	0.003 U	0.02	64	1.4	23	37							
5/7/2007	XX	GW402B0AH	0.005 U	150		0.025	68	1.5	10	38							
8/14/2007	XX	GW402B0CA	0.005 U	170		0.03	72	0.18	6.1	47							
11/5/2007	XX	GW402B0E2	0.005 U	160		0.023	76	2	24	38							
6/11/2008	XX	GW402B0GA	0.005 U	170		0.015	76	0.17	6.7	42							
8/20/2008	XX	GW402B0IA	0.005 U	180		0.02	64	0.19	5.7	39							
8/20/2008	XD	GWDP4X0H5	0.005 U	170		0.02	68	0.2	5.8	41							
10/27/2008	XX	GW402B0JI	0.005 U	180		0.02	86	0.85	12	42							
5/13/2009	XX	GW402B11I	0.005 U	160		0.028	80	0.32	3.6	40							
8/13/2009	XX	GW402B13I	0.005 U	200		0.015	100	0.23	5.6	50							
8/13/2009	XD	GWDP4X12D	0.005 U	180		0.01 U	100	0.21	5.6	50							
10/28/2009	XX	GW402B156	0.005 U	120		0.014	59	0.23	4.3	35							
6/3/2010	XX	GW402B177	0.005 U	180		0.017	82	0.81	6	36							
8/17/2010	XX	GW402B198	0.005 U	140		0.015	69	0.21	6.1	31							
8/17/2010	XD	GWDP4X183	0.005 U	130		0.014	64	0.23	5.8	30							
10/19/2010	XX	GW402B1AG	0.005 U	130		0.033	60	0.17	5	33							
5/16/2011	XX	GW402B1DH	0.005 U	120		0.015	62	0.33	9.2	26							
8/8/2011	XX	GW402B1F8	0.0016 U	130		0.012	64	0.19	6.3	32							
11/1/2011	XX	GW402B1GJ	0.0016 U	120		0.014 J	68	0.3	8.8	35							
5/16/2012	XX	GW402B1ID	0.005 U	110		0.016	64	0.59	11	30							
8/15/2012	XX	GW402B206	0.005 U	120		0.012	38	0.35	9.7	33							
10/31/2012	XX	GW402B220	0.005 U	130		0.061	70	1.5	13	36							
5/20/2013	XX	GW402B23E	0.005 U	110		0.011	58	0.34	8.2	26							
7/22/2013	XX	GW402B258	0.005 U	130		0.01 U	58	0.3	8.7	29							
9/30/2013	XX	GW402B272	0.005 U	130		0.01	65	0.54	8.6	29							
6/4/2014	XX	GW402B28G	0.008 U	136		0.1 U	69.3	1.01	6.29	30.3							
8/19/2014	XX	GW402B2AA	0.008 U	137		0.1 U	66.2	0.513	8.46	29.5							
11/11/2014	XX	GW402B2C4	0.008 U	124		0.1 U	64.7	0.418	8.18	29.3							
6/4/2015	XX	GW402B2E0	0.008 U	121		0.136	66.9	2.53	6.55	26.9							
9/1/2015	XX	GW402B2FF	0.008 U	143		0.1 U	80.5	0.625	10.8	34.1							
11/3/2015	XX	GW402B2H9	0.008 U	119		0.1 U	68.7	1.63	13.4	27.6							
6/14/2016	XX	GW402B30J	0.008 U	132		0.1 U	71.7	0.656	7.9	29.1							
9/20/2016	XX	GW402B32D	0.008 U	139		0.1 U	68.4	0.69	10.7	29.3							
11/9/2016	XX	GW402B347	0.008 U	138		0.1 U	70.9	0.454	11.9	30.9							
6/14/2017	XX	GW402B362	0.008 U	135		0.1 U	75	0.824	9.28	28.6							
8/29/2017	XX	GW402B37G	0.008 U	126		0.1 U	65.1	0.58	10.4	27.4							
11/15/2017	XX	GW402B39A	0.008 U	125		0.1 U	68.6	0.789	10.9	27.6							
6/20/2018	XX	GW402B3B5	0.008 U	138		0.1 U	66.9	2.48	10.2	28.4							
8/15/2018	XX	GW402B3DE	0.008 U	121		0.1 U	68.8	0.481	11	25.6							
11/28/2018	XX	GW402B3ED	0.008 U	128		0.129	65.9	5.04	11.7	26.7							
6/5/2019	XX	GW402B3G8	0.008 U	124		0.1 U	67.8	0.452	8.42	24.5							
8/13/2019	XX	GW402B3IH	0.008 U	117		0.1 U	68	0.891	11.9	25.6							
10/22/2019	XX	GW402B3JG	0.008 U	123		0.1 U	68.3	1.32	13.4	26.7							
6/17/2020	XX	GW402B41B	0.008 U	118		0.1 U	61.2	0.819	10.3	24.3							
8/4/2020	XX	GW402B440	0.008 U			0.1 U	67.1	0.508	12.3	25.3							

SEVEE & MAHER ENGINEERS, INC.
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(402B)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
8/4/2020	XX	GW402B440R		133													
10/21/2020	XX	GW402B44J	0.008 U	128		0.102	69.4	1.33	14.8	26.4							
6/23/2021	XX	GW402B46E	0.008 U	123		0.274	62	2.31	12.2	24.3							
9/21/2021	XX	GW402B489	0.008 U	115		0.133	64.7	1.83	14.3	24.8							
6/28/2022	XX	GW402B4AB	0.008 U	124		0.1 U	66.6	1.25	13.6	23.8							
10/19/2022	XX	GW402B4C8	0.008 U	126		0.2	65.3	2.66	16.8	24.8							
6/7/2023	XX	GW402B4E9	0.008 U	126		0.212	62.4	4.27	13.6	23.3							
10/17/2023	XX	GW402B4I4	0.008 U	119		0.282	64.2	3.02	14.7	24.4							
ND																	
5/3/2000	XX	NDXX36649				D				D							
8/9/2000	XX	NDXX36747				D				D							
11/8/2000	XX	NDXX36838				D				D							
5/16/2001	XX	NDXX37027	D			D		D	D	D							
7/31/2001	XX	NDXX37103	D			D		D	D	D							
10/23/2001	XX	NDXX37187	D			D		D	D	D							
5/21/2002	XX	NDXX37397	D	D		D	D	D	D	D							
7/30/2002	XX	NDXX37467	D	D		D	D	D	D	D							
10/22/2002	XX	NDXX37551	D	D		D	D	D	D	D							
6/23/2003	XX	NDXX37795	D	D		D	D	D	D	D							
8/13/2003	XX	NDXX37846	D	D		D	D	D	D	D							
10/20/2003	XX	NDXX37914	D	D		D	D	D	D	D							
5/6/2004	XX	NDXX38113	D	D		D	D	D	D	D							
7/27/2004	XX	NDXX38195	D	D		D	D	D	D	D							
10/25/2004	XX	NDXX38285	D	D		D	D	D	D	D							
5/12/2005	XX	SWNDXX016	D	D		D	D	D	D	D							
7/25/2005	XX	SWNDXX02I	D	D		D	D	D	D	D							
11/10/2005	XX	SWNDXX04A	0.005 U	26		0.64	3	0.04	4.4	1.3							
5/2/2006	XX	SWNDXX096	0.005 U	26		3.5	3.4	0.26	6.2	2.1							
8/3/2006	XX	SWNDXX07E	D	D		D	D	D	D	D							
10/18/2006	XX	SWNDXX062	D	D		D	D	D	D	D							
5/21/2007	XX	SWNDXX0AI	D	D		D	D	D	D	D							
8/8/2007	XX	SWNDXX0CB	D	D		D	D	D	D	D							
11/6/2007	XX	SWNDXX0E3	D	D		D	D	D	D	D							
6/11/2008	XX	SWNDXX0GB	0.005 U	52		0.26	4.9	0.041	7.1	2.4							
8/19/2008	XX	SWNDXX0IB	D	D		D	D	D	D	D							
10/22/2008	XX	SWNDXX0JJ	D	D		D	D	D	D	D							
5/18/2009	XX	SWNDXX11J	D	D		D	D	D	D	D							
8/17/2009	XX	SWNDXX13J	D	D		D	D	D	D	D							
10/29/2009	XX	SWNDXX157	D	D		D	D	D	D	D							
6/7/2010	XX	SWNDXX178	0.005 U	59		0.053	2.6	0.021	3.8	1							
8/18/2010	XX	SWNDXX199	D	D		D	D	D	D	D							
10/21/2010	XX	SWNDXX1AH	D	D		D	D	D	D	D							
5/18/2011	XX	SWXXXX1E9	0.005 U	30		0.082	2.6	0.53	2.6	1.1							
8/10/2011	XX	SWXXXX1G0	D	D		D	D	D	D	D							
11/2/2011	XX	SWXXXX1HB	D	D		D	D	D	D	D							
5/14/2012	XX	SWXXXX1J5	D	D		D	D	D	D	D							
8/14/2012	XX	SWXXXX20I	F6	F6		F6	F6	F6	F6	F6							
10/29/2012	XX	SWXXXX22C	D	D		D	D	D	D	D							
5/21/2013	XX	SWXXXX246	D	D		D	D	D	D	D							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(ND)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L
7/24/2013	XX	SWXXXX260	D	D		D	D	D	D	D
10/1/2013	XX	SWXXXX27E	D	D		D	D	D	D	D
6/5/2014	XX	SWXXXX298	D	D		D	D	D	D	D
8/21/2014	XX	SWXXXX2B2	D	D		D	D	D	D	D
11/13/2014	XX	SWXXXX2CG	D	D		D	D	D	D	D
6/4/2015	XX	SWXXXX2EC	D	D		D	D	D	D	D
9/3/2015	XX	SWXXXX2G7	D	D		D	D	D	D	D
11/5/2015	XX	SWXXXX2I1	I	I		I	I	I	I	I
6/16/2016	XX	SWXXXX31B	D	D		D	D	D	D	D
9/22/2016	XX	SWXXXX335	D	D		D	D	D	D	D
11/10/2016	XX	SWXXXX34J	D	D		D	D	D	D	D
6/15/2017	XX	SWXXXX36E	D	D		D	D	D	D	D
8/31/2017	XX	SWXXXX388	D	D		D	D	D	D	D
11/16/2017	XX	SWXXXX3A2	D	D		D	D	D	D	D
6/21/2018	XX	SWXXXX3BH	D	D		D	D	D	D	D
8/16/2018	XX	SWXXXX3CC	D	D		D	D	D	D	D
6/6/2019	XX	SWXXXX3H0	D	D		D	D	D	D	D
8/15/2019	XX	SWXXXX3HF	D	D		D	D	D	D	D
10/24/2019	XX	SWXXXX408	I	I		I	I	I	I	I
6/18/2020	XX	SWXXXX423	D	D		D	D	D	D	D
8/6/2020	XX	SWXXXX42I	D	D		D	D	D	D	D
10/22/2020	XX	SWXXXX45B	D	D		D	D	D	D	D
6/24/2021	XX	SWXXXX476	D	D		D	D	D	D	D
9/23/2021	XX	SWXXXX491	D	D		D	D	D	D	D
6/30/2022	XX	SWXXXX4B3	D	D		D	D	D	D	D
10/20/2022	XX	SWXXXX4D0	D	D		D	D	D	D	D
6/8/2023	XX	SWXXXX4F1	0.008 U	203		1.39	10.1	1.31	12	2.35
10/19/2023	XX	SWXXXX4IG	D	D		D	D	D	D	D
PBF										
5/3/2000	XX	PBFXX36649				0.17		0.057	0.84	2.73
8/9/2000	XX	PBFXX36747				0.111		0.06	2.28	18.94
11/8/2000	XX	PBFXX36838	0.008 U			0.161		0.02	0.7	3.6
5/16/2001	XX	PBFXX37027	0.008 U			1.424		2.53	2.49	22
7/31/2001	XX	PBFXX37103	0.008 U			1.13		1.12	1.25	6.1
10/23/2001	XX	PBFXX37187	0.008 U			0.265		0.69	2.32	19
5/21/2002	XX	PBFXX37397	0.01 U	67.3		5.39	10.3	2.12	2.356	19.1
8/8/2002	XX	PBFXX37476	0.01 U	12.1	0.01 U	2.35	3	1.53	0.7	4.4
10/24/2002	XX	PBFXX37553	0.01 U	2.5	0.01 U	0.216	2	0.02	0.69	2.9
6/26/2003	XX	PBFXX37798	0.005 U	8	0.003 U	0.67	2	0.33	1 U	2.9
8/13/2003	XX	PBFXX37846	0.005 U	10	0.012	0.82	2.7	0.29	1 U	3.2
10/23/2003	XX	PBFXX37917	0.005 U	12	0.003 U	0.66	2.5	0.22	1.2	3.5
5/6/2004	XX	PBFXX38113	0.005 U	7.8	0.003 U	0.9	2.2	0.033	1 U	1.5
7/27/2004	XX	PBFXX38195	0.005 U	24	0.003 U	1	3.2	1.4	1.3	5
10/25/2004	XX	PBFXX38285	0.005 U	8.4	0.003 U	0.23	2.3	0.088	1.1	1.9
5/12/2005	XX	SWPBFX017	0.005 U	8.2	0.003 U	0.51	2	0.14	1.5	1.9
7/25/2005	XX	SWPBFX02J	0.005 U	6.8	0.003 U	1.3	2	0.82	1 U	2
11/10/2005	XX	SWPBFX04B	0.005 U	6.5	0.009	0.25	1.8	0.04	1.6	1.9
5/2/2006	XX	SWPBFX097	0.005 U	14	0.005	0.4	2.6	0.13	2.3	4.7
8/3/2006	XX	SWPBFX07F	0.005 U	9.4	0.003 U	1.1	2.8	0.14	2.1	2.2

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(PBF)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
10/18/2006	XX	SWPBFX063	0.005 U	11	0.003 U	0.32 B	2.6	0.3	2.1	2.6							
5/21/2007	XX	SWPBFX0AJ	0.005 U	8.3	0.004	0.21	2.4	0.033	1.7	2.6							
8/8/2007	XX	SWPBFX0CC	0.005 U	6	0.005	0.41	1.9	0.097	1 U	1.9							
11/6/2007	XX	SWPBFX0E4	0.005 U	7.3	0.003 U	0.3	1.8	0.06	1.5	2.4							
6/11/2008	XX	SWPBFX0GC	0.005 U	44	0.0085	0.4	9.4	0.36	35	16							
8/19/2008	XX	SWPBFX0IC	0.005 U	9.6	0.003 U	0.45	2.5	0.15	2.1	2							
10/22/2008	XX	SWPBFX100	0.005 U	6.4	0.003 U	0.36	2	0.12	1.1	1.7							
5/7/2009	XX	SWPBFX120	0.005 U	5.2		0.43	1.4	0.28	1 U	1.5							
8/12/2009	XX	SWPBFX140	0.005 U	24	0.003 U	0.58	2.6	0.99	2.2	2.9							
10/27/2009	XX	SWPBFX158	0.005 U	10	0.003 U	0.1	1.7	0.04	2.4	2.7							
6/7/2010	XX	SWPBFX179	0.005 U	14	0.001 U	0.14	2	0.19	2.5	6.9							
8/18/2010	XX	SWPBFX19A	0.005 U	3.6	0.001 U	0.18	1.2	0.038	1 U	1.4							
10/21/2010	XX	SWPBFX1AI	0.005 U	4.7	0.003 U	0.24	1.3	0.025	1 U	1.6							
5/18/2011	XX	SWXXXX1E8	0.005 U	5.2	0.00029 J	0.31	1.4	0.055	1 U	2.2							
8/10/2011	XX	SWXXXX1FJ	0.0016 U	4.1	0.00034 U	0.21	1.5	0.05	0.43	1.5							
8/10/2011	XD	LTDP3X1G9	0.0016 U	4	0.00034 U	0.2	1.4	0.048	0.42	1.4							
11/2/2011	XX	SWXXXX1HA	0.0016 U	12	0.00028 U	0.093	1.8	0.11	1.6	3.6							
PBFR																	
5/14/2012	XX	SWXXXX1J4	0.005 U	11	0.003 U	0.088	1.6	0.044	2	4.1							
8/14/2012	XX	SWXXXX20H	0.005 U	12	0.0031	2.4	2.2	0.99	1.3	2.6							
10/29/2012	XX	SWXXXX22B	0.005 U	15	0.003 U	0.12	3.1	0.037	1.6	4.2							
10/29/2012	XD	SWDP2X230	0.005 U	14	0.003 U	0.13	3.1	0.041	1.6	4.3							
5/21/2013	XX	SWXXXX245	0.005 U	5	0.003 U	0.27	1.4	0.085	1 U	1.3							
5/21/2013	XD	SWDP2X24E	0.005 U	5	0.003 U	0.27	1.4	0.086	1 U	1.3							
7/24/2013	XX	SWXXXX25J	0.005 U	4.4	0.003 U	0.84	1.2	0.24	1 U	1.2							
7/24/2013	XD	SWDP2X268	0.005 U	4.2	0.003 U	0.44	1.2	0.079	1 U	1.1							
10/1/2013	XX	SWXXXX27D	0.005 U	5	0.003 U	0.43	1.4	0.25	1 U	1.5							
10/1/2013	XD	SWDP3X282	0.005 U	5.9	0.003 U	0.27	1.6	0.064	1 U	1.6							
6/5/2014	XX	SWXXXX297	0.008 U	5.12	0.025 U	0.347	1.5	0.139	1 U	1.58							
6/5/2014	XD	SWDP2X29G	0.008 U	4.93	0.025 U	0.461	1.47	0.132	1 U	1.51							
8/21/2014	XX	SWXXXX2B1	0.008 U	5.22	0.025 U	0.359	1.7	0.153	1 U	1.6							
8/21/2014	XD	SWDP2X2BA	0.008 U	5.15	0.025 U	0.375	1.69	0.158	1 U	1.64							
11/13/2014	XX	SWXXXX2CF	0.008 U	6.54	0.025 U	0.194	1.73	0.0262	1 U	2.06							
11/13/2014	XD	SWDP3X2D4	0.008 U	6.41	0.025 U	0.185	1.72	0.0244	1 U	2.03							
6/4/2015	XX	SWXXXX2EB	0.008 U	12.3	0.025 U	0.941	1.56	0.948	1.45	4.76							
6/4/2015	XD	SWDP2X2F0	0.008 U	12.1	0.025 U	0.21	1.49	0.652	1.44	4.9							
9/3/2015	XX	SWXXXX2G6	0.008 U	8.2	0.025 U	0.558	2.06	0.73	1 U	2.12							
9/3/2015	XD	SWDP2X2GF	0.008 U	8.01	0.025 U	0.415	2.03	0.531	1 U	2.14							
11/5/2015	XX	SWXXXX2I0	0.008 U	7.18	0.025 U	0.307	1.82	0.038	1 U	2.1							
11/5/2015	XD	SWDP3X2I9	0.008 U	8.04	0.025 U	0.28	1.74	0.052	1.05	2.48							
6/16/2016	XD	SWDP2X31J	0.008 U	5.78	0.025 U	0.267	1.78	0.073	1 U	1.75							
6/16/2016	XX	SWXXXX31A	0.008 U	5.81	0.025 U	0.339	1.82	0.106	1 U	1.81							
9/22/2016	XD	SWDP2X33D	0.008 U	5.9	0.025 U	0.341	1.95	0.125	1 U	2.14							
9/22/2016	XX	SWXXXX334	0.008 U	5.69	0.025 U	0.332	1.96	0.121	1 U	2.08							
11/10/2016	XD	SWDP3X357	0.008 U	7	0.025 U	0.188	2.08	0.02	1 U	1.99							
11/10/2016	XX	SWXXXX34I	0.008 U	6.89	0.025 U	0.173	2.07	0.019	1 U	2							
6/15/2017	XD	SWDP2X372	0.008 U	6.58	0.025 U	0.248	1.77	0.0328	1 U	1.65							
6/15/2017	XX	SWXXXX36D	0.008 U	6.7	0.025 U	0.253	1.8	0.0325	1 U	1.69							
8/31/2017	XD	SWDP2X38G	0.008 U	9.91	0.025 U	1.33	2.48	1.13	1 U	2.07							

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(PBFR)			Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
Date	Type	Sample ID															
8/31/2017	XX	SWXXXX387	0.008 U	8.62	0.025 U	0.296	2.35	0.36	1 U	2.09							
11/16/2017	XD	SWDP3X3AA	0.008 U	10.8	0.025 U	3.74	2.68	2.06	1.2	2.63							
11/16/2017	XX	SWXXXX3A1	0.008 U	11	0.025 U	3.15	2.5	1.62	1.3	2.73							
6/21/2018	XD	SWDP2X3C5	0.008 U	6.3	0.025 U	0.346	1.71	0.0785	1 U	1.68							
6/21/2018	XX	SWXXXX3BG	0.008 U	6.3	0.025 U	0.341	1.69	0.0789	1 U	1.7							
8/16/2018	XD	SWDP2X3D0	0.008 U	6.35	0.025 U	0.383	1.84	0.0957	1 U	1.74							
8/16/2018	XX	SWXXXX3CB	0.008 U	6.65	0.025 U	0.369	1.89	0.0888	1 U	1.8							
11/29/2018	XD	SWDP3X3FD	0.008 U	52.5	0.025 U	0.1 U	4.6	0.0465	1.9	5.02							
11/29/2018	XX	SWXXXX3F4	0.008 U	50.3	0.025 U	0.468	4.54	0.251	1.86	4.83							
6/6/2019	XD	SWDP2X3H8	0.008 U	7.98	0.025 U	0.229	1.74	0.0502	1 U	2.04							
6/6/2019	XX	SWXXXX3GJ	0.008 U	14.7	0.025 U	0.267	2.17	0.548	1.23	2.44							
8/15/2019	XD	SWDP2X3I3	0.008 U	6.23	0.025 U	0.124	1.88	0.0361	1 U	1.89							
8/15/2019	XX	SWXXXX3HE	0.008 U	6.26	0.025 U	0.133	1.88	0.0415	1 U	1.9							
10/24/2019	XD	SWDP3X40G	0.008 U	12	0.025 U	0.266	1.96	0.0405	1.38	2.44							
10/24/2019	XX	SWXXXX407	0.008 U	11.8	0.025 U	0.271	1.93	0.0402	1.4	2.44							
6/18/2020	XD	SWDP2X42B	0.008 U	5.66	0.025 U	0.426	1.64	0.164	1 U	1.92							
6/18/2020	XX	SWXXXX422	0.008 U	5.52	0.025 U	0.433	1.63	0.16	1 U	1.89							
8/6/2020	XD	SWDP2X436	0.008 U	5.26	0.025 U	0.278	1.87	0.054	1 U	2.02							
8/6/2020	XX	SWXXXX42H	0.008 U	5.01	0.025 U	0.213	1.82	0.0319	1 U	1.96							
10/22/2020	XD	SWDP3X45J	0.008 U	16.2	0.025 U	0.1 U	2.27	0.0319	1.2	3.33							
10/22/2020	XX	SWXXXX45A	0.008 U	16.5	0.025 U	0.101	2.42	0.0353	1.24	3.42							
6/24/2021	XX	SWXXXX475	0.008 U	6.18	0.025 U	0.264	1.91	0.0911	1 U	2.01							
6/24/2021	XD	SWDP2X47E	0.008 U	6.16	0.025 U	0.468	1.91	0.188	1 U	1.98							
9/23/2021	XD	SWDP3X499	0.008 U	6.86	0.025 U	0.147	2.14	0.0994	1 U	2.12							
9/23/2021	XX	SWXXXX490	0.008 U	6.91	0.025 U	0.155	2.13	0.0982	1 U	2.12							
6/30/2022	XD	SWDP2X4BB	0.008 U	6.47	0.025 U	0.342	1.9	0.109	1 U	1.88							
6/30/2022	XX	SWXXXX4B2	0.008 U	6.29	0.025 U	0.266	1.85	0.067	1 U	1.78							
10/20/2022	XD	SWDP3X4D8	0.008 U	16.6	0.025 U	3.07	3.12	0.531	1.98	2.25							
10/20/2022	XX	SWXXXX4CJ	0.008 U	14.2	0.025 U	1.9	2.89	0.16	1.72	1.99							
6/8/2023	XD	SWDP2X4F9	0.008 U	14	0.025 U	0.177	2.65	0.0301	1 U	2.34							
6/8/2023	XX	SWXXXX4F0	0.008 U	13.8	0.025 U	0.187	2.62	0.0298	1 U	2.33							
10/19/2023	XD	SWDP3X4J3	0.008 U	37.4	0.025 U	0.1 U	13.2	0.005 U	3.04	238							
10/19/2023	XX	SWXXXX4IF	0.008 U	13.6	0.025 U	0.27	2.67	0.158	1.07	2.23							
PBFB																	
5/3/2000	XX	PBFBXX36649				0.28		0.054	0.55	1.53							
8/9/2000	XX	PBFBXX36747				2.592		0.07	0.15	1.16							
11/8/2000	XX	PBFBXX36838	0.008 U			0.369		0.09	0.48	1.9							
5/16/2001	XX	PBFBXX37027	0.008 U			0.502		0.09	0.48	1.7							
7/31/2001	XX	PBFBXX37103	0.008 U			1.043		0.23	0.2	1.7							
10/24/2001	XX	PBFBXX37188	0.008 U			0.413		1.58	0.29	2.2							
5/21/2002	XX	PBFBXX37397	0.01 U	3.5		0.388	1	0.21	0.146	2.2							
8/6/2002	XX	PBFBXX37474	0.01 U	6.7		3.18	2	0.99	0.16	1.8							
10/24/2002	XX	PBFBXX37553	0.01 U	2.5		0.392	1	0.15	0.18	2.1							
6/26/2003	XX	PBFBXX37798	0.005 U	5		0.76	2	0.72	1 U	2.1							
8/13/2003	XX	PBFBXX37846	0.005 U	5.4		0.95	1.9	0.15	1 U	2.2							
10/23/2003	XX	PBFBXX37917	0.005 U	4.6		0.57	1	0.5	1 U	1.5							
5/6/2004	XX	PBFBXX38113	0.005 U	6.6		0.9	1.9	0.13	1 U	1.6							
7/27/2004	XX	PBFBXX38195	0.005 U	4.7		1.6	1.5	0.52	1 U	1.9							
10/25/2004	XX	PBFBXX38285	0.005 U	5.8		1.8	1.2	0.62	1 U	1.6							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(PBFB)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
5/12/2005	XX	SWPBFB018	0.005 U	5.8		0.53	1.6	0.12	1.2	1.5							
7/25/2005	XX	SWPBFB030	0.005 U	7.2		1.6	2	0.52	1.4	2							
11/10/2005	XX	SWPBFB04C	0.005 U	4.2		0.71	1 U	0.57	1	1.3							
5/2/2006	XX	SWPBFB098	0.005 U	4.4		0.37	1.3	0.12	1.4	1.5							
8/3/2006	XX	SWPBFB07G	0.005 U	6.4		1.2	1.7	0.24	1 U	1.6							
10/18/2006	XX	SWPBFB064	0.005 U	3.9		0.74 B	1 U	0.72	1 U	1.3							
5/21/2007	XX	SWPBFB0B0	0.005 U	3.7		0.36	1	0.1	1 U	1.5							
8/8/2007	XX	SWPBFB0CD	0.005 U	7.1		1.5	1.8	0.59	1 U	1.6							
11/6/2007	XX	SWPBFB0E5	0.005 U	3.8		0.34	1 U	0.23	1 U	1.5							
6/11/2008	XX	SWPBFB0GD	0.005 U	4.8		0.49	1 U	0.13	1 U	1.3							
8/19/2008	XX	SWPBFB0ID	0.005 U	6.4		0.77	1.9	0.33	1 U	1.4							
10/22/2008	XX	SWPBFB101	0.005 U	6.9		0.97	1.5	0.64	1 U	1.6							
5/7/2009	XX	SWPBFB121	0.005 U	3.7		0.51	1.1	0.13	1 U	1.1							
8/12/2009	XX	SWPBFB141	0.005 U	8.1		2.2	1.4	1.4	1 U	1.1							
10/27/2009	XX	SWPBFB159	0.005 U	4		0.39	1 U	0.051	1 U	1.2							
6/7/2010	XX	SWPBFB17A	0.005 U	3.2		4	1 U	0.29	1 U	1 U							
8/18/2010	XX	SWPBFB19B	0.005 U	5.6		0.77	1.5	0.9	1 U	1 U							
10/21/2010	XX	SWPBFB1AJ	0.005 U	3.8		0.29	1 U	0.11	1 U	1.1							
5/18/2011	XX	SWXXXX1E7	0.005 U	3.8		0.35	1.1	0.021	1 U	1.2							
8/10/2011	XX	SWXXXX1FI	0.0016 U	3.9		0.56	1.4	0.068	0.4	1.4							
11/2/2011	XX	SWXXXX1H9	0.0016 U	3.2		0.89	1.1	0.052	0.53 J	1.3							
5/14/2012	XX	SWXXXX1J3	0.005 U	4.6		0.76	1.4	0.05	1 U	1.6							
8/14/2012	XX	SWXXXX20G	0.005 U	4.8		2.3	1	0.18	1 U	1.3							
10/29/2012	XX	SWXXXX22A	0.005 U	4.7		0.27	1.3	0.016	1 U	1.6							
5/21/2013	XX	SWXXXX244	0.005 U	2.6		0.18	1 U	0.017	1 U	1 U							
7/24/2013	XX	SWXXXX25I	0.005 U	4.3		0.52	1.2	0.031	1 U	1.1							
10/1/2013	XX	SWXXXX27C	0.005 U	4.6		0.16	1.3	0.018	1 U	1.3							
6/5/2014	XX	SWXXXX296	0.008 U	4.65		1.34	1.32	0.0816	1 U	1.42							
8/21/2014	XX	SWXXXX2B0	0.008 U	4.48		0.706	1.55	0.0598	1 U	1.45							
11/13/2014	XX	SWXXXX2CE	0.008 U	4.59		0.474	1.54	0.034	1 U	1.58							
6/4/2015	XX	SWXXXX2EA	0.008 U	3.47		0.256	1.24	0.027	1 U	1.32							
9/3/2015	XX	SWXXXX2G5	0.008 U	4.74		0.337	1.58	0.048	1 U	1.64							
11/5/2015	XX	SWXXXX2HJ	0.008 U	4.72		0.349	1.48	0.021	1 U	1.48							
6/16/2016	XX	SWXXXX319	0.008 U	4.7		0.274	1.63	0.029	1 U	1.64							
9/22/2016	XX	SWXXXX333	0.008 U	5.02		0.311	1.72	0.041	1 U	2.1							
11/10/2016	XX	SWXXXX34H	0.008 U	4.16		0.255	1.48	0.018	1 U	1.62							
6/15/2017	XX	SWXXXX36C	0.008 U	5.7		0.515	1.57	0.0566	1 U	1.56							
8/31/2017	XX	SWXXXX386	0.008 U	5.83		0.457	1.95	0.0705	1 U	1.7							
11/16/2017	XX	SWXXXX3A0	0.008 U	7.21		0.337	2.09	0.0287	1 U	2.05							
6/21/2018	XX	SWXXXX3BF	0.008 U	5.28		0.385	1.54	0.0437	1 U	1.6							
8/16/2018	XX	SWXXXX3CA	0.008 U	5.9		0.497	1.75	0.0494	1 U	1.48							
11/29/2018	XX	SWXXXX3F3	0.008 U	7.15		0.252	2.09	0.031	1 U	1.97							
6/6/2019	XX	SWXXXX3GI	0.008 U	4.89		0.511	1.48	0.0595	1 U	1.65							
8/15/2019	XX	SWXXXX3HD	0.008 U	4.38		0.226	1.58	0.0267	1 U	1.48							
10/24/2019	XX	SWXXXX406	0.008 U	5.78		0.952	1.41	0.153	1 U	1.73							
6/18/2020	XX	SWXXXX421	0.008 U	4.85		0.562	1.51	0.104	1 U	1.79							
8/6/2020	XX	SWXXXX42G	0.008 U	4.77		0.434	1.66	0.0323	1 U	1.56							
10/22/2020	XX	SWXXXX459	0.008 U	6.01		0.291	1.78	0.055	1 U	2							
6/24/2021	XX	SWXXXX474	0.008 U	5.34		0.497	1.74	0.0734	1 U	1.98							

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(PBFB) Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
9/23/2021	XX	SWXXXX48J	0.008 U	5.84		0.904	1.7	0.0864	1 U	1.65							
6/30/2022	XX	SWXXXX4B1	0.008 U	5.79		0.466	1.7	0.0726	1 U	1.71							
10/20/2022	XX	SWXXXX4CI	0.008 U	5.07		0.522	1.41	0.0502	1 U	1.56							
6/8/2023	XX	SWXXXX4EJ	0.008 U	6.33		0.314	1.71	0.0477	1 U	1.66							
10/19/2023	XX	SWXXXX4IE	0.008 U	8.19		13.7	5.45	0.57	2.42	5.71							
SPO																	
5/3/2000	XX	SPOXX36649				D				D							
8/9/2000	XX	SPOXX36747				D				D							
11/8/2000	XX	SPOXX36838				D				D							
5/16/2001	XX	SPOXX37027	D			D		D	D	D							
7/31/2001	XX	SPOXX37103	D			D		D	D	D							
10/23/2001	XX	SPOXX37187	D			D		D	D	D							
5/21/2002	XX	SPOXX37397	D	D		D	D	D	D	D							
7/30/2002	XX	SPOXX37467	D	D		D	D	D	D	D							
10/22/2002	XX	SPOXX37551	D	D		D	D	D	D	D							
6/23/2003	XX	SPOXX37795	D	D		D	D	D	D	D							
8/13/2003	XX	SPOXX37846	D	D		D	D	D	D	D							
10/20/2003	XX	SPOXX37914	D	D		D	D	D	D	D							
5/6/2004	XX	SPOXX38113	0.005 U	27		0.94	3.3	0.14	5.2	3.9							
7/27/2004	XX	SPOXX38195	D	D		D	D	D	D	D							
10/25/2004	XX	SPOXX38285	D	D		D	D	D	D	D							
5/12/2005	XX	SWSPOX01A	D	D		D	D	D	D	D							
7/25/2005	XX	SWSPOX032	D	D		D	D	D	D	D							
11/10/2005	XX	SWSPOX04E	0.005 U	36		1.4	4.7	0.64	4.6	4							
5/2/2006	XX	SWSPOX09A	0.005 U	29		1.3	3.2	0.2	7	8.7							
8/3/2006	XX	SWSPOX07I	0.005 U	26		5.7	2.6	3.6	3.7	4.5							
10/18/2006	XX	SWSPOX066	0.005 U	15		2.2 B	1.8	0.36	3.9	4.4							
5/21/2007	XX	SWSPOX0B2	0.005 U	19		0.86	2.6	0.21	2.9	7.3							
8/9/2007	XX	SWSPOX0CF	D	D		D	D	D	D	D							
11/6/2007	XX	SWSPOX0E7	0.005 U	9.8		0.32	1.4	0.04	2.4	2.1							
6/11/2008	XX	SWSPOX0GF	0.005 U	12		0.91	1.4	0.17	1.6	2.1							
8/19/2008	XX	SWSPOX0GJ	D	D		D	D	D	D	D							
10/22/2008	XX	SWSPOX103	D	D		D	D	D	D	D							
5/7/2009	XX	SWSPOX123	0.005 U	19		0.52	2.4	0.14	2.2	5.8							
8/17/2009	XX	SWSPOX127	D	D		D	D	D	D	D							
10/27/2009	XX	SWSPOX15B	0.005 U	11		0.31	1.4	0.036	2.4	2.7							
6/7/2010	XX	SWSPOX17C	0.005 U	12		1.6	1.3	0.2	1.3	5							
8/18/2010	XX	SWSPOX17H	D	D		D	D	D	D	D							
10/21/2010	XX	SWSPOX1B1	D	D		D	D	D	D	D							
5/18/2011	XX	SWXXXX1EA	0.005 U	13		0.3	1.6	0.036	1.1	3.1							
8/10/2011	XX	SWXXXX1G1	F6	F6		F6	F6	F6	F6	F6							
11/2/2011	XX	SWXXXX1HC	F6	F6		F6	F6	F6	F6	F6							
5/14/2012	XX	SWXXXX1J6	0.005 U	13		0.52	1.9	0.066	2.7	5.2							
8/14/2012	XX	SWXXXX20J	F6	F6		F6	F6	F6	F6	F6							
10/29/2012	XX	SWXXXX22D	0.005 U	14		1	1.8	0.71	3.3	5.5							
5/21/2013	XX	SWXXXX247	0.005 U	8.4		2.2	1.4	0.55	1 U	3.1							
7/24/2013	XX	SWXXXX261	0.005 U	8.4		1.8	1 U	0.39	1.1	1.2							
10/1/2013	XX	SWXXXX27F	I	I		I	I	I	I	I							
6/5/2014	XX	SWXXXX299	D	D		D	D	D	D	D							

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(SPO) Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
8/21/2014	XX	SWXXXX2B3	I	I		I	I	I	I	I							
11/13/2014	XX	SWXXXX2CH	0.008 U	9.92		0.601	1.27	0.094	1.76	1.96							
6/4/2015	XX	SWXXXX2ED	0.008 U	13		4.35	1.89	0.686	1.11	3							
9/3/2015	XX	SWXXXX2G8	D	D		D	D	D	D	D							
11/5/2015	XX	SWXXXX2I2	0.008 U	12		0.36	1.5	0.047	1.54	1.9							
6/16/2016	XX	SWXXXX31C	D	D		D	D	D	D	D							
9/22/2016	XX	SWXXXX336	D	D		D	D	D	D	D							
11/10/2016	XX	SWXXXX350	I	I		I	I	I	I	I							
6/15/2017	XX	SWXXXX36F	I	I		I	I	I	I	I							
8/31/2017	XX	SWXXXX389	D	D		D	D	D	D	D							
11/16/2017	XX	SWXXXX3A3	D	D		D	D	D	D	D							
6/21/2018	XX	SWXXXX3BI	D	D		D	D	D	D	D							
8/16/2018	XX	SWXXXX3CD	D	D		D	D	D	D	D							
6/6/2019	XX	SWXXXX3H1	0.008 U	20.8		2.18	2.55	0.715	1.44	2.26							
8/15/2019	XX	SWXXXX3HG	D	D		D	D	D	D	D							
10/24/2019	XX	SWXXXX409	0.008 U	11.7		0.331	1.33	0.0434	3.85	1.33							
6/18/2020	XX	SWXXXX424	D	D		D	D	D	D	D							
8/6/2020	XX	SWXXXX42J	I	I		I	I	I	I	I							
10/22/2020	XX	SWXXXX45C	I	I		I	I	I	I	I							
6/24/2021	XX	SWXXXX477	D	D		D	D	D	D	D							
9/23/2021	XX	SWXXXX492	D	D		D	D	D	D	D							
6/30/2022	XX	SWXXXX4B4	D	D		D	D	D	D	D							
10/20/2022	XX	SWXXXX4D1	0.008 U	12.1		4.02	1.91	0.196	3.19	1 U							
6/8/2023	XX	SWXXXX4F2	F6	F6		F6	F6	F6	F6	F6							
10/19/2023	XX	SWXXXX4IH	0.008 U	135		3.55	9.94	6.03	14.8	2.74							
SPON																	
5/12/2005	XX	SWSPON01B	0.005	84		6.2	14	8.7	24	10							
7/25/2005	XX	SWSPON033	D	D		D	D	D	D	D							
11/10/2005	XX	SWSPON04F	0.005 U	110		1.2	21	9.3	14	13							
5/2/2006	XX	SWSPON09B	0.005 U	81		3.2	18	9.9	10	14							
8/3/2006	XX	SWSPON07J	0.005 U	200		1.5	61	17	82	36							
10/18/2006	XX	SWSPON067	0.005 U	90		1.4 B	23	6.4	20	16							
5/21/2007	XX	SWSPON0B3	0.005 U	78		0.56	16	1.5	14	14							
8/9/2007	XX	SWSPON0CG	D	D		D	D	D	D	D							
11/6/2007	XX	SWSPON0E8	0.005 U	42		0.73	7.1	0.82	7.6	4.1							
6/11/2008	XX	SWSPON0GG	0.005 U	48		1.4	8.1	0.59	17	5.8							
8/19/2008	XX	SWSPON0H0	0.005 U	75		2.6	15	9.5	13	8.8							
10/22/2008	XX	SWSPON104	0.005 U	130		1.2	26	8	22	16							
5/7/2009	XX	SWSPON124	0.005 U	77		0.31	23	0.4	14	16							
8/12/2009	XX	SWSPON128	0.005 U	76		0.8	13	1.6	6.9	7.5							
10/27/2009	XX	SWSPON15C	0.005 U	70		0.23	11	1.6	8.4	6.9							
6/7/2010	XX	SWSPON17D	0.005 U	62		0.42	5.6	0.8	3.8	2.7							
8/18/2010	XX	SWSPON17I	D	D		D	D	D	D	D							
10/21/2010	XX	SWSPON1B2	0.005 U	81		0.3	19	6	11	11							
5/18/2011	XX	SWXXXX1EB	0.005 U	45		0.16	8.9	1.1	6.8	5.8							
8/10/2011	XX	SWXXXX1G2	D	D		D	D	D	D	D							
11/2/2011	XX	SWXXXX1HD	0.0016 U	94		0.42	30	9.1	20	19							
5/14/2012	XX	SWXXXX1J7	0.005 U	37		0.86	8	1.4	8.2	4.8							
8/14/2012	XX	SWXXXX210	F6	F6		F6	F6	F6	F6	F6							

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Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
(SPON)																	
10/29/2012	XX	SWXXXX22E	0.005 U	100		1.3	27	10	21	18							
5/21/2013	XX	SWXXXX248	0.005 U	76		0.85	26	3.4	18	18							
7/24/2013	XX	SWXXXX262	0.005 U	37		4.7	12	4.8	8.9	5.3							
10/1/2013	XX	SWXXXX27G	0.005 U	86		1.3	26	7.6	17	16							
6/5/2014	XX	SWXXXX29A	0.008 U	100		1.38	35.2	8.36	25.4	25.2							
8/21/2014	XX	SWXXXX2B4	0.008 U	56.8		0.686	21.9	1.58	27.2	12.2							
11/13/2014	XX	SWXXXX2CI	0.008 U	77		6.89	24	7.67	15.2	15.4							
6/4/2015	XX	SWXXXX2EE	0.008 U	75.3		8.66	24.4	8.78	14.7	20							
9/3/2015	XX	SWXXXX2G9	0.008 U	105		3.68	34.6	16.2	18.6	24.7							
11/5/2015	XX	SWXXXX2I3	0.008 U	73.9		1.3	24.7	5.92	15.2	17.1							
6/16/2016	XX	SWXXXX31D	0.008 U	89		0.48	31.1	3.75	18.6	30.6							
9/22/2016	XX	SWXXXX337	D	D		D	D	D	D	D							
11/10/2016	XX	SWXXXX351	0.008 U	196		0.15	36.6	0.198	11.7	13							
6/15/2017	XX	SWXXXX36G	0.008 U	94		0.199	34.7	0.692	5.83	21.7							
8/31/2017	XX	SWXXXX38A	D	D		D	D	D	D	D							
11/16/2017	XX	SWXXXX3A4	0.008 U	185		0.17	33.3	0.383	9.4	15.6							
6/21/2018	XX	SWXXXX3BJ	D	D		D	D	D	D	D							
8/16/2018	XX	SWXXXX3CE	D	D		D	D	D	D	D							
11/29/2018	XX	SWXXXX3F7	0.008 U	98.4		0.744	15.7	0.971	4.47	5.91							
6/6/2019	XX	SWXXXX3H2	0.008 U	93.6		0.394	24.9	4.28	10.9	13.8							
8/15/2019	XX	SWXXXX3HH	0.008 U	62.8		1.55	21	1.95	3.87	18.4							
10/24/2019	XX	SWXXXX40A	0.008 U	87.8		0.606	11.1	0.223	4.36	3.85							
6/18/2020	XX	SWXXXX425	D	D		D	D	D	D	D							
8/6/2020	XX	SWXXXX430	D	D		D	D	D	D	D							
10/22/2020	XX	SWXXXX45D	0.008 U	56.2		0.656	12	0.0753	6.04	6.8							
6/24/2021	XX	SWXXXX478	D	D		D	D	D	D	D							
9/23/2021	XX	SWXXXX493	0.008 U	66.1		3.59	14.4	2.65	3.73	7.83							
6/30/2022	XX	SWXXXX4B5	0.008 U	78.8		0.351	26.7	14	6.41	15.4							
10/20/2022	XX	SWXXXX4D2	0.008 U	68.6		1.76	7.74	0.311	5.56	2.88							
6/8/2023	XX	SWXXXX4F3	0.008 U	152		2.2	11.6	0.737	8.6	3.89							
10/19/2023	XX	SWXXXX4II	0.008 U	98		0.969	18	1.18	7.51	9.31							
SPOS																	
5/12/2005	XX	SWSPOS01C	0.006	58		25	12	4.2	3.5	36							
7/25/2005	XX	SWSPOS034	0.005 U	27		6.9	8	3.7	1 U	2							
11/10/2005	XX	SWSPOS04G	0.005 U	14		0.08	4.8	0.05	1.6	3.2							
5/2/2006	XX	SWSPOS09C	0.005 U	15		0.19	4.6	0.04	1.6	4.4							
8/3/2006	XX	SWSPOS080	0.005 U	24		0.32	7	0.22	1.4	4							
10/18/2006	XX	SWSPOS068	0.005 U	17		0.09 B	5.3	0.04	2.6	3.9							
5/21/2007	XX	SWSPOS0B4	0.005 U	11		0.051	3.9	0.011	1.4	4.7							
8/8/2007	XX	SWSPOS0CH	0.005 U	19		3.6	4.9	4.8	1 U	1.5							
11/6/2007	XX	SWSPOS0E9	0.005 U	12		0.06	4	0.01	1.3	4							
11/6/2007	XD	SWDP4X0F1	0.005 U	12		0.06	4	0.01	1.3	4.1							
6/11/2008	XX	SWSPOS0GH	0.005 U	14		0.23	3.6	0.12	1.6	4.7							
8/19/2008	XX	SWSPOS0H1	0.005 U	24		1	6.9	1.3	1.3	3.8							
10/22/2008	XX	SWSPOS105	0.005 U	23		0.15	6.2	0.17	4.9	5							
5/7/2009	XX	SWSPOS125	0.005 U	13		0.059	3.9	0.04	1.2	3.7							
8/12/2009	XX	SWSPOS129	0.005 U	28		0.72	5.9	1.1	1.3	3.6							
10/27/2009	XX	SWSPOS15D	0.005 U	11		0.071	3.3	0.034	1.2	3							
6/7/2010	XX	SWSPOS17E	0.005 U	12		0.21	3.3	0.18	1.3	4							

DATA SUMMARY TABLE

Metals

SEVEE & MAHER ENGINEERS, INC.
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(SPOS)

Date	Type	Sample ID	Arsenic mg/L	Calcium mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Sodium mg/L							
8/18/2010	XX	SWSPOS17J	D	D		D	D	D	D	D							
10/21/2010	XX	SWSPOS1B3	0.005 U	16		0.1	4.7	0.063	1	4							
10/21/2010	XD	SWDP4X1B7	0.005 U	16		0.097	4.7	0.06	1 U	3.8							
5/18/2011	XX	SWXXXX1EC	0.005 U	10		0.047	3.1	0.01 U	1.2	3.1							
8/10/2011	XX	SWXXXX1G3	F6	F6		F6	F6	F6	F6	F6							
11/2/2011	XX	SWXXXX1HE	0.0016 U	14		0.08	4.4	0.041	0.84 J	3.6							
5/14/2012	XX	SWXXXX1J8	0.005 U	12		0.045	3.7	0.012	1.4	3.1							
8/14/2012	XX	SWXXXX211	F6	F6		F6	F6	F6	F6	F6							
10/29/2012	XX	SWXXXX22F	0.005 U	17		0.076	5	0.039	1.5	4.2							
5/21/2013	XX	SWXXXX249	0.005 U	13		0.045	4	0.029	1.3	2.9							
7/24/2013	XX	SWXXXX263	0.005 U	14		0.2	4.4	0.14	1 U	2.8							
10/1/2013	XX	SWXXXX27H	0.005 U	22		0.26	6.8	0.24	1 U	3.5							
6/5/2014	XX	SWXXXX29B	0.008 U	22.5		0.175	6.63	0.507	1.55	3.73							
8/21/2014	XX	SWXXXX2B5	0.008 U	21.7		3.13	5.93	2.37	1 U	2.29							
11/13/2014	XX	SWXXXX2CJ	0.008 U	11.7		0.1 U	3.95	0.0394	1.13	2.84							
6/4/2015	XX	SWXXXX2EF	0.008 U	11.2		0.223	3.9	0.122	1.16	2.57							
9/3/2015	XX	SWXXXX2GA	0.008 U	28.8		7.42	7.02	5.34	1 U	3.13							
11/5/2015	XX	SWXXXX2I4	0.008 U	12.6		0.1 U	4.2	0.046	1.02	2.73							
6/16/2016	XX	SWXXXX31E	D	D		D	D	D	D	D							
9/22/2016	XX	SWXXXX338	D	D		D	D	D	D	D							
11/10/2016	XX	SWXXXX352	0.008 U	27.5		0.196	6.14	0.101	1.7	4							
6/15/2017	XX	SWXXXX36H	0.008 U	20.6		0.218	4.99	0.131	1 U	3.11							
8/31/2017	XX	SWXXXX38B	D	D		D	D	D	D	D							
11/16/2017	XX	SWXXXX3A5	0.008 U	14.9		0.1 U	4.35	0.0785	1	2.94							
6/21/2018	XX	SWXXXX3C0	0.008 U	25.7		0.553	6.35	0.131	1 U	3.7							
8/16/2018	XX	SWXXXX3CF	0.008 U	21.4		0.568	5.36	0.606	1 U	2.7							
11/29/2018	XX	SWXXXX3F8	0.008 U	12.1		0.1 U	3.6	0.206	1 U	2.56							
6/6/2019	XX	SWXXXX3H3	0.008 U	15.2		0.33	4.39	0.0919	1.41	2.45							
8/15/2019	XX	SWXXXX3HI	0.008 U	24.4		0.704	5.88	0.211	1 U	3.34							
10/24/2019	XX	SWXXXX40B	0.008 U	14		0.132	3.94	0.0265	1.71	2.67							
6/18/2020	XX	SWXXXX426	0.008 U	25.9		2.2	5.86	1.49	1.75	3.41							
8/6/2020	XX	SWXXXX431	0.008 U	28.4		1.85	6.11	1.13	1.23	2.57							
10/22/2020	XX	SWXXXX45E	0.008 U	16.2		0.216	4.45	0.0447	1.49	2.64							
6/24/2021	XX	SWXXXX479	0.008 U	19.9		2.84	4.66	2.2	1 U	2.7							
9/23/2021	XX	SWXXXX494	0.008 U	17.1		1.25	4.6	0.276	1 U	3.11							
6/30/2022	XX	SWXXXX4B6	0.008 U	25.7		1.46	6.82	2.84	1 U	2.44							
10/20/2022	XX	SWXXXX4D3	0.008 U	13.1		0.205	4.06	0.0419	1.49	2.13							
6/8/2023	XX	SWXXXX4F4	0.008 U	16		0.163	4.38	0.0396	1 U	2.58							
10/19/2023	XX	SWXXXX4IJ	0.008 U	55.4		6.87	9.21	2	5.31	3.22							

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SPOS)			Arsenic	Calcium	Copper	Iron	Magnesium	Manganese	Potassium	Sodium
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date	Type	Sample ID								

Units Abbreviations:

mg/L - MILLIGRAMS PER LITER

Notes: Sample Type XX = Environmental Sample, XD = Duplicate Sample
Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

! - The sampling location was damaged or destroyed.
B - Compound is found in the associated quality control blank as well as sample.
D - The sampling location was dry.
E - Compound exceeded upper level of calibration range and required dilution.
F6 - No flow. Sample not taken.
I - The sampling location yielded insufficient quantity to collect a sample.
J - Analyte was positively identified/Associated value is an estimate.
U - Not Detected above the laboratory reporting limit.

DATA SUMMARY TABLE

Leachate Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LDS)			Ammonia (N)	Nitrate (N)	Total Phosphorus	Total Dissolved Solids	Total Suspended Solids	Sulfate	Ca-mg Hardness (CaCO3)	Bicarbonate Alkalinity (CaCO3)	Alkalinity (CaCO3)	Organic Carbon	Biochemical Oxygen Demand	Chemical Oxygen Demand	Chloride	Cyanide	
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	
LDS																	
6/10/2008	XX	LDSXX39597	0.21	0.5 U	0.045	550	8.6	22	480	430	460	19			28		
8/19/2008	XX	LDSXX39687	0.2 U	0.5 U	0.053	600	8.8	22	510	470	500	20			25		
10/22/2008	XX	LDSXX39736	0.2 U	0.5 U	0.06	640	9.9	13	640	520	550	11			25		
5/7/2009	XX	LDSXX39940	2.7	0.5 U		880	37	1 U	870	790	820	30			49		
8/12/2009	XX	LDSXX40037	2.8	0.5 U	0.05 U	800	72	1 U	680	725	770	19			40		
10/27/2009	XX	LDSXX40113	2.2	0.5 U	0.02 U	820	24	9.5	650	740	770	49			41		
6/7/2010	XX	GWXXXX1B8	5.9	0.5 U	0.02 U	970	42	1 U	790	840	880	25			47		
8/18/2010	XX	GWXXXX1B9	7.1	0.5 U	0.02 U	1000	34	1 U	660	880	950	42			54		
10/21/2010	XX	GWXXXX1BA	4.5	0.5 U	0.24	860	32	1 U	590	785	810	29			49		
5/18/2011	XX	LTXXXX1EF	1.4	0.5 U	0.045	560	20	18	440	510	510	18			38		
8/10/2011	XX	LTXXXX1G6	1.5	0.2 U	0.079	580	17	19	360	520	520	11			40		
11/2/2011	XX	LTXXXX1HH	1.6	0.2 U	0.044	620	13	19	430	500	500	12			35		
5/14/2012	XX	LTXXXX1JB	5.1	0.5 U	0.02 U	850	18	30	730	676	676	21			41		
8/14/2012	XX	LTXXXX214	7.1	0.25 U	0.086	370	46	3.7	180	320	320	41.3			4		
10/30/2012	XX	LTXXXX22I	5.4	0.25 U	0.043	790	14	27	650	710	710	20			42		
5/21/2013	XX	LTXXXX24C	5	0.25 U	0.041	830	15	24	600	740	740	18			40		
7/25/2013	XX	LTXXXX266	4.9	0.25 U	0.042	840	14	21	580	690	690	19			38		
10/1/2013	XX	LTXXXX280	4.9	0.25 U	0.02 U	800	15	13	620	710	710	17			38		
6/5/2014	XX	LTXXXX29E	7.9	0.05 U	0.1 U	1000	14	1 U	738	830	830	23			49		
8/21/2014	XX	LTXXXX2B8	1.4	0.05 U	0.1 U	550	4.4	16	406	440	440	7.2			37		
11/13/2014	XX	LTXXXX2D2	0.66	0.19	0.1 U	560	4 U	29	428	480	480	8.4			38		
6/4/2015	XX	LTXXXX2EI	1.2	0.05 U	0.1 U	590	10	20	419	440	440	6.5			37		
9/3/2015	XX	LTXXXX2GD	1	0.05 U	0.1 U	570	9.6	16	436	460	460	6.8			32		
11/5/2015	XX	LTXXXX2I7	1.1	0.05 U	0.1 U	580	8.8	16	452	470	470	6.2			37		
6/16/2016	XX	LTXXXX31H	1.6	0.05 U	0.1 U	630	6.4	26	496	500	500	7.6			34		
9/22/2016	XX	LTXXXX33B	1.5	0.05 U	0.1 U	620	9.6	1 U	473	480	480	7.6			34		
11/10/2016	XX	LTXXXX355	1.3	0.05 U	0.1 U	590	10	1 U	444	540	540	8			36		
6/15/2017	XX	LTXXXX370	3.9	0.05 U	0.1 U	780	6.8	36	658	640	640	16			38		
8/31/2017	XX	LTXXXX38E	2.4	0.05 U	0.1 U	720	7.6	22	547	590	590	11			38		
11/16/2017	XX	LTXXXX3A8	2.6	0.05 U	0.1 U	680	8	51	503	560	560	12			35		
6/21/2018	XX	LTXXXX3C3	3.2	0.05 U	0.1 U	760	5.6	30	578	620	620	13			35		
8/16/2018	XX	LTXXXX3CI	2.8	0.05 U	0.1 U	750	8.8	24	555	630	630	12			38		
11/29/2018	XX	LTXXXX3FB	6.2	0.05 U	0.1 U	820	4 U	29	712	720	720	24			42		
6/6/2019	XX	LTXXXX3H6	6.6	0.05 U	0.1 U	900	4.8	26	755	810	810	21			39		
8/15/2019	XX	LTXXXX3I1	6	0.05 U	0.1 U	880	8	23	651	760	760	19			40		
10/24/2019	XX	LTXXXX40E	2.3	0.05 U	0.1 U	620	23	16	533	550	550	12			31		
6/18/2020	XX	LTXXXX429	2.4	0.05 U	0.1 U	860	13	12	531	630	630	11			150		
8/6/2020	XX	LTXXXX434	2.6	0.05 U	0.1 U	790	17	5.8	573	580	580	11			120		
10/22/2020	XX	LTXXXX45H	2.4	0.05 U	0.1 U	780	10	10 U	559	580	580	10			110		
6/24/2021	XX	LTXXXX47C	1.5	0.5 U	0.34	580	4 U	110	382	420	420	85			54		
9/23/2021	XX	LTXXXX497	0.46	0.05 U	0.1 U	570	11	16	508	520	520	7.2			34		
6/30/2022	XX	LTXXXX4B9	0.19	0.05 U	0.1 U	570	4.4	48	478	500	500	6.7			28		
10/20/2022	XX	LTXXXX4D6	D	D	D	D		D	D	D	D	D			D		
6/8/2023	XX	LTXXXX4F7	D	D	D	D	D	D	D	D	D	D			D		
10/19/2023	XX	LTXXXX4J1	D	D	D		D	D	D	D	D	D			D		
LP																	
4/7/1986	XX	LPXX31509	0.32					10				37		130	12		

DATA SUMMARY TABLE

Leachate Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LP)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Biochemical Oxygen Demand mg/L	Chemical Oxygen Demand mg/L	Chloride mg/L	Cyanide ug/L	
6/23/1986	XX	LPXX31586	0.13					11				103		334	30		
9/17/1986	XX	LPXX31672	3.1					15				136		514	44		
11/11/1986	XX	LPXX31727	0.1 U					3				158		475	58		
4/6/1987	XX	LPXX31873	20					200				428		1890	72		
6/29/1987	XX	LPXX31957	12					4				260		877	115		
10/5/1987	XX	LPXX32055	2					1100	4320			5615		1630	300		
11/16/1987	XX	LPXX32097	8		3			900	4734			5680		9238	270		
3/29/1988	XX	LPXX32231	5		2			125	780			574		1730	48		
6/27/1988	XX	LPXX32321	12		1.45			250	2428			2080		6185	240		
9/26/1988	XX	LPXX32412	11		1.47			14	2174			1235		4965	180		
11/10/1988	XX	LPXX32457	19		0.955			164	1987			1068		3190	280		
3/26/1989	XX	LPXX32593	17		0.86			260	957			560			46		
6/23/1989	XX	LPXX32682	21		0.33			155	1789			1168		2200	330		
9/25/1989	XX	LPXX32776	20		0.15			71	1990			1140		2098	560		
12/4/1989	XX	LPXX32846	24		1.58			30	2130					1892	320		
3/22/1990	XX	LPXX32954	9		1.46			192	1078			238		599	130		
6/19/1990	XX	LPXX33043	4		0.77			73	683			190		1016	120		
9/6/1990	XX	LPXX33122	18		0.104			45	1688			284		750	238		
10/23/1990	XX	LPXX33169	5		0.42			109	730			274		577	90		
3/13/1991	XX	LPXX33310	7.8		0.97			69.6	384.6			164.8		480	60		
6/7/1991	XX	LPXX33396	18.5					10	1272.7			225		290	171		
8/23/1991	XX	LPXX33473	1.7		0.08			30	761.7			116		436	111		
10/14/1991	XX	LPXX33525	7.6		1.29			41	1089.4			210		800	178		
3/17/1992	XX	LPXX33680	13.8		1.04			292	1487			365		1200	187		
6/11/1992	XX	LPXX33766	8.4		1.26			30	1627			440		3100	266		
8/13/1992	XX	LPXX33829	8.3		0.69			22	1942.3			375		1461	296		
10/20/1992	XX	LPXX33897	21.8		0.15			25	1869			470		1132	302		
4/13/1993	XX	LPXX34072	9.3		0.71			568	3589			581		1648	171		
8/3/1993	XX	LPXX34184	17.6		2.12			6.7	2204			615		1911	314		
10/19/1993	XX	LPXX34261	3.1		0.16			230	1320.5			297		1020	130		
5/10/1994	XX	LPXX34464	12.5		0.24			156	6430.2			252		932	143		
8/2/1994	XX	LPXX34548	10.5		0.52			150	1557.3			188		598	220		
10/19/1994	XX	LPXX34626	18.4		0.23			14.4	1254.8			172		605	271.5		
5/2/1995	XX	LPXX34821	8.3		0.165			39	1458.8			143			224		
7/7/1995	XX	LPXX34887	8.16		1.33			62.5	1760.9			260			244		
10/16/1995	XX	LPXX34988	8.9		1.04			128	1311.4			136			250		
5/15/1996	XX	LPXX35200	11		0.06			18.5	1217.6			258			265		
8/12/1996	XX	LPXX35289	10.8		1.76			20.8	1657.6			355			209		
10/9/1996	XX	LPXX35347	12.8		0.395			30.6	1760.1			357			222		
6/5/1997	XX	LPXX35586	13.24		0.16			32	1777.6			450			166		
8/14/1997	XX	LPXX35656	13.7		1.97			58	2450.9			457			211		
10/31/1997	XX	LPXX35734	12.6		1.67			17.3	1345.5			276.8			175		
5/5/1998	XX	LPXX35920	12.8		0.156			61.3	1421			195.7			181		
8/14/1998	XX	LPXX36021	13.6		0.208			72.1	1423			129.1			140		
10/21/1998	XX	LPXX36089	14.2		0.984			79.5	1264			193.4			154		
4/28/1999	XX	LPXX36278	19.35		0.301			39.4	1257.2			111.5			102		
7/23/1999	XX	LPXX36364	17.46		0.276			3.5	1470.5			118.9			218		
10/14/1999	XX	LPXX36447	17.68		0.978	2582		59.4	1573.4			462			156		
5/3/2000	XX	LPXX36649	23.4	6.1	1.364	1943	133	61.7	1243.8	1180	1351.4	263			95.2		

DATA SUMMARY TABLE

Leachate Inorganics

SME
SEVEE & MAHER ENGINEERS
SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LP)

Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Biochemical Oxygen Demand mg/L	Chemical Oxygen Demand mg/L	Chloride mg/L	Cyanide ug/L	
8/9/2000	XX	LPXX36747	14.56	15.5	1.18	2440	101	8.4	1407.3	1475	1835.7	238.8			136.8		
11/8/2000	XX	LPXX36838	22.05	13.5	0.861	2464	80	78	1351.7	1900	1979.6	203.3			110.6		
5/16/2001	XX	LPXX37027	22.8	10	0.503	2563	125	50	1418.9	1800	1865	253			141.4		
7/31/2001	XX	LPXX37103	27	2.4	0.287	3903	128	20	1035.2	2550	2700	383.4			208		
10/23/2001	XX	LPXX37187	22.4	4.4	1.1	3556	50	17.4	1810.8	2415	2475	325.2			248		
5/21/2002	XX	LPXX37397	15.75	1.88	0.093	1828	129	91	1229.7	1230	1354	56.3			107		
8/6/2002	XX	LPXX37474	22.05	3.1	0.585	2684	119	3.2	1302.4	1914	2005	140.1			161.5		
10/24/2002	XX	LPXX37553	21.1	1.35	0.575	2118	45	52.2	1167.1	1650	1720	144.5			139.6		
6/26/2003	XX	LPXX37798	14	2 U	0.23	1400	83	70	1100	1000	1100	68			78		
8/13/2003	XX	LPXX37846	14	2 U	0.36	1400	50	51	870	1080	1100	74			58		
10/22/2003	XX	LPXX37916	11	2 U	0.13	1000	58	180	930	680	710	60	36	180	27	27	
5/6/2004	XX	LPXX38113	9.9	2 U	0.1 U	1000	54	77	870	800	840	46	54	140	37	10 U	
7/27/2004	XX	LPXX38195	15	0.5 U	0.1 U	1400	55	47	2300	1120	1200	80	68	220	93	10 U	
10/25/2004	XX	LPXX38285	21	2 U	0.1 U	1700	24	13	1300	1300	1400	64			100		
5/12/2005	XX	LTLPXX002	11	2 U	0.28	1100	35	61	970	840	880	69			48		
7/25/2005	XX	LTLPXX01E	14	2 U	0.27	1800	86	30	1300	1600	1700	77			88		
11/9/2005	XX	LTLPXX036	12	2 U	0.1 U	920	50	95	1000	900	980	40	22	140	48	10 U	
5/2/2006	XX	LTLPXX082	12	2 U	0.3	1300	54	80	1100	890	980	47			53		
8/3/2006	XX	LTLPXX06A	12	2 U	0.41	910	58	32	820	780	810	52			41		
10/18/2006	XX	LTLPXX04I	17	2 U	0.65	1400	50	120	650	1040	1100	48	20	170	65	19	
5/21/2007	XX	LTLPXX09E	1.1	2 U	0.43	1000	65	66	790	780	820	59			47		
5/21/2007	XD	LTXXXX0ED	1.1	2 U	0.47	1100	64	54	850		860	77			38		
8/8/2007	XX	LTLPXX0B7	A	A		A	A	A	A	A	A	A			A		
11/6/2007	XX	LTLPXX0CJ	4.2	1.9	0.28	1200	82	320	680	590	640	67	64	200	38	0.015	
5/27/2008	XX	LTLPXX0F7	1.2	0.5 U	0.22	1200	63	15	810	880	930	92			69		
8/19/2008	XX	LTLPXX0H7	4.3	0.5 U	0.28	1100	66	33	740	860	920	56			45		
10/22/2008	XX	LTLPXX0IF	6	0.5 U	0.55	1900	69	100	1500	1300	1400	120	110	300	92	0.01 U	
5/7/2009	XX	LTLPXX10F	7.5	0.5 U		1400	50	50	1200	940	1000	170			33		
8/12/2009	XX	LTLPXX12F	8.3	0.5 U	0.26	1400	30	4	1300	1120	1200	260			59		
10/27/2009	XX	LTLPXX143	4.9	0.59	0.14	840	59	65	680	675	710	150	170	400	34	0.18	
6/7/2010	XX	LTLPXX164	8.2	0.5 U	0.19	1300	87	48	670	960	1000	130			62		
6/7/2010	XD	LTDP4X162	8	0.5 U	0.21	1300	95	48	680		1000	130			62		
8/18/2010	XX	LTLPXX185	15	0.5 U	0.022	2000	46	11	760	1560	1700	110			140		
10/21/2010	XX	LTLPXX19D	10	0.5 U	0.37	1400	45	150	920	1060	1100	68	18	140	66	0.01 U	
5/18/2011	XX	LTXXXX1ED	5	0.5 U	0.11	710	31	37	500	610	610	37			24		
5/18/2011	XD	LTXXXX1EI	5	0.5 U	0.11	710	33	37	510	620	620	36			24		
8/10/2011	XX	LTXXXX1G4	6.6	0.2 U	0.51	1300	68	15	680	1200	1300	89			130		
11/2/2011	XX	LTXXXX1HF	11	0.2 U	0.16	1200	17	67	750	1100	1100	51			48		
11/2/2011	XD	LTDP3X1I0	11	0.2 U	0.15	1100	20	66	770	980	980	51			48		
5/14/2012	XX	LTXXXX1J9	5.6	0.52	0.035	640	24	33	490	520	520	26			17		
8/15/2012	XX	LTXXXX212	5.3	0.25 U	0.33	1300	100	13	690	1100	1100	96.5			85		
8/15/2012	XD	LTDP3X217	5.3	0.25 U	0.34	1300	92	13	650	1000	1000	97.7			84		
10/30/2012	XX	LTXXXX22G	9.6	0.25 U	0.12	940	23	70	680	780	780	32			33		
5/21/2013	XX	LTXXXX24A	8	0.25 U	0.14	960	42	26	650	810	810	31			42		
7/25/2013	XX	LTXXXX264	6.4	0.25 U	0.17	900	70	11	370	740	760	43			47		
10/1/2013	XX	LTXXXX27I	11	0.25 U	0.066	1000	18	18	510	890	890	33			37		
6/5/2014	XX	LTXXXX29C	11	0.05 U	0.1 U	1100	7.2	1 U	749	850	850	27			39		
8/21/2014	XX	LTXXXX2B6	27	0.05 U	0.14	1800	82	1.1	1160	1400	1400	51			82		
11/13/2014	XX	LTXXXX2D0	6.9	1.1	0.1 U	830	7.2	100	556	590	590	23			23		

DATA SUMMARY TABLE

Leachate Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LP) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Biochemical Oxygen Demand mg/L	Chemical Oxygen Demand mg/L	Chloride mg/L	Cyanide ug/L	
6/4/2015	XX	LTXXXX2EG	6.2	0.36	0.1 U	700	15	28	500	550	560	18			19		
9/3/2015	XX	LTXXXX2GB	7.8	0.16	0.14	1100	26	1.5	705	870	880	47			50		
11/5/2015	XX	LTXXXX2I5	7.6	0.39	0.1 U	800	25	3.1	548	640	640	24			24		
6/16/2016	XX	LTXXXX31F	11	0.38	0.1 U	1100	6.8	1 U	760	930	930	30			48		
9/22/2016	XX	LTXXXX339	4.2	0.84	0.19	1400	24	1 U	871	1000	1100	54			82		
11/10/2016	XX	LTXXXX353	14	0.69	0.1 U	1500	14	1 U	918	1200	1200	51			82		
6/15/2017	XX	LTXXXX36I	12	0.12	0.1 U	1000	4 U	26	810	910	910	30			39		
8/31/2017	XX	LTXXXX38C	27	0.05 U	0.11	1800	10	1 U	1230	1600	1600	55			91		
11/16/2017	XX	LTXXXX3A6	7.4	0.75	0.1 U	780	8.4	77	610	600	600	22			26		
6/21/2018	XX	LTXXXX3C1	9.2	1.4	0.1 U	1300	8.8	1 U	875	1000	1000	34			50		
8/16/2018	XX	LTXXXX3CG	5.5	0.53	0.15	1000	49	54	644	810	820	35			50		
11/29/2018	XX	LTXXXX3F9	3.2	0.6	0.1 U	270	4 U	33	259	260	260	9.9			11		
6/6/2019	XX	LTXXXX3H4	7.5	0.18	0.1 U	680	17	23	551	630	630	19			20		
8/15/2019	XX	LTXXXX3HJ	16	0.05 U	0.1 U	1200	4 U	1 U	824	1100	1100	45			51		
10/24/2019	XX	LTXXXX40C	12	0.68	0.1 U	950	6.8	35	696	850	850	30			39		
6/18/2020	XX	LTXXXX427	12	0.05 U	0.1 U	1000	4 U	1 U	742	1000	1000	32			39		
8/6/2020	XX	LTXXXX432	4.4	0.31	0.1 U	1200	10	1.4	907	1000	1000	43			57		
10/22/2020	XX	LTXXXX45F	3.7	4.4	0.1 U	750	9.6	88	565	540	540	24			27		
6/24/2021	XX	LTXXXX47A	8.5	0.084	0.1 U	1200	4.8	1 U	822	1000	1000	40			50		
10/5/2021	XX	LTXXXX49J	5.6	0.52	0.1 U	710	7.2	55	523	580	580	23			21		
6/30/2022	XX	LTXXXX4B7	1.8	0.58	0.1 U	580	4 U	22	481	510	510	10			27		
10/20/2022	XX	LTXXXX4DG	2.5	1.8	0.23	400		62	323	260	260	23			9.2		
10/20/2022	XX	LTXXXX4DGRR					16										
6/8/2023	XX	LTXXXX4F5	7.8	0.9	0.15	800	4 U	33	691	770	770	27			31		
10/19/2023	XX	LTXXXX4JB	11	0.12	0.1 U	670	9.6	46	636	760	760	32			27		
LPD2																	
5/19/2005	XX	LTLPD2003	0.79	2 U	0.1 U	160	4	4.5	120	115	120	6.9			2 U		
8/2/2005	XX	LTLPD201F	3.3	2 U		410	16	6.9	410	345	370	17			4.5		
10/26/2005	XX	LTLPD2037	2.9	2 U	0.12	160	12	18	130	110	120	11			2 U		
5/10/2006	XX	LTLPD2083	0.2 U	2 U	0.02 U	95	3	3.5	120	97	99	8.1			2		
7/24/2006	XX	LTLPD206B	0.21	2 U	0.024	100	7	1.9	110	100	100	9.2			2 U		
10/10/2006	XX	LTLPD204J	4.9	2 U	0.02 U	320	22	12	340	290	310	24			5.2		
5/21/2007	XX	LTLPD209F	0.65	2 U	0.02 U	94	1 U	1.8	100	100	110	4.2			1		
8/6/2007	XX	LTLPD20B8	1.5	0.5 U	0.17	370	30	6.9	360	300	330	40			6.1		
10/24/2007	XX	LTLPD20D0	0.43	0.5 U	0.074	170	5.7	24	100	62	63	9.7			2 U		
5/28/2008	XX	LTLPD20F8	1.7	0.5 U	0.02 U	140	1 U	3.4	140	145	150	8			2 U		
8/11/2008	XX	LTLPD20H8	0.2 U	0.5 U	0.03	130	1.3	1.5	120	110	130	8.2			2 U		
10/15/2008	XX	LTLPD20IG	2.4	0.67	0.04	140	3.7	17	130	100	110	10			2 U		
5/6/2009	XX	LTLPD210G	0.2 U	0.5 U		120	0.6 U	1.3	90	98	100	5.8			1.1		
5/6/2009	XD	GWDP2X10B	0.2 U	0.5 U		150	0.6 U	1.2	90		100	4.8			2 U		
8/4/2009	XX	LTLPD212G	0.2 U	0.5 U	0.03	120	2 U	1 U	86	89	91	6.4			2 U		
10/19/2009	XX	LTLPD2144	0.71	0.5 U	0.04	140	5.2	15	86	71	72	9.9			2 U		
10/19/2009	XD	GWDP2X15F	0.71	2.2	0.05	120	1.3	15	90		100	10			2 U		
5/25/2010	XX	LTLPD2165	2.8	0.5 U	0.02 U	190	2.7	3.6	180	165	170	11			2 U		
8/2/2010	XX	LTLPD2186	1.9	0.5 UH	0.029	280	25	1 U	110	240	260	28			3.3		
10/12/2010	XX	LTLPD219E	0.62	1.5	0.062	150	4.8	30	97	73	74	9.6			2 U		
10/12/2010	XD	GWDP2X1B5	0.55	1.6	0.035	160	4.7	31	51		74	9.8			2 U		
5/18/2011	XX	LTXXXX1EE	0.2 U	0.5 U	0.02 U	26	5 U	2.9	44	44	44	4			2 U		
8/10/2011	XX	LTXXXX1G5	4.3	0.2 U	0.12	330	13	5	240	300	300	39			6.2		

DATA SUMMARY TABLE

Leachate Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LPD2) Date	Type	Sample ID	Ammonia (N) mg/L	Nitrate (N) mg/L	Total Phosphorus mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Sulfate mg/L	Ca-mg Hardness (CaCO3) mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Biochemical Oxygen Demand mg/L	Chemical Oxygen Demand mg/L	Chloride mg/L	Cyanide ug/L	
11/2/2011	XX	LTXXXX1HG	6.3	0.2 U	0.039	200	17	15	170	210	210	13			1.2 U		
5/14/2012	XX	LTXXXX1JA	0.2 U	0.5 U	0.02 U	70	2.5 U	2.6	66	63	63	7			2 U		
8/14/2012	XX	LTXXXX213	4.6	0.25 U	0.03	810	14	21	550	710	710	23.1			41		
10/30/2012	XX	LTXXXX22H	3.4	0.58	0.041	200	13	35	140	120	120	9.5			1		
5/21/2013	XX	LTXXXX24B	0.2 U	0.25 U	0.025	28	3.1	2.4	48	53	53	6.2			0.58		
7/25/2013	XX	LTXXXX265	0.86	0.25 U	2.4	130	11	13	70	91	91	8.2			0.7		
10/1/2013	XX	LTXXXX27J	2.1	0.4	0.031	140	6.9	14	88	120	120	9.4			0.58		
6/5/2014	XX	LTXXXX29D	0.16	0.05 U	0.1 U	98	8	1 U	67.2	82	82	5.6			2 U		
8/21/2014	XX	LTXXXX2B7	3.4	0.05 U	0.14	310	25	1 U	218	250	250	23			7.2		
11/13/2014	XX	LTXXXX2D1	2.7	0.81	0.1 U	190	29	33	125	110	110	7.4			2.6		
6/4/2015	XX	LTXXXX2EH	0.1 U	0.05 U	0.1 U	68	4 U	3.4	56.3	56	56	4.4			2.7		
9/3/2015	XX	LTXXXX2GC	1.6	1.6	0.1 U	180	4 U	24	110	91	91	15			2.7		
11/5/2015	XX	LTXXXX2I6	4.3	0.49	0.1 U	200	34	16	151	150	150	8.8			3.1		
6/16/2016	XX	LTXXXX31G	4.6	0.31	0.1 U	290	4 U	1 U	268	260	260	11			7.1		
9/22/2016	XX	LTXXXX33A	D	D	D	D	D	D	D	D	D	D			D		
11/10/2016	XX	LTXXXX354	D	D	D	D	D	D	D	D	D	D			D		
6/15/2017	XX	LTXXXX36J	0.54	2.4	0.1 U	94	4 U	4.9	82.7	79	79	7.4			2.2		
8/31/2017	XX	LTXXXX38D	6.2	0.19	0.1 U	310	8.4	15	235	250	250	27			6.8		
11/16/2017	XX	LTXXXX3A7	2.1	1	0.1 U	190	10	43	135	78	78	7.1			2.9		
6/21/2018	XX	LTXXXX3C2	2.6	0.076	0.1 U	200	6	1.9	168	160	160	12			2.1		
8/16/2018	XX	LTXXXX3CH	0.8	5.3	0.1 U	230	4 U	22	108	92	92	11			2.1		
11/29/2018	XX	LTXXXX3FA	2.7	0.39	0.1 U	180	19	38	136	94	94	8.2			3.9		
6/6/2019	XX	LTXXXX3H5	0.1 U	0.05 U	0.1 U	76	4 U	2.9	50.5	45	45	5.2			2 U		
8/15/2019	XX	LTXXXX3I0	4.5	0.05 U	0.1 U	250	7.2	11	213	220	220	15			4.4		
10/24/2019	XX	LTXXXX40D	1	2.7	0.1 U	130	8	23	89.7	58	58	12			3.6		
6/18/2020	XX	LTXXXX428	3.6	0.05 U	0.1 U	200	4 U	6.3	192	220	220	10			2.2		
8/6/2020	XX	LTXXXX433	3.7	0.05 U	0.18	370	12	1 U	297	280	280	43			14		
10/22/2020	XX	LTXXXX45G	0.18	6.2	0.1 U	150	4 U	40	90.2	21	21	9.8			2 U		
6/24/2021	XX	LTXXXX47B	3.6	0.1	0.1 U	260	6.4	14	244	240	240	14			2.8		
9/23/2021	XX	LTXXXX496	0.1 U	4	0.19	92	4 U	21	74.7	45	45	9.9			2 U		
6/30/2022	XX	LTXXXX4B8	3.6	0.4	0.1 U	220	7.6	11	218	210	210	11			2 U		
10/20/2022	XX	LTXXXX4D5	0.32	0.2	0.1 U	100		53	51.6	42	42	9.7			2 U		
10/20/2022	XX	LTXXXX4D5RR					4.4										
6/8/2023	XX	LTXXXX4F6	3.4	0.32	0.1 U	140	4 U	14	173	160	160	9			2 U		
10/19/2023	XX	LTXXXX4J0RR				140 H											
10/19/2023	XX	LTXXXX4J0	1.9	0.18	0.1 U		13	16	103	96	96	14			2 U		
UDLP																	
6/24/2021	XX	LFXXXX47J	0.19	0.098		540	4 U	24	452	420	420	6.9			30		
9/23/2021	XX	LFXXXX49F	0.16	0.096		310	4 U	13	282	310	310	4.2			13		
6/29/2022	XX	LFXXXX4A1	0.28	2.2		480	8.4	50	455	390	390	6.3			25		
10/20/2022	XX	LFXXXX4DE	0.12	0.36		370		16	329	330	330	4.4			17		
10/20/2022	XX	LFXXXX4DERR					5.6										
6/8/2023	XX	LFXXXX4DJ	0.3	0.11		390	4 U	17	368	360	360	5.1			17		
10/19/2023	XX	LFXXXX4J9	0.34	0.066		410	4 U	14	347	380	380	8.5			14		

DATA SUMMARY TABLE

Leachate Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(UDLP)			Ammonia (N)	Nitrate (N)	Total Phosphorus	Total Dissolved Solids	Total Suspended Solids	Sulfate	Ca-mg Hardness (CaCO3)	Bicarbonate Alkalinity (CaCO3)	Alkalinity (CaCO3)	Organic Carbon	Biochemical Oxygen Demand	Chemical Oxygen Demand	Chloride	Cyanide
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L

Units Abbreviations:

mg/L - MILLIGRAMS PER LITER
ug/L - MICROGRAMS PER LITER

Notes: Sample Type XX = Environmental Sample, XD = Duplicate Sample
Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

A - The sampling location was inaccessible.
D - The sampling location was dry.
H - Analyzed outside U.S.EPA's recommended hold time.
U - Not Detected above the laboratory reporting limit.
UH - Not Detected above the laboratory reporting limit. Analyzed outside U.S.EPA's recommended hold time

DATA SUMMARY TABLE

Leachate Metals Group 1 of 2

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LDS)			Aluminum mg/L	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Calcium mg/L	Chromium mg/L	Cobalt mg/L	Copper mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L
Date	Type	Sample ID															
LDS																	
6/10/2008	XX	LDSXX39597			0.01				130				3.2		38	6.2	
8/19/2008	XX	LDSXX39687			0.008				140				5.4		38	7.7	
10/22/2008	XX	LDSXX39736			0.006				190				10		41	12	
5/7/2009	XX	LDSXX39940			0.015				210				21		83	14	
8/12/2009	XX	LDSXX40037			0.018				150				19		75	11	
10/27/2009	XX	LDSXX40113			0.0092				160				9.8		61	8.9	
6/7/2010	XX	GWXXXX1B8			0.029				180				24		83	8.2	
8/18/2010	XX	GWXXXX1B9			0.034				140				16		75	5.4	
10/21/2010	XX	GWXXXX1BA			0.021				130				14		64	5.3	
5/18/2011	XX	LTXXXX1EF			0.013				110				9.1		39	5.8	
8/10/2011	XX	LTXXXX1G6			0.018				95				6.4		31	4.6	
11/2/2011	XX	LTXXXX1HH			0.014				110				6.8		37	5.2	
5/14/2012	XX	LTXXXX1JB			0.0062				170				8.4		73	6.2	
8/14/2012	XX	LTXXXX214			0.0061				29				4.8		26	1.5	
10/30/2012	XX	LTXXXX22I			0.019				150				6.2		67	5	
5/21/2013	XX	LTXXXX24C			0.01				140				6.5		62	5.3	
7/25/2013	XX	LTXXXX266			0.018				140				6.2		56	5.2	
10/1/2013	XX	LTXXXX280			0.017				150				6.3		59	5.1	
6/5/2014	XX	LTXXXX29E			0.02				159				5.91		82.6	4.53	
8/21/2014	XX	LTXXXX2B8			0.01				106				2.87		34.1	2.82	
11/13/2014	XX	LTXXXX2D2			0.008				122				3.05		30	1.71	
6/4/2015	XX	LTXXXX2EI			0.011				112				5.41		34.1	3.66	
9/3/2015	XX	LTXXXX2GD			0.018				120				5.98		33.1	3.95	
11/5/2015	XX	LTXXXX2I7			0.011				123				5.7		34.9	4.31	
6/16/2016	XX	LTXXXX31H			0.016				134				5.33		39.5	4.5	
9/22/2016	XX	LTXXXX33B			0.018				128				5.6		37.5	4.47	
11/10/2016	XX	LTXXXX355			0.008				120				5.64		34.9	4.34	
6/15/2017	XX	LTXXXX370			0.0143				160				5.21		63	5.55	
8/31/2017	XX	LTXXXX38E			0.016				140				4.13		47.9	4.4	
11/16/2017	XX	LTXXXX3A8			0.01				122				4.08		48	3.96	
6/21/2018	XX	LTXXXX3C3			0.018				143				5.12		53.8	4.66	
8/16/2018	XX	LTXXXX3CI			0.017				138				5.07		51.1	4.46	
11/29/2018	XX	LTXXXX3FB			0.011				146				3.98		84.3	3.99	
6/6/2019	XX	LTXXXX3H6			0.01				157				5.06		87.9	5.46	
8/15/2019	XX	LTXXXX3I1			0.015				144				5.16		71	4.86	
10/24/2019	XX	LTXXXX40E			0.013				133				7.9		48.7	3.76	
6/18/2020	XX	LTXXXX429			0.012				133				5.82		48.3	4.34	
8/6/2020	XX	LTXXXX434			0.017				142				5.74		52.8	4.45	
10/22/2020	XX	LTXXXX45H			0.008 U				137				6.01		52.7	4.51	
6/24/2021	XX	LTXXXX47C			0.016				102				6.16		31.1	3.55	
9/23/2021	XX	LTXXXX497			0.008				132				4.46		43.4	2.25	
6/30/2022	XX	LTXXXX4B9			0.013				118				4.93		44.5	2.82	
10/20/2022	XX	LTXXXX4D6			D				D				D		D	D	
6/8/2023	XX	LTXXXX4F7			D				D				D		D	D	
10/19/2023	XX	LTXXXX4J1			D				D				D		D	D	
LP																	
5/3/2000	XX	LPXX36649											21.3			20.95	

DATA SUMMARY TABLE

Leachate Metals Group 1 of 2

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LP) Date	Type	Sample ID	Aluminum mg/L	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Calcium mg/L	Chromium mg/L	Cobalt mg/L	Copper mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L
8/9/2000	XX	LPXX36747											6.2			3.9	
11/8/2000	XX	LPXX36838			0.0548								6.8			5.84	
5/16/2001	XX	LPXX37027			0.068								76.7			11.25	
7/31/2001	XX	LPXX37103			0.044								11.35			5.8	
10/23/2001	XX	LPXX37187			0.055								5.95			5.75	
5/21/2002	XX	LPXX37397			0.053				253				31.1		145.2	16.85	
8/6/2002	XX	LPXX37474			0.018				150.2				10.15		225.2	5.45	
10/24/2002	XX	LPXX37553			0.023				153.4				6.44		190.4	3.48	
6/26/2003	XX	LPXX37798			0.025				140				6.6		180	6.6	
8/13/2003	XX	LPXX37846			0.033				150				13		120	5.6	
10/22/2003	XX	LPXX37916	0.093	0.005 U	0.028	0.11	0.002 U	0.001 U	230	0.0059	0.05 U	0.0047	16	0.005	86	10	0.013
5/6/2004	XX	LPXX38113	0.02 U	0.003 U	0.02	0.16	0.002 U	0.001 U	200	0.009	0.05 U	0.0058	23	0.003 U	91	12	0.016
7/27/2004	XX	LPXX38195	0.2	0.003 U	0.016	0.25	0.002 U	0.001 U	330	0.0071	0.05 U	0.003 U	17	0.003 U	350	13	0.015
10/25/2004	XX	LPXX38285	0.065		0.024	0.17			190	0.0082	0.05 U	0.003 U	9	0.003 U	200	7.6	0.015
5/12/2005	XX	LTLPXX002	0.2		0.033	0.17			230	0.005 U	0.05 U	0.003 U	45	0.003 U	96	16	0.006
7/25/2005	XX	LTLPXX01E	0.12		0.039	0.2			200	0.005 U	0.05 U	0.003 U	20	0.003 U	200	13	0.01
11/9/2005	XX	LTLPXX036	0.03	0.003 U	0.024	0.12	0.002 U	0.002 U	220	0.005 U	0.05 U	0.008	11	0.003 U	120	12	0.01
5/2/2006	XX	LTLPXX082	0.02 U		0.02	0.12			210	0.005 U	0.05 U	0.004 B	13	0.003 U	130	11	0.012
8/3/2006	XX	LTLPXX06A	0.06 B		0.044	0.19			130	0.005 U	0.05 U	0.003 U	19	0.003 U	120	6.5	0.005
10/18/2006	XX	LTLPXX04I	0.06	0.004	0.022	0.14	0.002 U	0.002 U	95	0.005 U	0.05 U	0.003 U	11 B	0.003 U	100	6.6	0.009
5/21/2007	XX	LTLPXX09E			0.034				200				32		71	9.3	
5/21/2007	XD	LTXXXX0ED			0.038				210				37		80	10	
8/8/2007	XX	LTLPXX0B7			A				A				A		A	A	
11/6/2007	XX	LTLPXX0CJ			0.02				180				16		57	7	
5/27/2008	XX	LTLPXX0F7			0.021				110				14		130	2.3	
8/19/2008	XX	LTLPXX0H7			0.013				170				13		76	6.5	
10/22/2008	XX	LTLPXX0IF	0.26	0.011	0.008	0.24	0.002 U	0.0004 U	280	0.008	0.05 U	0.003 U	18	0.003 U	190	8.9	0.022
5/7/2009	XX	LTLPXX10F			0.0096				280				13		110	20	
8/12/2009	XX	LTLPXX12F			0.023				340				55		120	18	
10/27/2009	XX	LTLPXX143	0.27	0.0055	0.015	0.17	0.002 U	0.0004 U	190	0.005 U	0.05 U	0.003 U	24	0.003 U	50	7	0.014
6/7/2010	XX	LTLPXX164			0.022				160				23		66	3.8	
6/7/2010	XD	LTDP4X162			0.027 J				160				23		68	5	
8/18/2010	XX	LTLPXX185			0.021				41				1.2		160	1.3	
10/21/2010	XX	LTLPXX19D	0.12	0.003 U	0.0094	0.17	0.002 U	0.00071	210	0.005 U	0.05 U	0.003 U	12	0.003 U	97	5.4	0.017
5/18/2011	XX	LTXXXX1ED			0.0097				130				9.2		42	5.4	
5/18/2011	XD	LTXXXX1EI			0.0091				130				9.7		44	5.6	
8/10/2011	XX	LTXXXX1G4			0.028				40				5.6		140	1.7	
11/2/2011	XX	LTXXXX1HF	0.052	0.00035 U	0.0036 J	0.13	0.00002 U	0.00015 J	160	0.0036 J	0.0064 J	0.00028 U	6.3	0.00077 U	86	6	0.011
11/2/2011	XD	LTDP3X1I0	0.054	0.00035 U	0.005	0.13	0.00002 U	0.00013 U	160	0.0036 J	0.0065 J	0.00028 U	6.7	0.00077 U	91	6.4	0.011
5/14/2012	XX	LTXXXX1J9			0.005 U				130				8.3		41	5.1	
8/15/2012	XX	LTXXXX212			0.027				30				7.6		150	0.95	
8/15/2012	XD	LTDP3X217			0.028				28				7.3		140	0.92	
10/30/2012	XX	LTXXXX22G			0.01				160				5.4		69	4.8	
5/21/2013	XX	LTXXXX24A			0.025 U				130				3.2		78	3	
7/25/2013	XX	LTXXXX264			0.018				38				2.3		67	1.3	
10/1/2013	XX	LTXXXX27I	0.063	0.003 U	0.0099	0.11	0.002 U	0.0002 U	110	0.005 U	0.05 U	0.003 U	4.6	0.003 U	58	3.5	0.0098
6/5/2014	XX	LTXXXX29C			0.008 U				158				1.84		85.8	5.16	
8/21/2014	XX	LTXXXX2B6			0.021				174				6.87		177	5.85	
11/13/2014	XX	LTXXXX2D0	0.3 U	0.008 U	0.014	0.122	0.005 U	0.005 U	149	0.01 U	0.01 U	0.025 U	5.9	0.005 U	44.6	3.98	0.01 U

DATA SUMMARY TABLE

Leachate Metals Group 1 of 2

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LP) Date	Type	Sample ID	Aluminum mg/L	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Calcium mg/L	Chromium mg/L	Cobalt mg/L	Copper mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L
6/4/2015	XX	LTXXXX2EG			0.012				123				7.6		47	4.55	
9/3/2015	XX	LTXXXX2GB			0.008				97.7				4.24		112	1.39	
11/5/2015	XX	LTXXXX2I5	0.3 U	0.008 U	0.013	0.12	0.005 U	0.005 U	137	0.01 U	0.01 U	0.025 U	7.08	0.005 U	49.9	3.99	0.01 U
6/16/2016	XX	LTXXXX31F			0.009				135				2.88		103	2.18	
9/22/2016	XX	LTXXXX339			0.017				57.3				1.43		177	0.728	
11/10/2016	XX	LTXXXX353	0.3 U	0.008 U	0.014	0.0912	0.005 U	0.005 U	105	0.01 U	0.01 U	0.025 U	1.4	0.005 U	160	1.11	0.0134
6/15/2017	XX	LTXXXX36I			0.008				152				1.53		104	4.56	
8/31/2017	XX	LTXXXX38C			0.008				121				2.5		224	2.56	
11/16/2017	XX	LTXXXX3A6	0.3 U	0.008 U	0.009	0.105	0.005 U	0.005 U	144	0.01 U	0.01 U	0.025 U	4.39	0.005 U	60.8	3.73	0.0109
6/21/2018	XX	LTXXXX3C1			0.008 U				126				1.59		136	1.07	
8/16/2018	XX	LTXXXX3CG			0.008				75.1				2.54		111	0.865	
11/29/2018	XX	LTXXXX3F9	0.3 U	0.008 U	0.008 U	0.0439	0.005 U	0.005 U	64.2	0.01 U	0.01 U	0.025 U	1.18	0.005 U	24	2.13	0.01 U
6/6/2019	XX	LTXXXX3H4			0.01				118				3.46		62	4.63	
8/15/2019	XX	LTXXXX3HJ			0.015				110				1.88		133	1.7	
10/24/2019	XX	LTXXXX40C	0.3 U	0.008 U	0.012	0.107	0.005 U	0.005 U	115	0.01 U	0.01 U	0.025 U	3.69	0.005 U	99.4	2.68	0.01 U
6/18/2020	XX	LTXXXX427			0.012				122				4.57		106	1.6	
8/6/2020	XX	LTXXXX432			0.008 U				83.1				1.7		170	0.452	
10/22/2020	XX	LTXXXX45F	0.3 U	0.008 U	0.008	0.0974	0.005 U	0.005 U	110	0.01 U	0.0116	0.025 U	3.78	0.005 U	70.4	2.32	0.0175
6/24/2021	XX	LTXXXX47A			0.008 U				112				2.15		132	0.761	
10/5/2021	XX	LTXXXX49J	0.3 U	0.008 U	0.008 U	0.0973	0.005 U	0.005 U	113	0.01 U	0.01 U	0.025 U	4.18	0.005 U	58.5	2.03	0.01 U
6/30/2022	XX	LTXXXX4B7			0.008 U				110				0.33		49.9	0.931	
10/20/2022	XX	LTXXXX4DG	0.3 U	0.008 U	0.016	0.0823	0.005 U	0.005 U	88.6	0.01 U	0.01 U	0.025 U	8.82	0.005 U	24.6	3	0.01 U
6/8/2023	XX	LTXXXX4F5			0.008 U				123				2.6		93.1	2.9	
10/19/2023	XX	LTXXXX4JB	0.3 U	0.008 U	0.008	0.0941	0.005 U	0.005 U	121	0.01 U	0.01 U	0.025 U	4.76	0.005 U	80.9	4.73	0.01 U
LPD2																	
5/19/2005	XX	LTLPD2003			0.005 U				31				2.1		11	0.21	
8/2/2005	XX	LTLPD201F			0.005 U				62				1.8		61	0.67	
10/26/2005	XX	LTLPD2037			0.005 U				32				8.7		12	3.1	
5/10/2006	XX	LTLPD2083			0.005 U				31				0.47		9.3	0.15	
7/24/2006	XX	LTLPD206B			0.005 U				28				2.3 B		10	0.53	
10/10/2006	XX	LTLPD204J			0.005 U				50				2		52	0.6	
5/21/2007	XX	LTLPD209F			0.005 U				26				0.59		9.3	0.15	
8/6/2007	XX	LTLPD20B8			0.017				45				5.6		60	0.06	
10/24/2007	XX	LTLPD20D0			0.005 U				22				1.8		11	0.47	
5/28/2008	XX	LTLPD20F8			0.005 U				30				1.4		16	0.45	
8/11/2008	XX	LTLPD20H8			0.005 U				32				0.54		9.6	0.19	
10/15/2008	XX	LTLPD20IG			0.005 U				35				2.4		9.5	0.27	
5/6/2009	XX	LTLPD210G			0.005 U				23				0.77		7.9	0.11	
5/6/2009	XD	GWDP2X10B			0.005 U				23				0.77		7.8	0.11	
8/4/2009	XX	LTLPD212G			0.005 U				23				1.2		7	0.26	
10/19/2009	XX	LTLPD2144			0.005 U				22				1.2		7.5	0.23	
10/19/2009	XD	GWDP2X15F			0.005 U				23				1.2		7.8	0.24	
5/25/2010	XX	LTLPD2165			0.005 U				45				1.4		17	1	
8/2/2010	XX	LTLPD2186			0.005 U				19				4.2		16	0.25	
10/12/2010	XX	LTLPD219E			0.005 U				25				2.6		8.3	0.7	
10/12/2010	XD	GWDP2X1B5			0.005 U				13				1.4		4.4	0.38	
5/18/2011	XX	LTXXXX1EE			0.005 U				13				0.4		2.8	0.023	
8/10/2011	XX	LTXXXX1G5			0.01				36				4.7		36	0.83	
11/2/2011	XX	LTXXXX1HG			0.0025 J				40				7.5		18	2	

DATA SUMMARY TABLE

Leachate Metals Group 1 of 2

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LPD2)			Aluminum mg/L	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Calcium mg/L	Chromium mg/L	Cobalt mg/L	Copper mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L
Date	Type	Sample ID															
5/14/2012	XX	LTXXXX1JA			0.005 U				19				0.53		4.6	0.055	
8/14/2012	XX	LTXXXX213			0.023				130				6.5		54	5.1	
10/30/2012	XX	LTXXXX22H			0.005 U				36				4.9		12	2	
5/21/2013	XX	LTXXXX24B			0.005 U				12				0.83		4.3	0.074	
7/25/2013	XX	LTXXXX265			0.005 U				16				1.4		7.2	0.29	
10/1/2013	XX	LTXXXX27J			0.005 U				24				3.4		6.7	0.43	
6/5/2014	XX	LTXXXX29D			0.008 U				17.4				1.3		5.74	0.277	
8/21/2014	XX	LTXXXX2B7			0.024				36.5				9.6		31	1.38	
11/13/2014	XX	LTXXXX2D1			0.008				35.2				13		9.16	3.2	
6/4/2015	XX	LTXXXX2EH			0.008 U				16.2				1.23		3.82	0.09	
9/3/2015	XX	LTXXXX2GC			0.008 U				23.8				1.76		12.3	0.261	
11/5/2015	XX	LTXXXX2I6			0.009				37.4				15.2		14	4.12	
6/16/2016	XX	LTXXXX31G			0.008 U				46.1				1.78		37.2	0.975	
9/22/2016	XX	LTXXXX33A			D				D				D		D	D	
11/10/2016	XX	LTXXXX354			D				D				D		D	D	
6/15/2017	XX	LTXXXX36J			0.008 U				21.5				1.97		7.03	0.408	
8/31/2017	XX	LTXXXX38D			0.008 U				41.8				3.54		31.8	1.22	
11/16/2017	XX	LTXXXX3A7			0.008 U				38.1				5.62		9.67	1.93	
6/21/2018	XX	LTXXXX3C2			0.008 U				32.6				2.27		21.1	0.638	
8/16/2018	XX	LTXXXX3CH			0.008 U				22.9				0.792		12.2	0.245	
11/29/2018	XX	LTXXXX3FA			0.008 U				39.2				8.37		9.18	2.78	
6/6/2019	XX	LTXXXX3H5			0.008 U				14.8				1.28		3.32	0.0706	
8/15/2019	XX	LTXXXX3I0			0.008 U				39.9				3.18		27.6	1.04	
10/24/2019	XX	LTXXXX40D			0.008 U				23.6				3.62		7.44	1.02	
6/18/2020	XX	LTXXXX428			0.008 U				41				1.4		21.7	0.576	
8/6/2020	XX	LTXXXX433			0.011				46.3				13		44	1.32	
10/22/2020	XX	LTXXXX45G			0.008 U				26.9				0.193		5.6	0.534	
6/24/2021	XX	LTXXXX47B			0.008 U				53.2				2.94		27.1	1.23	
9/23/2021	XX	LTXXXX496			0.008 U				16.5				0.302		8.14	0.0865	
6/30/2022	XX	LTXXXX4B8			0.008 U				46.8				0.948		24.5	0.268	
10/20/2022	XX	LTXXXX4D5			0.008 U				14.8				3.04		3.57	0.659	
6/8/2023	XX	LTXXXX4F6			0.008 U				37.3				1.4		19.3	0.294	
10/19/2023	XX	LTXXXX4J0			0.008 U				28				6.44		7.94	1.54	
UDLP																	
6/24/2021	XX	LFXXXX47J			0.008 U				121				1.1		36.7	1.7	
9/23/2021	XX	LFXXXX49F			0.008 U				81.1				1.66		19.4	1.46	
6/29/2022	XX	LFXXXX4A1			0.008 U				121				0.579		37	1.59	
10/20/2022	XX	LFXXXX4DE			0.008 U				92.2				5.83		24	3.09	
6/8/2023	XX	LFXXXX4DJ			0.008 U				103				0.516		26.6	1.83	
10/19/2023	XX	LFXXXX4J9			0.008 U				92.2				1.73		28.3	2.9	

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(UDLP)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Nickel
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date Type Sample ID															

Units Abbreviations:

mg/L - MILLIGRAMS PER LITER

Notes: Sample Type XX = Environmental Sample, XD = Duplicate Sample
Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

A - The sampling location was inaccessible.
B - Compound is found in the associated quality control blank as well as sample.
D - The sampling location was dry.
J - Analyte was positively identified/Associated value is an estimate.
U - Not Detected above the laboratory reporting limit.

DATA SUMMARY TABLE

Leachate Metals Group 2 of 2

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LDS)

Date	Type	Sample ID	Potassium mg/L	Selenium mg/L	Silver mg/L	Sodium mg/L	Thallium mg/L	Zinc mg/L
LDS								
6/10/2008	XX	LDSXX39597	1 U			25		
8/19/2008	XX	LDSXX39687	18			22		
10/22/2008	XX	LDSXX39736	20			21		
5/7/2009	XX	LDSXX39940	66			33		
8/12/2009	XX	LDSXX40037	60			36		
10/27/2009	XX	LDSXX40113	50			30		
6/7/2010	XX	GWXXXX1B8	93			35		
8/18/2010	XX	GWXXXX1B9	110			37		
10/21/2010	XX	GWXXXX1BA	60			34		
5/18/2011	XX	LTXXXX1EF	32			26		
8/10/2011	XX	LTXXXX1G6	23			21		
11/2/2011	XX	LTXXXX1HH	27			25		
5/14/2012	XX	LTXXXX1JB	70			41		
8/14/2012	XX	LTXXXX214	5.5			5.1		
10/30/2012	XX	LTXXXX22I	73			39		
5/21/2013	XX	LTXXXX24C	56			36		
7/25/2013	XX	LTXXXX266	58			36		
10/1/2013	XX	LTXXXX280	50			34		
6/5/2014	XX	LTXXXX29E	89.8			44.1		
8/21/2014	XX	LTXXXX2B8	27.9			26.6		
11/13/2014	XX	LTXXXX2D2	17			27.3		
6/4/2015	XX	LTXXXX2EI	20.7			27		
9/3/2015	XX	LTXXXX2GD	23.4			29.6		
11/5/2015	XX	LTXXXX2I7	21.9			27.6		
6/16/2016	XX	LTXXXX31H	27.8			28.7		
9/22/2016	XX	LTXXXX33B	26.1			30.3		
11/10/2016	XX	LTXXXX355	23.3			26.9		
6/15/2017	XX	LTXXXX370	57.2			37.9		
8/31/2017	XX	LTXXXX38E	41.4			34.2		
11/16/2017	XX	LTXXXX3A8	35.4			29.6		
6/21/2018	XX	LTXXXX3C3	43.8			32		
8/16/2018	XX	LTXXXX3CI	44			33		
11/29/2018	XX	LTXXXX3FB	75.6			45		
6/6/2019	XX	LTXXXX3H6	70.3			41.1		
8/15/2019	XX	LTXXXX3I1	62.9			38.2		
10/24/2019	XX	LTXXXX40E	36.6			33		
6/18/2020	XX	LTXXXX429	39.4			125		
8/6/2020	XX	LTXXXX434	44.1			97		
10/22/2020	XX	LTXXXX45H	39.7			88.8		
6/24/2021	XX	LTXXXX47C	66.2			42.2		
9/23/2021	XX	LTXXXX497	16.8			32.2		
6/30/2022	XX	LTXXXX4B9	9.57			55.6		
10/20/2022	XX	LTXXXX4D6	D			D		
6/8/2023	XX	LTXXXX4F7	D			D		
10/19/2023	XX	LTXXXX4J1	D			D		
LP								
5/3/2000	XX	LPXX36649	157.9			54.65		

DATA SUMMARY TABLE

Leachate Metals Group 2 of 2

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LP)

Date	Type	Sample ID	Potassium mg/L	Selenium mg/L	Silver mg/L	Sodium mg/L	Thallium mg/L	Zinc mg/L									
8/9/2000	XX	LPXX36747	320			88.46											
11/8/2000	XX	LPXX36838	233.5			76.8											
5/16/2001	XX	LPXX37027	258.5			78.8											
7/31/2001	XX	LPXX37103	224.5			58.8											
10/23/2001	XX	LPXX37187	378			115											
5/21/2002	XX	LPXX37397	161.1			59.3											
8/6/2002	XX	LPXX37474	266.5			100.5											
10/24/2002	XX	LPXX37553	241			76											
6/26/2003	XX	LPXX37798	160			50											
8/13/2003	XX	LPXX37846	110			47											
10/22/2003	XX	LPXX37916	79	0.005 U	0.01 U	31	0.00125 U	0.01									
5/6/2004	XX	LPXX38113	76	0.0076	0.01 U	35	0.00125 U	0.019									
7/27/2004	XX	LPXX38195	280	0.005 U	0.01 U	140	0.00125 U	0.01 U									
10/25/2004	XX	LPXX38285	230	0.005 U		77		0.01 U									
5/12/2005	XX	LTLPXX002	120	0.01		34		0.01 U									
7/25/2005	XX	LTLPXX01E	210	0.01 U		88		0.01 U									
11/9/2005	XX	LTLPXX036	140	0.01 U	0.001 U		0.002 U	0.01 U									
5/2/2006	XX	LTLPXX082	130	0.01 U		52		0.01 U									
8/3/2006	XX	LTLPXX06A	100	0.01 U		44		0.01 U									
10/18/2006	XX	LTLPXX04I	150	0.01 U	0.001	52	0.0027 U	0.01 U									
5/21/2007	XX	LTLPXX09E	120			37											
5/21/2007	XD	LTXXXX0ED	120			41											
8/8/2007	XX	LTLPXX0B7	A			A											
11/6/2007	XX	LTLPXX0CJ	80			27											
5/27/2008	XX	LTLPXX0F7	180			60											
8/19/2008	XX	LTLPXX0H7	110			39											
10/22/2008	XX	LTLPXX0IF	410	0.01 U	0.006	92	0.0018 U	0.01 U									
5/7/2009	XX	LTLPXX10F	180			55											
8/12/2009	XX	LTLPXX12F	170			46											
10/27/2009	XX	LTLPXX143	92	0.014	0.001 U	25	0.0028 U	0.019									
6/7/2010	XX	LTLPXX164	170			32											
6/7/2010	XD	LTDP4X162	190			38											
8/18/2010	XX	LTLPXX185	210			77											
10/21/2010	XX	LTLPXX19D	170	0.012	0.007 U	47	0.0028 U	0.01 U									
5/18/2011	XX	LTXXXX1ED	57			19											
5/18/2011	XD	LTXXXX1EI	58			20											
8/10/2011	XX	LTXXXX1G4	160			73											
11/2/2011	XX	LTXXXX1HF	100	0.016	0.0014 U	40	0.02	0.021 U									
11/2/2011	XD	LTDP3X1I0	100	0.018	0.0014 U	44	0.021	0.021 U									
5/14/2012	XX	LTXXXX1J9	55			19											
8/15/2012	XX	LTXXXX212	160			74											
8/15/2012	XD	LTDP3X217	160			72											
10/30/2012	XX	LTXXXX22G	95			32											
5/21/2013	XX	LTXXXX24A	89			33											
7/25/2013	XX	LTXXXX264	78			31											
10/1/2013	XX	LTXXXX27I	73	0.005 U	0.001 U	28	0.002 U	0.005 U									
6/5/2014	XX	LTXXXX29C	108			36.3											
8/21/2014	XX	LTXXXX2B6	205			68.3											
11/13/2014	XX	LTXXXX2D0	64.4	0.01 U	0.01 U	19.7	0.015 U	0.02 U									

DATA SUMMARY TABLE

Leachate Metals Group 2 of 2

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LP)

Date	Type	Sample ID	Potassium mg/L	Selenium mg/L	Silver mg/L	Sodium mg/L	Thallium mg/L	Zinc mg/L
6/4/2015	XX	LTXXXX2EG	59.7			18.7		
9/3/2015	XX	LTXXXX2GB	132			48.7		
11/5/2015	XX	LTXXXX2I5	67.8	0.01 U	0.01 U	20.1	0.015 U	0.02 U
6/16/2016	XX	LTXXXX31F	126			42.9		
9/22/2016	XX	LTXXXX339	257			92.1		
11/10/2016	XX	LTXXXX353	219	0.01 U	0.01 U	71.2	0.015 U	0.02 U
6/15/2017	XX	LTXXXX36I	114			40.2		
8/31/2017	XX	LTXXXX38C	259			93.7		
11/16/2017	XX	LTXXXX3A6	70.1	0.01 U	0.01 U	26	0.015 U	0.02 U
6/21/2018	XX	LTXXXX3C1	161			58.6		
8/16/2018	XX	LTXXXX3CG	121			46.5		
11/29/2018	XX	LTXXXX3F9	26	0.01 U	0.01 U	9.39	0.015 U	0.02 U
6/6/2019	XX	LTXXXX3H4	59.7			20.9		
8/15/2019	XX	LTXXXX3HJ	143			54.6		
10/24/2019	XX	LTXXXX40C	108	0.01 U	0.01 U	40.9	0.015 U	0.02 U
6/18/2020	XX	LTXXXX427	117			43.1		
8/6/2020	XX	LTXXXX432	188			70.6		
10/22/2020	XX	LTXXXX45F	77.5	0.01 U	0.01 U	27.1	0.015 U	0.02 U
6/24/2021	XX	LTXXXX47A	149			55.7		
10/5/2021	XX	LTXXXX49J	63.6	0.01 U	0.01 U	23.9	0.015 U	0.02 U
6/30/2022	XX	LTXXXX4B7	32.4			28.6		
10/20/2022	XX	LTXXXX4DG	24.9	0.01 U	0.01 U	8.84	0.015 U	0.0217
6/8/2023	XX	LTXXXX4F5	90.8			34.7		
10/19/2023	XX	LTXXXX4JB	72.6	0.01 U	0.01 U	28.7	0.015 U	0.02 U
LPD2								
5/19/2005	XX	LTLPD2003	3			2.3		
8/2/2005	XX	LTLPD201F	10			9.8		
10/26/2005	XX	LTLPD2037	3.4			2.3		
5/10/2006	XX	LTLPD2083	2.6			2		
7/24/2006	XX	LTLPD206B	2.7			2.5		
10/10/2006	XX	LTLPD204J	9			9.1		
5/21/2007	XX	LTLPD209F	3.2			2		
8/6/2007	XX	LTLPD20B8	10			12		
10/24/2007	XX	LTLPD20D0	3.8			2.1		
5/28/2008	XX	LTLPD20F8	3.6			2.9		
8/11/2008	XX	LTLPD20H8	1.7			1.6		
10/15/2008	XX	LTLPD20IG	3.7			2.2		
5/6/2009	XX	LTLPD210G	2.2			1.5		
5/6/2009	XD	GWDP2X10B	2.3			1.5		
8/4/2009	XX	LTLPD212G	1.4			1.2		
10/19/2009	XX	LTLPD2144	2.8			1.7		
10/19/2009	XD	GWDP2X15F	3			1.7		
5/25/2010	XX	LTLPD2165	4			3		
8/2/2010	XX	LTLPD2186	3.2			2.7		
10/12/2010	XX	LTLPD219E	3			1.5		
10/12/2010	XD	GWDP2X1B5	1.6			1.2		
5/18/2011	XX	LTXXXX1EE	1.5			1 U		
8/10/2011	XX	LTXXXX1G5	6.8			6.8		
11/2/2011	XX	LTXXXX1HG	5.1			2.8		

DATA SUMMARY TABLE

Leachate Metals Group 2 of 2

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LPD2)

Date	Type	Sample ID	Potassium mg/L	Selenium mg/L	Silver mg/L	Sodium mg/L	Thallium mg/L	Zinc mg/L									
5/14/2012	XX	LTXXXX1JA	1.8			1											
8/14/2012	XX	LTXXXX213	52			36											
10/30/2012	XX	LTXXXX22H	4.9			2.1											
5/21/2013	XX	LTXXXX24B	1.4			1 U											
7/25/2013	XX	LTXXXX265	2.2			1.6											
10/1/2013	XX	LTXXXX27J	2.5			1.3											
6/5/2014	XX	LTXXXX29D	1.62			1 U											
8/21/2014	XX	LTXXXX2B7	6.58			5.18											
11/13/2014	XX	LTXXXX2D1	3.16			1.7											
6/4/2015	XX	LTXXXX2EH	1.61			1 U											
9/3/2015	XX	LTXXXX2GC	3.86			2.39											
11/5/2015	XX	LTXXXX2I6	3.98			2.16											
6/16/2016	XX	LTXXXX31G	5.6			5.86											
9/22/2016	XX	LTXXXX33A	D			D											
11/10/2016	XX	LTXXXX354	D			D											
6/15/2017	XX	LTXXXX36J	2.15			1.54											
8/31/2017	XX	LTXXXX38D	6.75			6.19											
11/16/2017	XX	LTXXXX3A7	3.4			1.99											
6/21/2018	XX	LTXXXX3C2	4.06			3.61											
8/16/2018	XX	LTXXXX3CH	3.3			2.21											
11/29/2018	XX	LTXXXX3FA	3.13			1.74											
6/6/2019	XX	LTXXXX3H5	1.15			1 U											
8/15/2019	XX	LTXXXX3I0	4.96			4.68											
10/24/2019	XX	LTXXXX40D	2.82			1.57											
6/18/2020	XX	LTXXXX428	4.71			3.77											
8/6/2020	XX	LTXXXX433	7.67			10											
10/22/2020	XX	LTXXXX45G	2.69			1.21											
6/24/2021	XX	LTXXXX47B	5.55			4.37											
9/23/2021	XX	LTXXXX496	2.21			1.62											
6/30/2022	XX	LTXXXX4B8	3.92			4.1											
10/20/2022	XX	LTXXXX4D5	3.31			1.02											
6/8/2023	XX	LTXXXX4F6	3.92			3.46											
10/19/2023	XX	LTXXXX4J0	3.01			1.79											
UDLP																	
6/24/2021	XX	LFXXXX47J	13.1			30.2											
9/23/2021	XX	LFXXXX49F	6.99			21.8											
6/29/2022	XX	LFXXXX4A1	13.6			28.7											
10/20/2022	XX	LFXXXX4DE	8.84			20.3											
6/8/2023	XX	LFXXXX4DJ	10.3			25.8											
10/19/2023	XX	LFXXXX4J9	10.7			23.6											

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(UDLP)			Potassium	Selenium	Silver	Sodium	Thallium	Zinc
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date	Type	Sample ID						

Units Abbreviations:

mg/L - MILLIGRAMS PER LITER

Notes: Sample Type XX = Environmental Sample, XD = Duplicate Sample
Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

A - The sampling location was inaccessible.
D - The sampling location was dry.
U - Not Detected above the laboratory reporting limit.

DATA SUMMARY TABLE

EPH (part 1 of 2)

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(301)			C9-C18 ALIPHATICS (ADJUSTED)	C19-C36 ALIPHATICS (ADJUSTED)	C11-C22 AROMATICS (ADJUSTED)	2-Methyl naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene				
Date	Type	Sample ID	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L				
301																	
10/30/2012	XX	GW301X21C	96.2 U	96.2 U	96.2 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U				
10/1/2013	XX	GW301X26E	102 U	102 U	102 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U				
11/11/2014	XX	GW301X2BG	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/4/2015	XX	GW301X2H1	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/10/2016	XX	GW301X33J	94 U	94 U	380	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/14/2017	XX	GW301X392	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/28/2018	XX	GW301X3E5	95 U	95 U	95 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/23/2019	XX	GW301X3J8RA	93 U	93 U	93 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/23/2019	XX	GW301X3J8RE	93 U	93 U	93 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/21/2020	XX	GW301X44BRA	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
9/22/2021	XX	GW301X481RE	93 U	93 U	93 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/19/2022	XX	GW301X4C0RE	93 UH	93 UH	93 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH				
10/18/2023	XX	GW301X4HG	100 U	100 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U				
302B																	
10/30/2012	XX	GW302B21D	96.2 U	96.2 U	96.2 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U				
10/1/2013	XX	GW302B26F	101 U	101 U	101 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U				
11/11/2014	XX	GW302B2BH	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/4/2015	XX	GW302B2H2	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/8/2016	XX	GW302B340	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/14/2017	XX	GW302B393	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/28/2018	XX	GW302B3E6	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/23/2019	XX	GW302B3J9	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/23/2019	XX	GW302B3J9RE	95 U	95 U	95 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/21/2020	XX	GW302B44CRA	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
9/22/2021	XX	GW302B482RE	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/19/2022	XX	GW302B4C1RE	93 UH	93 UH	93 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH				
10/18/2023	XX	GW302B4HH	100 U	100 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U				
302C																	
10/30/2012	XX	GW302C21E	96.2 U	96.2 U	96.2 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U				
10/30/2012	XD	GWDP3X231	96.2 U	96.2 U	96.2	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U				
10/1/2013	XX	GW302C26G	101 U	101 U	101 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U				
10/1/2013	XD	GWDP1X281	101 U	101 U	101 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U				
11/11/2014	XX	GW302C2BI	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/11/2014	XD	GWDP1X2D3	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/4/2015	XX	GW302C2H3	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/4/2015	XD	GWDP1X2I8	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/8/2016	XD	GWDP1X356	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/8/2016	XX	GW302C341	95 U	95 U	95 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/14/2017	XD	GWDP1X3A9	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/14/2017	XX	GW302C394	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/28/2018	XD	GWDP1X3FC	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/28/2018	XX	GW302C3E7	150	1900	630	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/23/2019	XD	GWDP1X40F	93 U	93 U	93 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/23/2019	XD	GWDP1X40FRE	92 U	92 U	92 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U				
10/23/2019	XX	GW302C3JA	95 U	95 U	95 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/23/2019	XX	GW302C3JARE	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				

DATA SUMMARY TABLE

VPH

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(301)			Benzene	Toluene	Ethylbenzene	o-Xylene	m,p-Xylene	C9-C12 ALIPHATICS (ADJUSTED)	C9-C10 AROMATICS (ADJUSTED)	C5-C8 ALIPHATICS (ADJUSTED)	Methyltertiary butylether	Naphthalene					
Date	Type	Sample ID	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L					
301																	
10/30/2012	XX	GW301X21C	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	4.81 U					
10/1/2013	XX	GW301X26E	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
11/11/2014	XX	GW301X2BG	3 U	5 U	5 U	5 U	10 U	94 U	94 U	94 U	5 U	5 U					
11/4/2015	XX	GW301X2H1	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/10/2016	XX	GW301X33JVPH	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/14/2017	XX	GW301X392	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/28/2018	XX	GW301X3E5	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/23/2019	XX	GW301X3J8	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/21/2020	XX	GW301X44B	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
9/22/2021	XX	GW301X481	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/19/2022	XX	GW301X4C0	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/18/2023	XX	GW301X4HG	1 U	2 U	2 U	2 U	2 U	100 U	100 U	280	2 U	5 U					
302B																	
10/30/2012	XX	GW302B21D	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	4.81 U					
10/1/2013	XX	GW302B26F	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
11/11/2014	XX	GW302B2BH	3 U	5 U	5 U	5 U	10 U	94 U	94 U	94 U	5 U	5 U					
11/4/2015	XX	GW302B2H2	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/8/2016	XX	GW302B340VPH	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/14/2017	XX	GW302B393	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/28/2018	XX	GW302B3E6	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/23/2019	XX	GW302B3J9	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/21/2020	XX	GW302B44C	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
9/22/2021	XX	GW302B482	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/19/2022	XX	GW302B4C1	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/18/2023	XX	GW302B4HH	1 U	2 U	2 U	2 U	2 U	100 U	100 U	850	2 U	5 U					
302C																	
10/30/2012	XX	GW302C21E	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	4.81 U					
10/30/2012	XD	GWDP3X231	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	4.81 U					
10/1/2013	XX	GW302C26G	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
10/1/2013	XD	GWDP1X281	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
11/11/2014	XX	GW302C2BI	3 U	5 U	5 U	5 U	10 U	94 U	94 U	94 U	5 U	5 U					
11/11/2014	XD	GWDP1X2D3	3 U	5 U	5 U	5 U	10 U	94 U	94 U	94 U	5 U	5 U					
11/4/2015	XX	GW302C2H3	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/4/2015	XD	GWDP1X2I8	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/8/2016	XD	GWDP1X356VPH	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/8/2016	XX	GW302C341VPH	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/14/2017	XD	GWDP1X3A9	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/14/2017	XX	GW302C394	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/28/2018	XD	GWDP1X3FC	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/28/2018	XX	GW302C3E7	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/23/2019	XD	GWDP1X40F	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/23/2019	XX	GW302C3JA	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/21/2020	XD	GWDP1X45I	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/21/2020	XX	GW302C44D	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
9/22/2021	XD	GWDP1X498	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
9/22/2021	XX	GW302C483	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					

DATA SUMMARY TABLE

VPH

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(302C) Date	Type	Sample ID	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	o-Xylene ug/L	m,p-Xylene ug/L	C9-C12 ALIPHATICS (ADJUSTED) ug/L	C9-C10 AROMATICS (ADJUSTED) ug/L	C5-C8 ALIPHATICS (ADJUSTED) ug/L	Methyltertiary butylether ug/L	Naphthalene ug/L					
10/19/2022	XD	GWDP1X4D7	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/19/2022	XX	GW302C4C2	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/18/2023	XD	GWDP1X4J2	1 U	2 U	2 U	2 U	2 U	100 U	100 U	100 U	2 U	5 U					
10/18/2023	XX	GW302C4HI	1 U	2 U	2 U	2 U	2 U	100 U	100 U	100	2 U	5 U					
LP																	
8/15/2012	XX	LTXXXX212	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
8/15/2012	XD	LTDP3X217	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
10/30/2012	XX	LTXXXX22G	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5.05 U					
5/21/2013	XX	LTXXXX24A	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5.21 U					
7/25/2013	XX	LTXXXX264	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
10/1/2013	XX	LTXXXX27I	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
6/5/2014	XX	LTXXXX29C	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	1.9 U					
8/21/2014	XX	LTXXXX2B6	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	1.9 U					
11/13/2014	XX	LTXXXX2D0	3 U	5 U	5 U	5 U	10 U	94 U	94 U	94 U	5 U	5 U					
6/4/2015	XX	LTXXXX2EG	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	1.9 U					
9/3/2015	XX	LTXXXX2GB	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/5/2015	XX	LTXXXX2I5	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/16/2016	XX	LTXXXX31F	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
9/22/2016	XX	LTXXXX339	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/10/2016	XX	LTXXXX353DL	30 U	50 U	50 U	50 U	100 U	1000 U	1000 U	1000 U	50 U	50 U					
6/15/2017	XX	LTXXXX36I	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
8/31/2017	XX	LTXXXX38C	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/16/2017	XX	LTXXXX3A6	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/21/2018	XX	LTXXXX3C1RA	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
8/16/2018	XX	LTXXXX3CG	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/29/2018	XX	LTXXXX3F9	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/6/2019	XX	LTXXXX3H4	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
8/15/2019	XX	LTXXXX3HJRA	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/24/2019	XX	LTXXXX40C	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/18/2020	XX	LTXXXX427	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
8/6/2020	XX	LTXXXX432	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/22/2020	XX	LTXXXX45F	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/24/2021	XX	LTXXXX47A	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/5/2021	XX	LTXXXX49J	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/30/2022	XX	LTXXXX4B7	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/20/2022	XX	LTXXXX4DG	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/8/2023	XX	LTXXXX4F5RA	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/19/2023	XX	LTXXXX4JB	1 U	2 U	2 U	2 U	2 U	100 U	100 U	100 U	2 U	5 U					
QCBT																	
8/15/2012	XX	BTXXXX21A	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
10/30/2012	XX	BTXXXX234	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
5/21/2013	XX	BTXXXX24I	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
7/25/2013	XX	BTXXXX26C	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
10/1/2013	XX	BTXXXX286	5 U	5 U	5 U	5 U	10 U	25 U	25 U	75 U	5 U	5 U					
6/5/2014	XX	BTXXXX2A0	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
8/21/2014	XX	BTXXXX2BE	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/11/2014	XX	BTXXXX2D8	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/13/2014	XX	BTXXXX2D9	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					

DATA SUMMARY TABLE

VPH

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT) Date	Type	Sample ID	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	o-Xylene ug/L	m,p-Xylene ug/L	C9-C12 ALIPHATICS (ADJUSTED) ug/L	C9-C10 AROMATICS (ADJUSTED) ug/L	C5-C8 ALIPHATICS (ADJUSTED) ug/L	Methyltertiary butylether ug/L	Naphthalene ug/L					
6/4/2015	XX	BTXXXX2F4	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
9/3/2015	XX	BTXXXX2GJ	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/4/2015	XX	BTXXXX2ID	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/5/2015	XX	BTXXXX2IE	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/16/2016	XX	BTXXXX323	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
9/22/2016	XX	BTXXXX33H	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/8/2016	XX	BTXXXX35B	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/10/2016	XX	BTXXXX35C	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/15/2017	XX	BTXXXX376	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
8/31/2017	XX	BTXXXX390	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/14/2017	XX	BTXXXX3AE	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/16/2017	XX	BTXXXX3AF	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/21/2018	XX	BTXXXX3C9RA	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
8/16/2018	XX	BTXXXX3D4	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/28/2018	XX	BTXXXX3FH	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
11/29/2018	XX	BTXXXX3FI	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/6/2019	XX	BTXXXX3HC	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
8/15/2019	XX	BTXXXX3I7RA	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/23/2019	XX	BTXXXX410	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/24/2019	XX	BTXXXX411	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/18/2020	XX	BTXXXX42F	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
8/6/2020	XX	BTXXXX43A	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/21/2020	XX	BTXXXX463	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/22/2020	XX	BTXXXX464	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/24/2021	XX	BTXXXX47I	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
9/22/2021	XX	BTXXXX49D	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
9/23/2021	XX	BTXXXX49E	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/5/2021	XX	BTXXXX4A0	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/30/2022	XX	BTXXXX4BF	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/19/2022	XX	BTXXXX4DC	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/20/2022	XX	BTXXXX4DD	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
6/8/2023	XX	BTXXXX4FDRA	3 U	5 U	5 U	5 U	10 U	100 U	100 U	100 U	5 U	5 U					
10/18/2023	XX	BTXXXX4J8	1 U	2 U	2 U	2 U	2 U	100 U	100 U	100 U	2 U	5 U					
10/19/2023	XX	BTXXXX4JC	1 U	2 U	2 U	2 U	2 U	100 U	100 U	100 U	2 U	5 U					

Units Abbreviations:

ug/L - MICROGRAMS PER LITER

Notes: Sample Type XX = Environmental Sample, XD = Duplicate Sample
Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

U - Not Detected above the laboratory reporting limit.

DATA SUMMARY TABLE

EPH (part 1 of 2)

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(302C)			C9-C18 ALIPHATICS (ADJUSTED)	C19-C36 ALIPHATICS (ADJUSTED)	C11-C22 AROMATICS (ADJUSTED)	2-Methyl naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene				
Date	Type	Sample ID	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L				
10/21/2020	XD	GWDP1X45IRA	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/21/2020	XX	GW302C44DRA	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
9/22/2021	XD	GWDP1X498RE	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
9/22/2021	XX	GW302C483RE	93 U	93 U	93 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/19/2022	XD	GWDP1X4D7RE	93 UH	93 UH	93 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH				
10/19/2022	XX	GW302C4C2	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/18/2023	XD	GWDP1X4J2	100 U	100 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U				
10/18/2023	XX	GW302C4HI	100 U	100 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U				
LP																	
8/15/2012	XX	LTXXXX212	100 U	100 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U				
8/15/2012	XD	LTDP3X217	100 U	100 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U				
10/30/2012	XX	LTXXXX22G	101 U	101 U	101 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U				
5/21/2013	XX	LTXXXX24A	104 U	104 U	104 U	5.21 U	5.21 U	5.21 U	5.21 U	5.21 U	5.21 U	5.21 U	5.21 U				
7/25/2013	XX	LTXXXX264	100 U	100 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U				
10/1/2013	XX	LTXXXX27I	102 U	102 U	102 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U				
6/5/2014	XX	LTXXXX29C	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
8/21/2014	XX	LTXXXX2B6	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/13/2014	XX	LTXXXX2D0	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
6/4/2015	XX	LTXXXX2EG	95 U	95 U	95 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
9/3/2015	XX	LTXXXX2GB	95 U	95 U	95 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/5/2015	XX	LTXXXX2I5	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
6/16/2016	XX	LTXXXX31F	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
9/22/2016	XX	LTXXXX339RE	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/10/2016	XX	LTXXXX353	94 U	94 U	280	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
6/15/2017	XX	LTXXXX36I	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
8/31/2017	XX	LTXXXX38C	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/16/2017	XX	LTXXXX3A6	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
6/21/2018	XX	LTXXXX3C1RE	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
6/21/2018	XX	LTXXXX3C1	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
8/16/2018	XX	LTXXXX3CG	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
11/29/2018	XX	LTXXXX3F9	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
6/6/2019	XX	LTXXXX3H4	95 U	360	95 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
6/6/2019	XX	LTXXXX3H4RE	95 U	95 U	95 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
8/15/2019	XX	LTXXXX3HJRE	95 U	95 U	95 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/24/2019	XX	LTXXXX40C	93 U	93 U	93 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/24/2019	XX	LTXXXX40CRE	99 U	99 U	99 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U				
6/18/2020	XX	LTXXXX427RE	93 U	93 U	93 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
8/6/2020	XX	LTXXXX432	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/22/2020	XX	LTXXXX45FRA	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
6/24/2021	XX	LTXXXX47ARE	94 U	94 U	94 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/5/2021	XX	LTXXXX49J	95 U	95 U	95 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
6/30/2022	XX	LTXXXX4B7	95 U	95 U	95 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
10/20/2022	XX	LTXXXX4DG	93 U	93 U	93 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U				
6/8/2023	XX	LTXXXX4F5RE	93 UH	93 UH	93 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH				
10/19/2023	XX	LTXXXX4JB	100 U	100 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U				

DATA SUMMARY TABLE

EPH (part 1 of 2)

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LP)			C9-C18 ALIPHATICS (ADJUSTED)	C19-C36 ALIPHATICS (ADJUSTED)	C11-C22 AROMATICS (ADJUSTED)	2-Methyl naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
Date	Type	Sample ID	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Units Abbreviations:

ug/L - MICROGRAMS PER LITER

Notes: Sample Type XX = Environmental Sample, XD = Duplicate Sample

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

U - Not Detected above the laboratory reporting limit.

UH - Not Detected above the laboratory reporting limit. Analyzed outside U.S.EPA's recommended hold time

DATA SUMMARY TABLE

EPH (part 2 of 2)

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(301) Date	Type	Sample ID	Naphthalene (EPH) ug/L	Benzo(a) Anthracene ug/L	Chrysene ug/L	Benzo(b) Fluoranthene ug/L	Benzo(k) Fluoranthene ug/L	Benzo(a) Pyrene ug/L	Indeno(1,2,3-c,d) Pyrene ug/L	Dibenz(a,h) Anthracene ug/L	Benzo(g,h,i) perylene ug/L						
301																	
10/30/2012	XX	GW301X21C		4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U						
10/1/2013	XX	GW301X26E		5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U						
11/11/2014	XX	GW301X2BG		1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/4/2015	XX	GW301X2H1	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/10/2016	XX	GW301X33J	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/14/2017	XX	GW301X392	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/28/2018	XX	GW301X3E5	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/23/2019	XX	GW301X3J8RA	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/23/2019	XX	GW301X3J8RE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/21/2020	XX	GW301X44BRA	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
9/22/2021	XX	GW301X481RE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/19/2022	XX	GW301X4C0RE	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH						
10/18/2023	XX	GW301X4HG	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U						
302B																	
10/30/2012	XX	GW302B21D		4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U						
10/1/2013	XX	GW302B26F		5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U						
11/11/2014	XX	GW302B2BH		1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/4/2015	XX	GW302B2H2	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/8/2016	XX	GW302B340	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/14/2017	XX	GW302B393	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/28/2018	XX	GW302B3E6	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/23/2019	XX	GW302B3J9	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/23/2019	XX	GW302B3J9RE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/21/2020	XX	GW302B44CRA	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
9/22/2021	XX	GW302B482RE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/19/2022	XX	GW302B4C1RE	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH						
10/18/2023	XX	GW302B4HH	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U						
302C																	
10/30/2012	XX	GW302C21E		4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U						
10/30/2012	XD	GWDP3X231		4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U	4.81 U						
10/1/2013	XX	GW302C26G		5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U						
10/1/2013	XD	GWDP1X281		5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U						
11/11/2014	XX	GW302C2BI		1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/11/2014	XD	GWDP1X2D3		1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/4/2015	XX	GW302C2H3	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/4/2015	XD	GWDP1X2I8	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/8/2016	XD	GWDP1X356	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/8/2016	XX	GW302C341	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/14/2017	XD	GWDP1X3A9	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/14/2017	XX	GW302C394	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/28/2018	XD	GWDP1X3FC	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/28/2018	XX	GW302C3E7	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/23/2019	XD	GWDP1X40F	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/23/2019	XD	GWDP1X40FRE	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U						
10/23/2019	XX	GW302C3JA	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/23/2019	XX	GW302C3JARE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						

DATA SUMMARY TABLE

EPH (part 2 of 2)

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(302C) Date	Type	Sample ID	Naphthalene (EPH) ug/L	Benzo(a) Anthracene ug/L	Chrysene ug/L	Benzo(b) Fluoranthene ug/L	Benzo(k) Fluoranthene ug/L	Benzo(a) Pyrene ug/L	Indeno(1,2,3-c,d) Pyrene ug/L	Dibenz(a,h) Anthracene ug/L	Benzo(g,h,i) perylene ug/L						
10/21/2020	XD	GWDP1X45IRA	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/21/2020	XX	GW302C44DRA	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
9/22/2021	XD	GWDP1X498RE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
9/22/2021	XX	GW302C483RE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/19/2022	XD	GWDP1X4D7RE	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH						
10/19/2022	XX	GW302C4C2	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/18/2023	XD	GWDP1X4J2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U						
10/18/2023	XX	GW302C4HI	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U						
LP																	
8/15/2012	XX	LTXXXX212		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U						
8/15/2012	XD	LTDP3X217		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U						
10/30/2012	XX	LTXXXX22G		5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U	5.05 U						
5/21/2013	XX	LTXXXX24A		5.21 U	5.21 U	5.21 U	5.21 U	5.21 U	5.21 U	5.21 U	5.21 U						
7/25/2013	XX	LTXXXX264		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U						
10/1/2013	XX	LTXXXX27I		5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U						
6/5/2014	XX	LTXXXX29C		1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
8/21/2014	XX	LTXXXX2B6		1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/13/2014	XX	LTXXXX2D0		1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
6/4/2015	XX	LTXXXX2EG	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
9/3/2015	XX	LTXXXX2GB	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/5/2015	XX	LTXXXX2I5	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
6/16/2016	XX	LTXXXX31F	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
9/22/2016	XX	LTXXXX339RE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/10/2016	XX	LTXXXX353	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
6/15/2017	XX	LTXXXX36I	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
8/31/2017	XX	LTXXXX38C	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/16/2017	XX	LTXXXX3A6	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
6/21/2018	XX	LTXXXX3C1RE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
6/21/2018	XX	LTXXXX3C1	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
8/16/2018	XX	LTXXXX3CG	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
11/29/2018	XX	LTXXXX3F9	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
6/6/2019	XX	LTXXXX3H4	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
6/6/2019	XX	LTXXXX3H4RE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
8/15/2019	XX	LTXXXX3HJRE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/24/2019	XX	LTXXXX40C	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/24/2019	XX	LTXXXX40CRE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U						
6/18/2020	XX	LTXXXX427RE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
8/6/2020	XX	LTXXXX432	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/22/2020	XX	LTXXXX45FRA	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
6/24/2021	XX	LTXXXX47ARE	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/5/2021	XX	LTXXXX49J	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
6/30/2022	XX	LTXXXX4B7	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
10/20/2022	XX	LTXXXX4DG	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U						
6/8/2023	XX	LTXXXX4F5RE	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH	1.9 UH						
10/19/2023	XX	LTXXXX4JB	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U						

DATA SUMMARY TABLE

EPH (part 2 of 2)

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LP)			Naphthalene (EPH)	Benzo(a) Anthracene	Chrysene	Benzo(b) Fluoranthene	Benzo(k) Fluoranthene	Benzo(a) Pyrene	Indeno(1,2,3-c,d) Pyrene	Dibenz(a,h) Anthracene	Benzo(g,h,i) perylene
			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Date	Type	Sample ID									

Units Abbreviations:

ug/L - MICROGRAMS PER LITER

Notes: Sample Type XX = Environmental Sample, XD = Duplicate Sample
Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

U - Not Detected above the laboratory reporting limit.
UH - Not Detected above the laboratory reporting limit. Analyzed outside U.S.EPA's recommended hold time

APPENDIX M

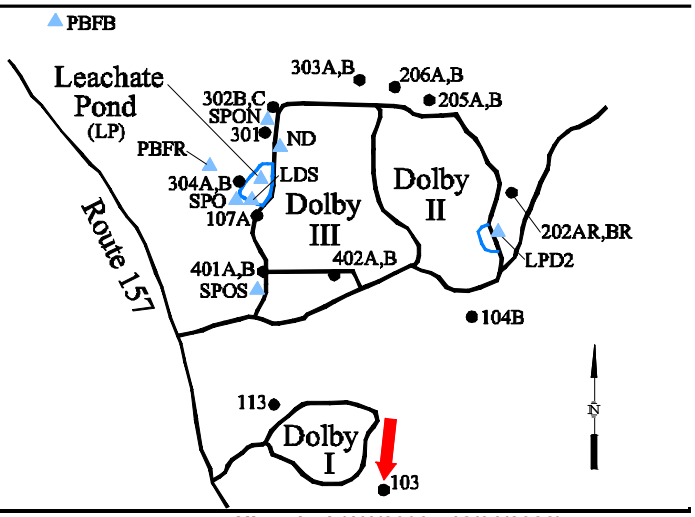
WATER QUALITY SUMMARIES

SME
SEVEE & MAHER
ENGINEERS

Well Description

Well located upgradient to southeast of Dolby I Landfill.

Screen Interval:	**Unknown TOS to 15 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Jun-82**
Material Screened:	**Bedrock**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		68		77	23	to 135	34	± 2.600	48
Dissolved Oxygen (mg/L)		10		4.7	1	to 14.3	8.5	± 0.420	47
pH (STU)		6.8		7.4	4.58	to 9.1	6.3	± 0.110	48
Turbidity (field) (NTU)		1.2		2.1	0	to 23.4	1.6	± 0.500	47

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

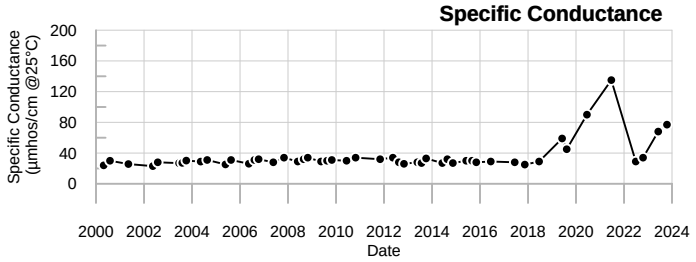
Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

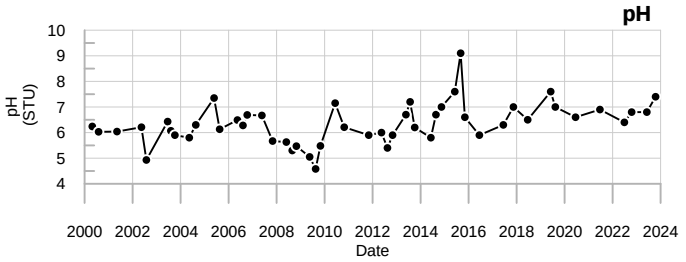
↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

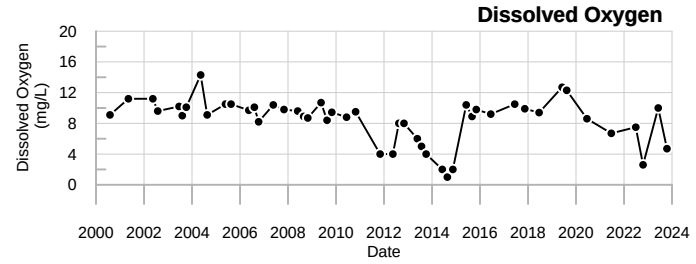
Comments

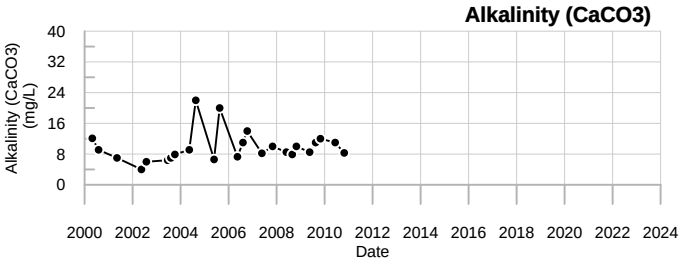
Q2= 6 - 2023
Q4= 10 - 2023

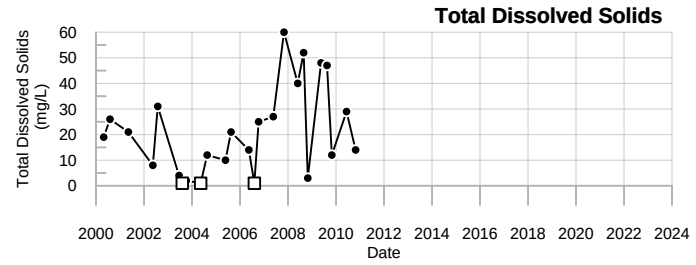
Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

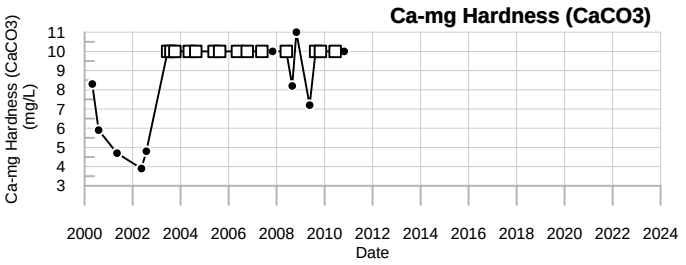


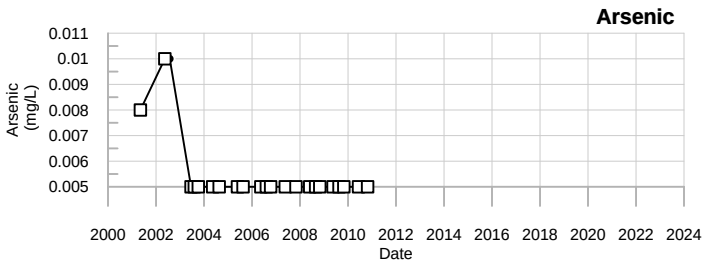


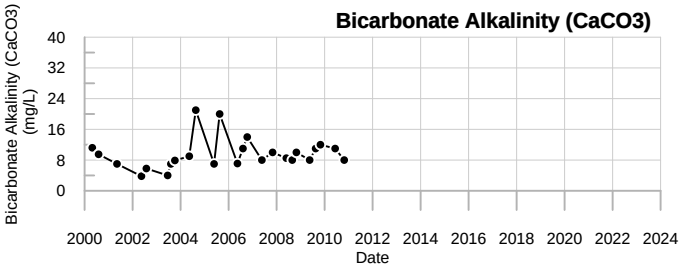


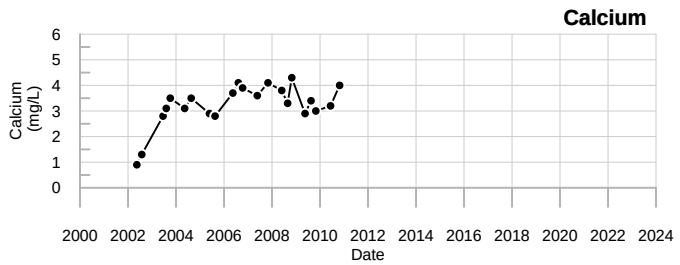


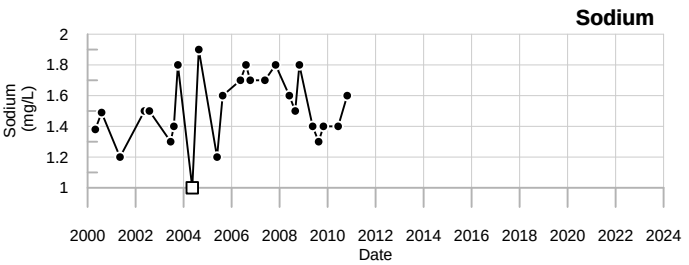


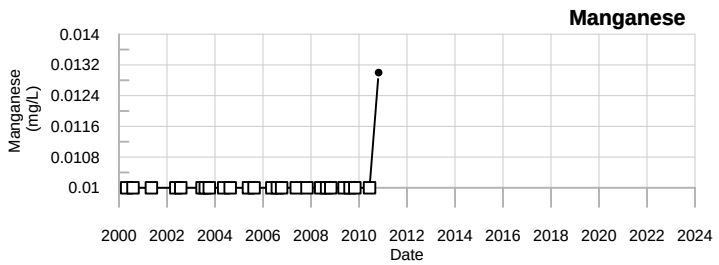


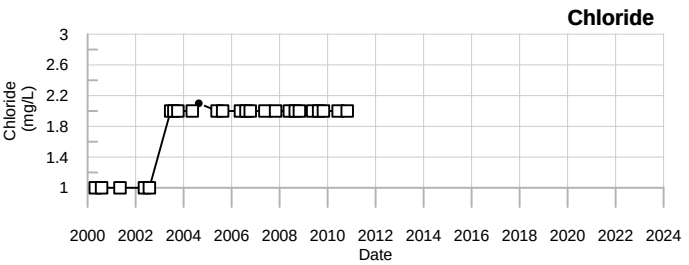












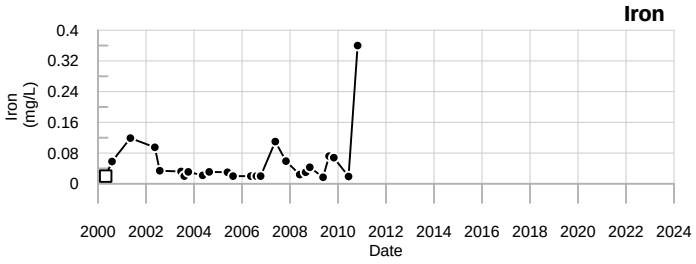
LEGEND

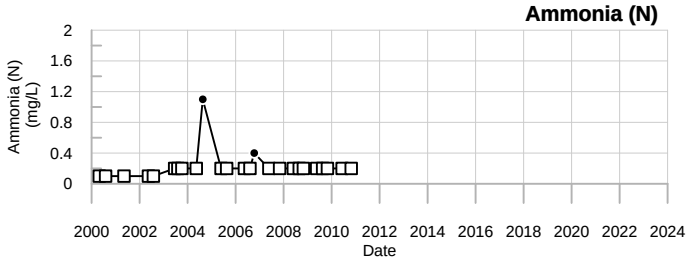
- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

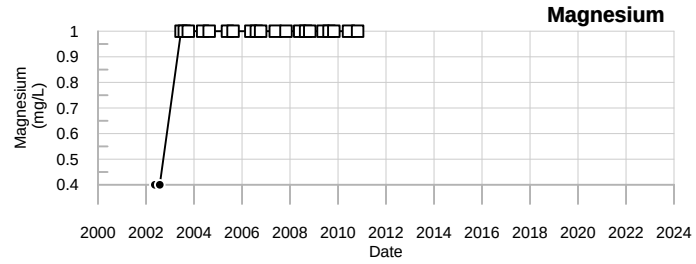
SME
SEVEE & MAHER
ENGINEERS

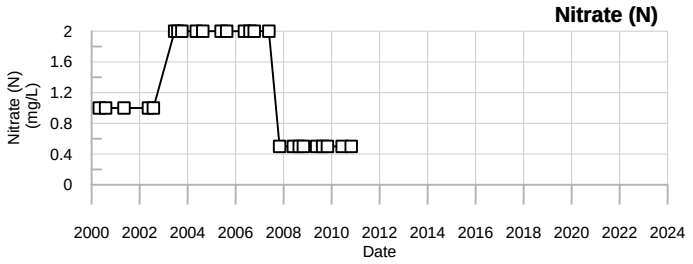
103
Dolby Landfill

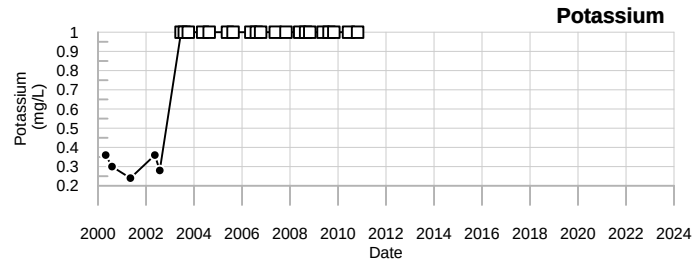
Sevee & Maher Engineers, Inc.

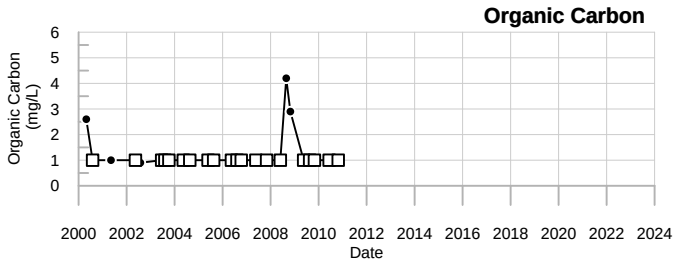


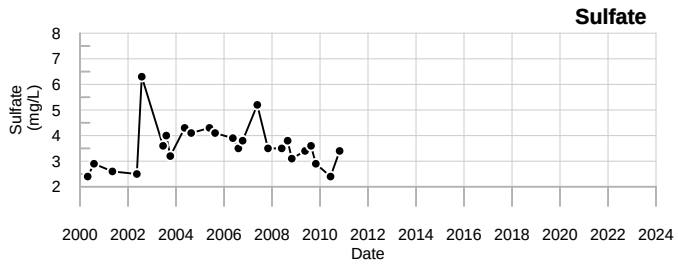


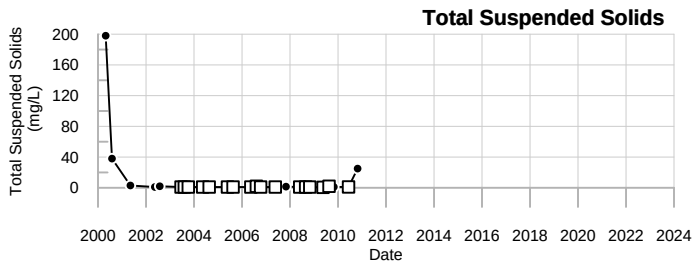


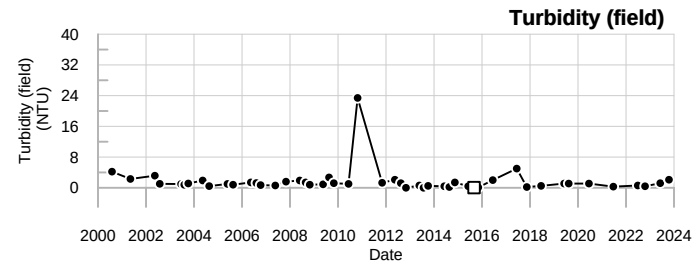












LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

SME
SEVEE & MAHER
ENGINEERS

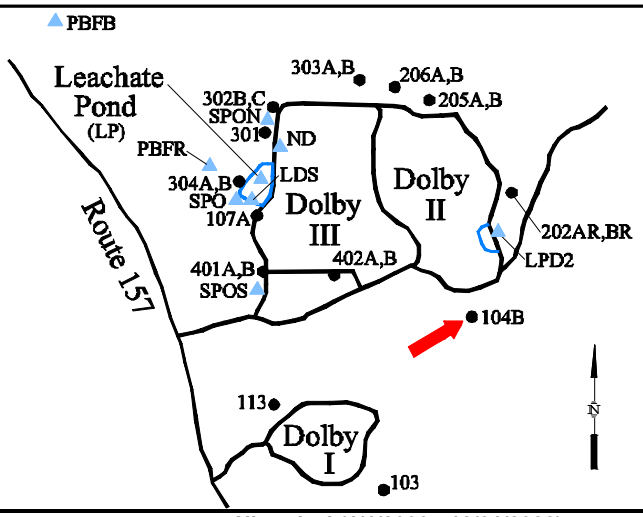
103
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located upgradient to south of Dolby II Landfill.

Screen Interval:	**Unknown TOS to 37 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Mar-82**
Material Screened:	**Bedrock**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		144		153	113	to 174	140 ±	1.300	67
Dissolved Oxygen (mg/L)		1		2.2	0.2	to 5.5	1.2 ±	0.130	66
Total Dissolved Solids (mg/L)		95		89	34	to 140	91 ±	2.500	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.01 U	0.0065 ±	0.000	65
Calcium (mg/L)		23.9		21.5	9.1	to 27	21 ±	0.410	61
Manganese (mg/L)		0.0336		0.0405	0.0079	to 0.132	0.038 ±	0.003	67
pH (STU)		7.2		7.7	6.34	to 8.5	7.7 ±	0.059	67
Alkalinity (CaCO3) (mg/L)		52		54	37	to 58	50 ±	0.400	67
Ca-mg Hardness (CaCO3) (mg/L)		67.8		61.6	29.2	to 75	58 ±	1.300	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		52		54	37	to 58	49 ±	0.490	67
Sodium (mg/L)		4.63		4.46	3.3	to 5.1	4.2 ±	0.049	67
Chloride (mg/L)		2 U		2 U	1	to 3.9	2.1 ±	0.067	67
Iron (mg/L)		0.255		0.443	0.01 U	to 1.01	0.094 ±	0.021	67
Magnesium (mg/L)		1.95		1.9	1.5	to 2.07	1.8 ±	0.017	61
Potassium (mg/L)		1 U		1.01	0.91	to 1.3	1 ±	0.009	67
Sulfate (mg/L)		19		17	14	to 20	17 ±	0.150	67
Total Suspended Solids (mg/L)		32		8.8	0.32 U	to 186	5.3 ±	2.700	67
Turbidity (field) (NTU)		0.4		0.1	0	to 5.5	0.45 ±	0.081	66
Ammonia (N) (mg/L)		0.1 U		0.1 U	0.08 U	to 0.9	0.16 ±	0.013	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 2 U	0.63 ±	0.085	67
Organic Carbon (mg/L)		1 U		1 U	0.5 U	to 2.2	1 ±	0.026	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

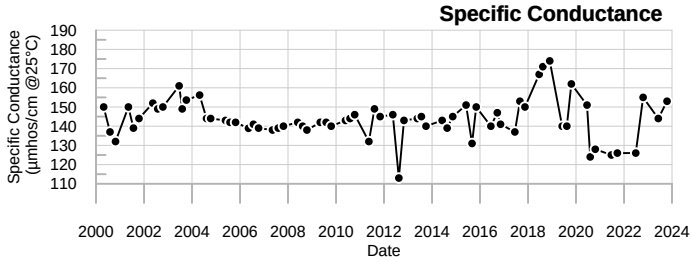
↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

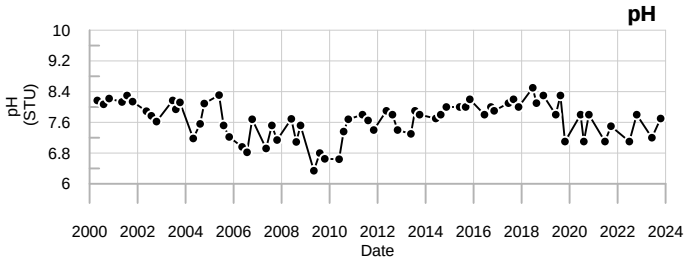
Comments

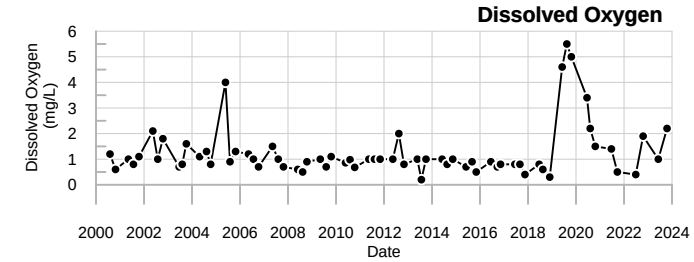
Q2= 6 - 2023
Q4= 10 - 2023

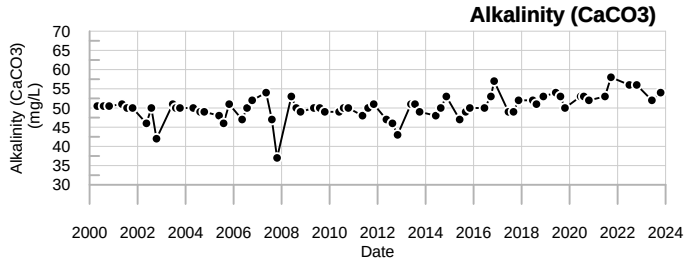
U = Not Detected above the laboratory reporting limit.

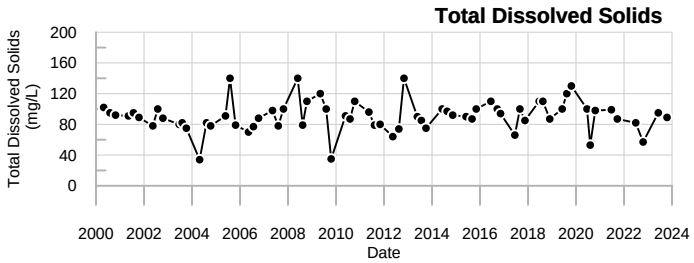
Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

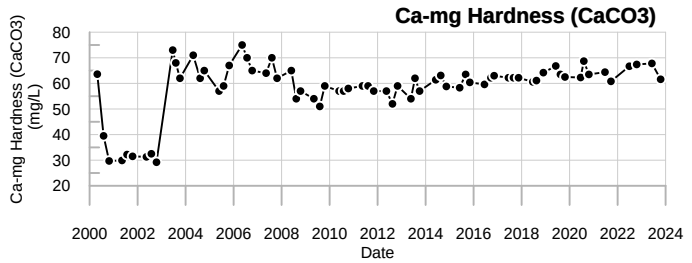




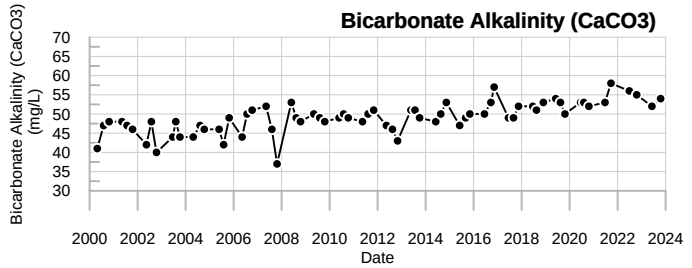


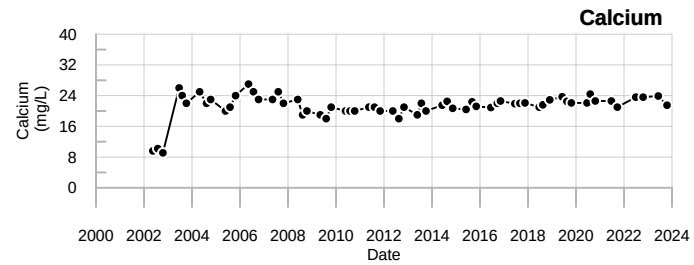


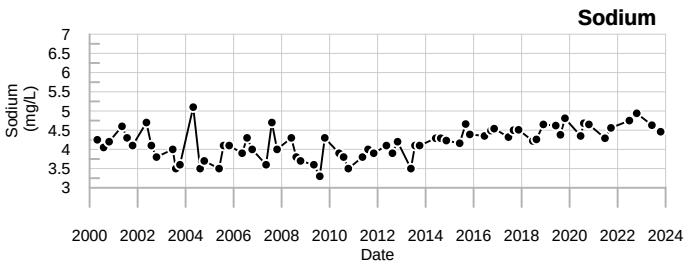


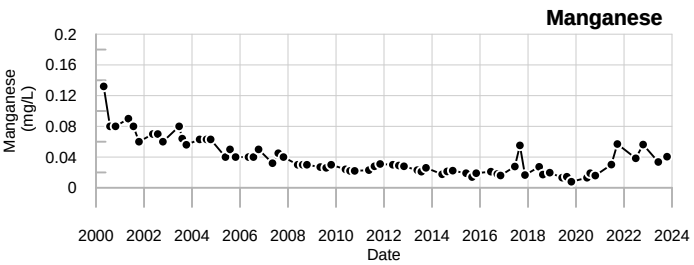


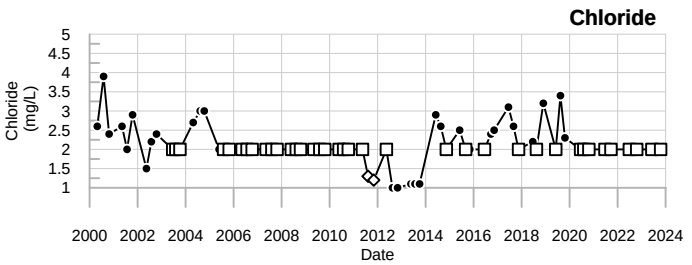










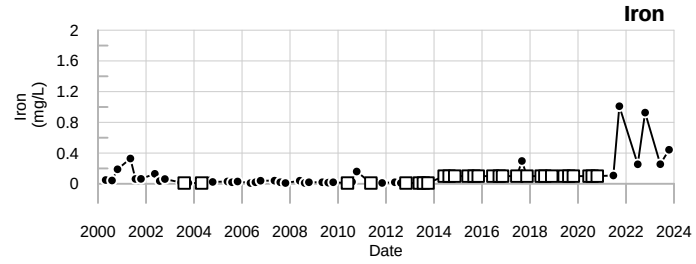


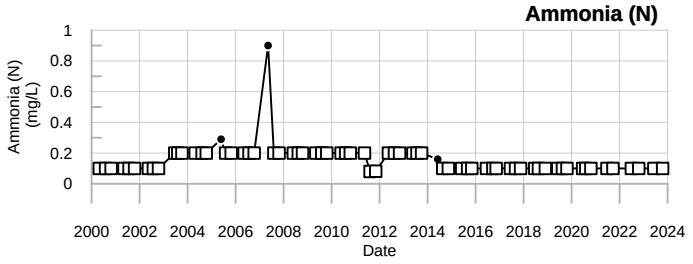
LEGEND

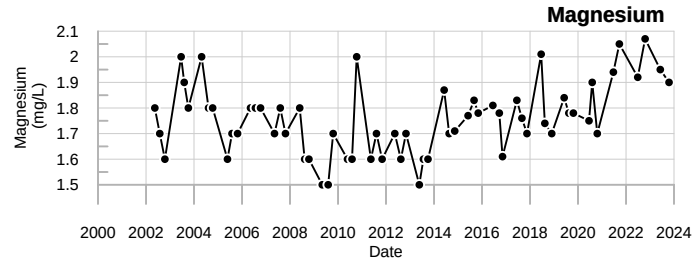
- □ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

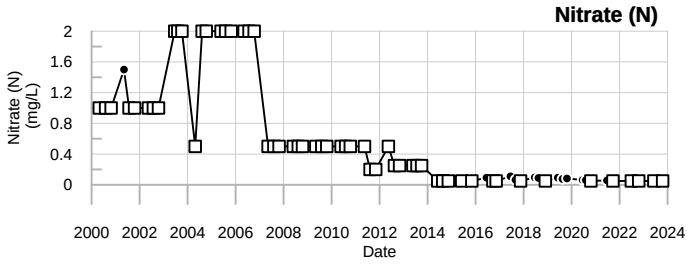
SME
SEVEE & MAHER ENGINEERS

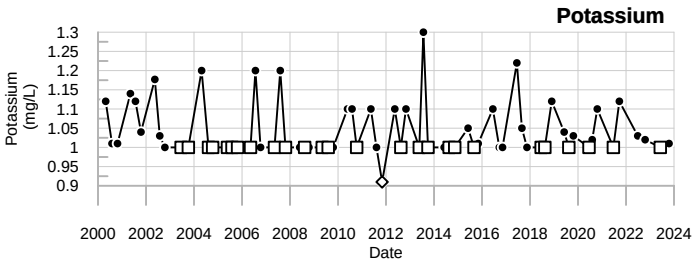
104B
Dolby Landfill

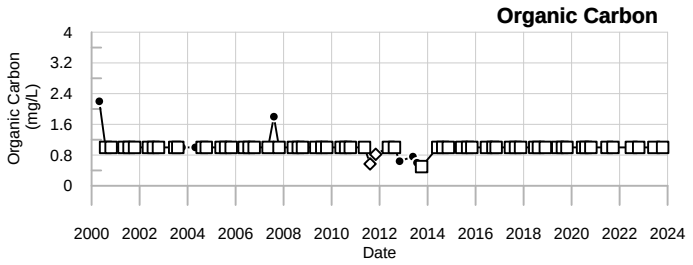


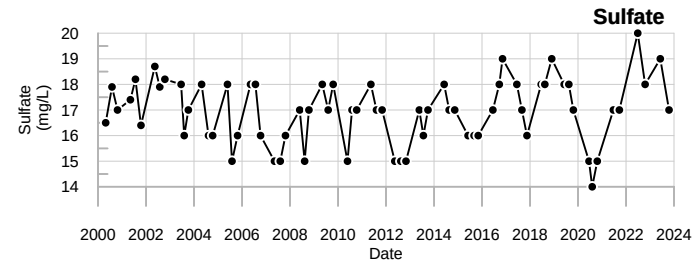


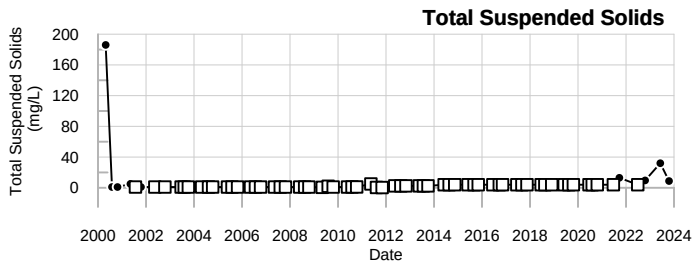


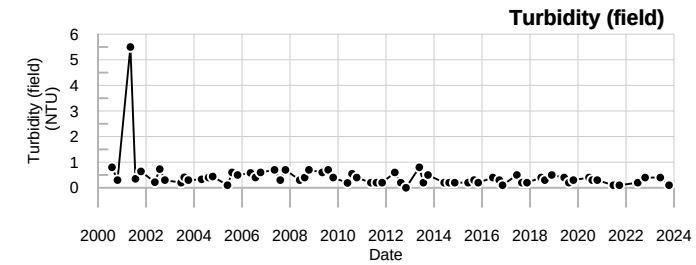












LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

SME
SEVEE & MAHER
ENGINEERS

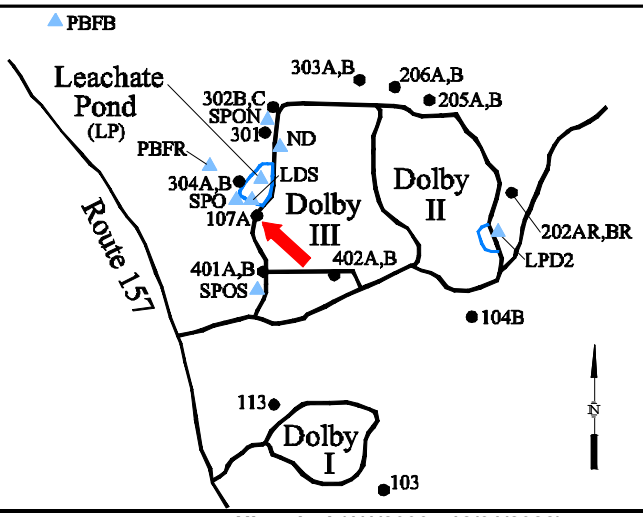
104B
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located downgradient to the west of the Dolby III Landfill.

Screen Interval:	**Unknown TOS to 19.36 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Jun-82**
Material Screened:	**Bedrock**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Intiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		1041		862	477	to 2710	1100	± 65.000	67
Dissolved Oxygen (mg/L)		0.6		↑4.5	0.1 U	to 3.5	0.68	± 0.059	66
Total Dissolved Solids (mg/L)		540		460	280	to 1834	700	± 44.000	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.043	0.008	± 0.001	65
Calcium (mg/L)		82.2		66.8	50	to 370.2	110	± 7.700	61
Manganese (mg/L)		**6.62**		**6.18**	0.79	to 72.5	21	± 2.000	67
pH (STU)		6.9		6.6	5.98	to 7.3	6.7	± 0.030	67
Alkalinity (CaCO3) (mg/L)		540		480	250	to 1440	600	± 36.000	67
Ca-mg Hardness (CaCO3) (mg/L)		496		404	200	to 1548.1	560	± 36.000	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		540		480	240	to 1429	580	± 35.000	67
Sodium (mg/L)		36.2		26.4	12	to 93.2	37	± 2.200	67
Chloride (mg/L)		34		23	14	to 222	59	± 5.300	67
Iron (mg/L)		0.462		0.356	0.02 U	to 1.85	0.45	± 0.048	67
Magnesium (mg/L)		70.6		57.5	18.6	to 150	65	± 4.700	61
Potassium (mg/L)		30		27	1.1	to 65	8.9	± 1.700	67
Sulfate (mg/L)		5.1		4	1 U	to 15.4	7	± 0.410	67
Total Suspended Solids (mg/L)		6.4		5.6	0.32 U	to 43	3.4	± 0.630	67
Turbidity (field) (NTU)		2.2		0.3	0	to 3.1	0.48	± 0.054	66
Ammonia (N) (mg/L)		0.41		1	0.08 U	to 5.6	0.54	± 0.130	67
Nitrate (N) (mg/L)		0.6		0.2	0.05 U	to 2	0.72	± 0.097	67
Organic Carbon (mg/L)		9.8		11	1.5	to 62.6	11	± 1.200	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:49

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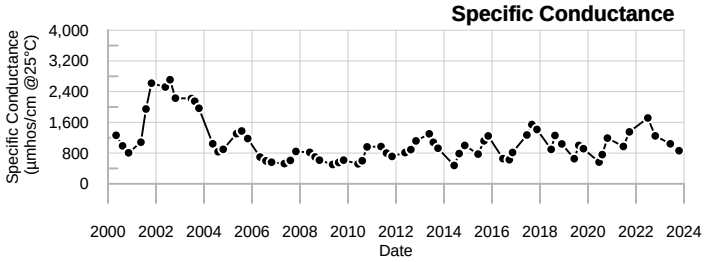

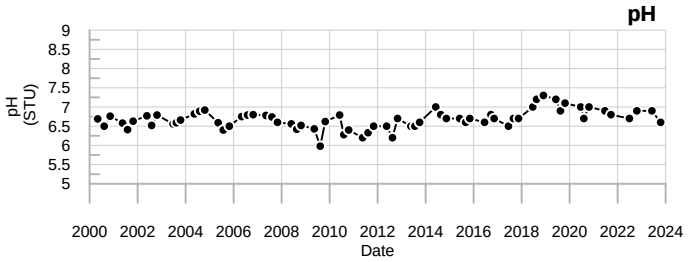

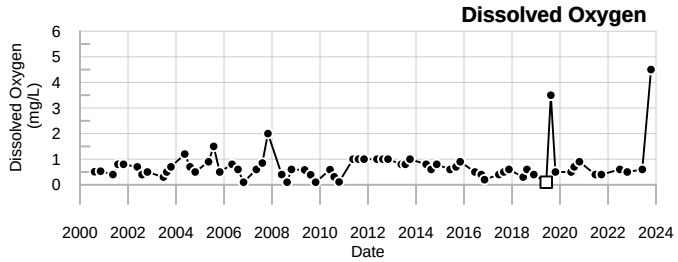

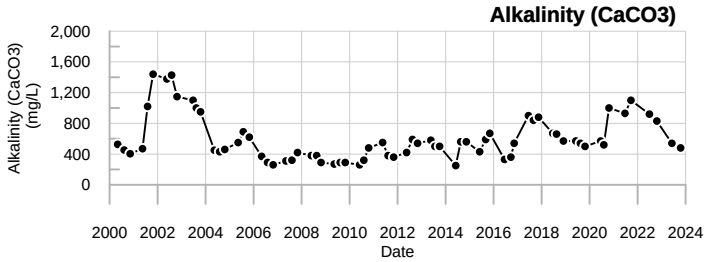

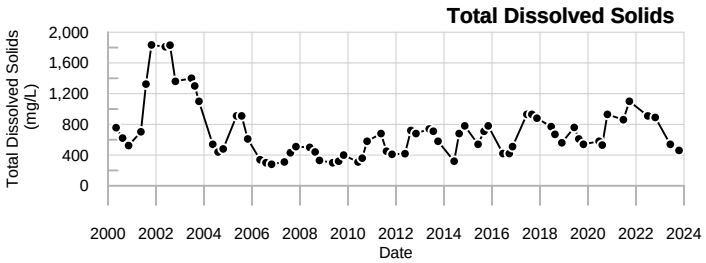

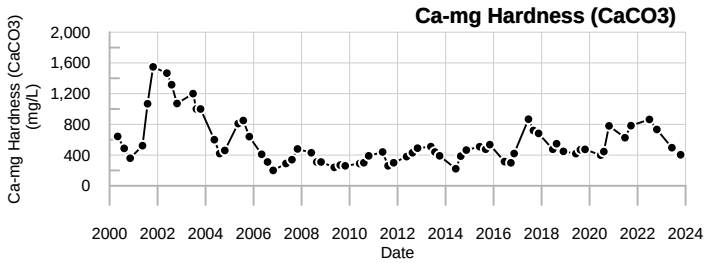

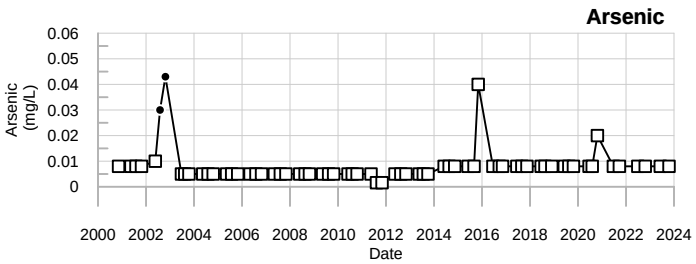

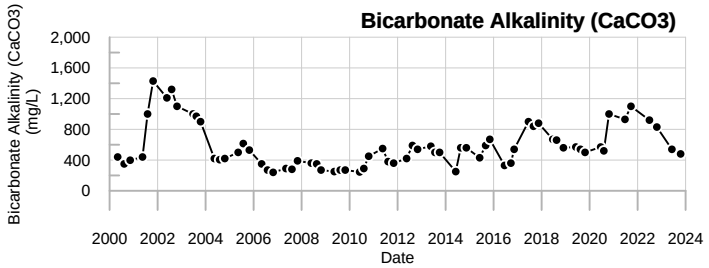

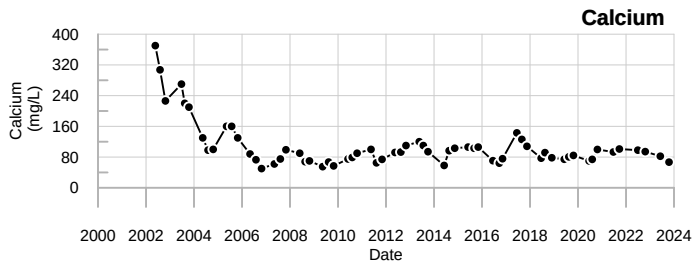

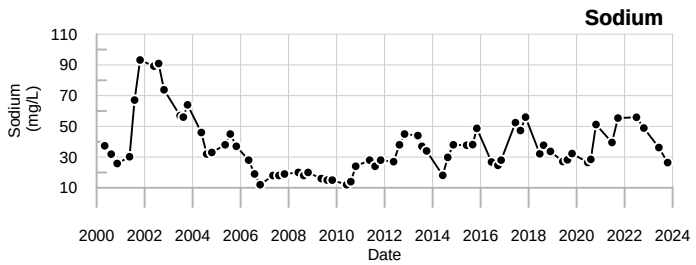

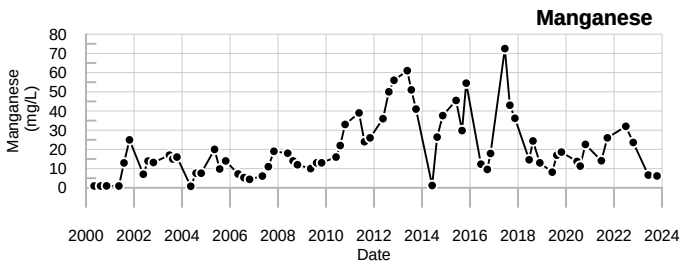

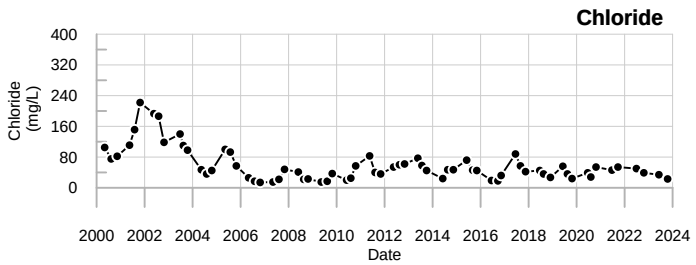

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

SME
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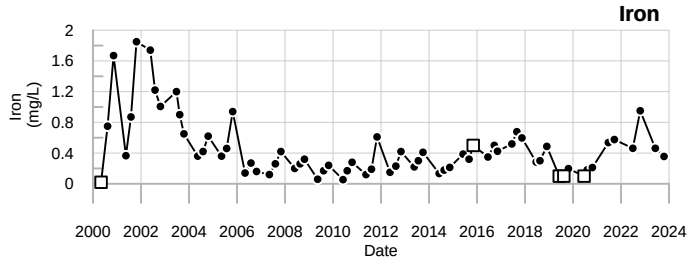
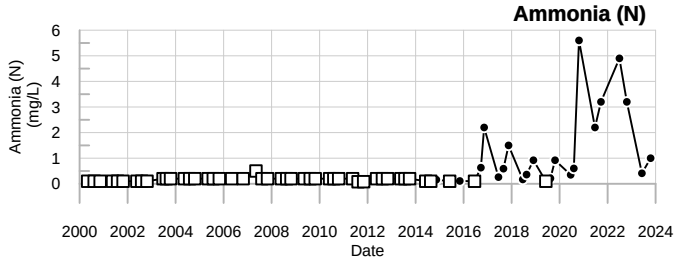
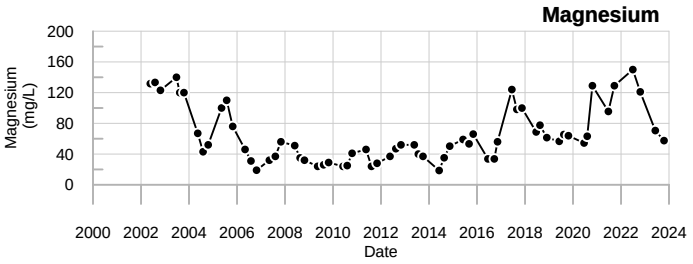
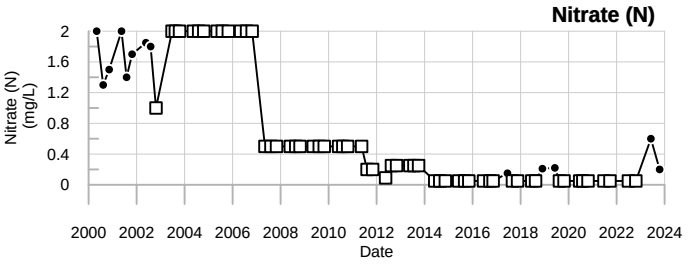
ENGINEERS

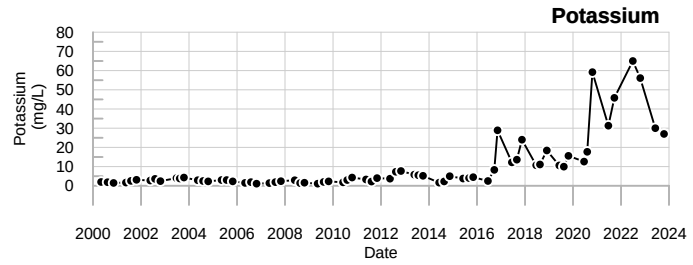
107A
Dolby Landfill

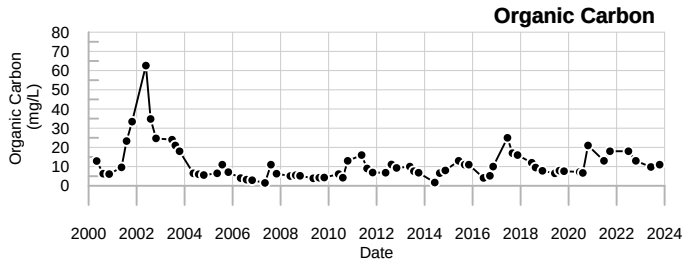


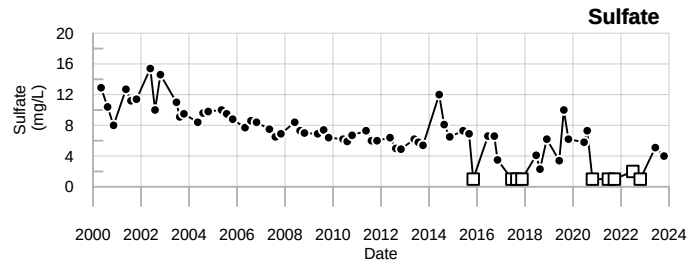


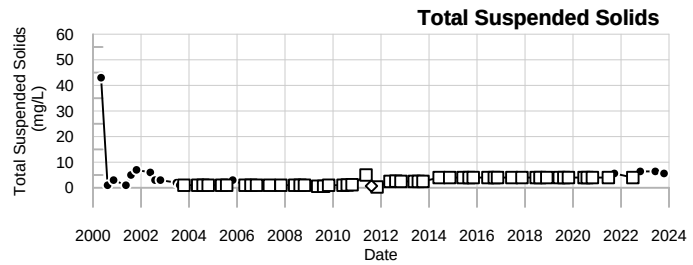


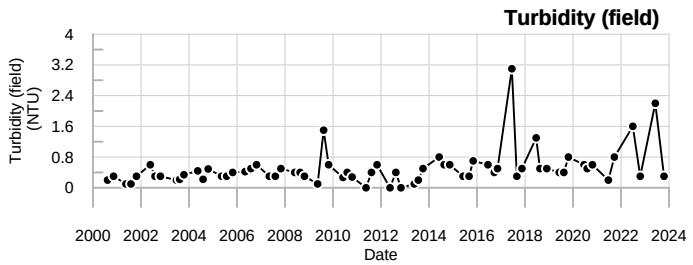












LEGEND

- □ - Below reporting Limit, Associate value is the reporting limit.
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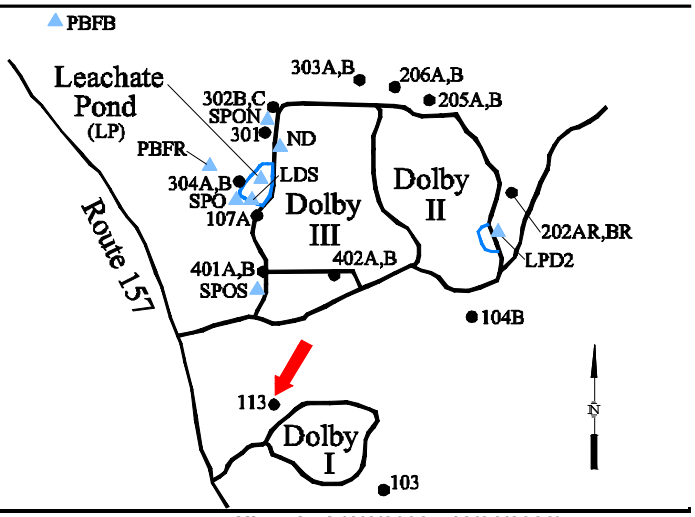
107A
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located downgradient to northwest of Dolby I Landfill.

Screen Interval: **Unknown TOS to 21.6 ft.**
Sampled: **2 Times Annually**
Sampled Since: **Nov-83**
Material Screened: **Bedrock**
Well Condition: **Good**
Sampling Method: **Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		882		847	683	to 1504	1100 ±	25.000	64
Dissolved Oxygen (mg/L)		9.2		6	0.1	to 9.9	1.4 ±	0.250	63
pH (STU)		6.8		6.6	6	to 7.3	6.5 ±	0.032	64
Turbidity (field) (NTU)		1.2		1.5	0	to 4.2	0.78 ±	0.087	63

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

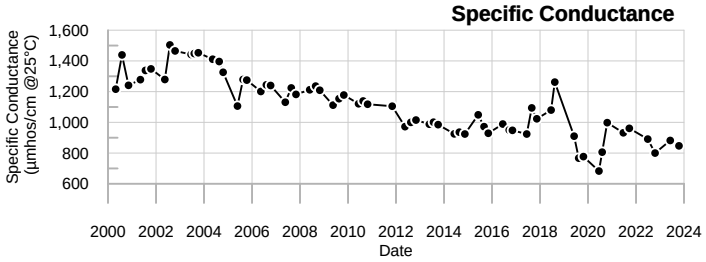
Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

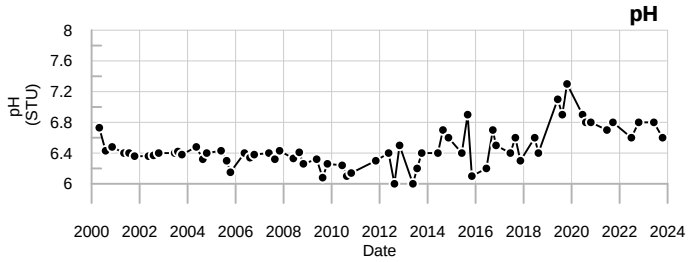
↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

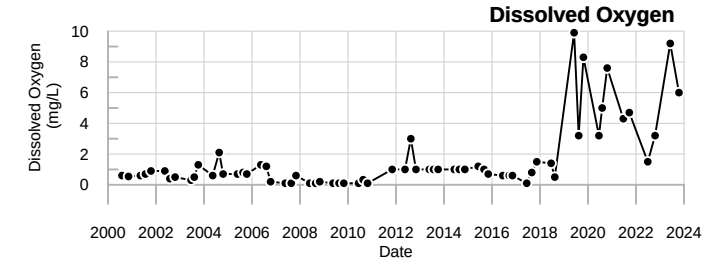
Comments

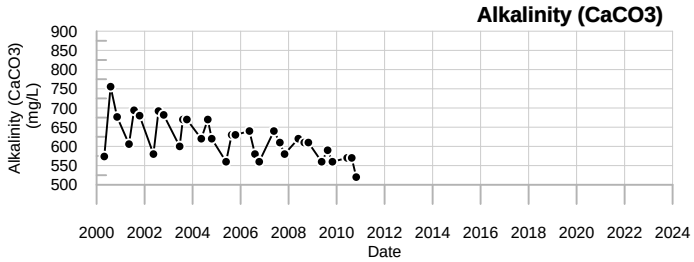
Q2= 6 - 2023
Q4= 10 - 2023

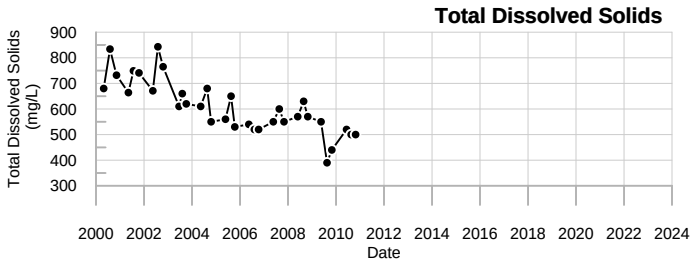
Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

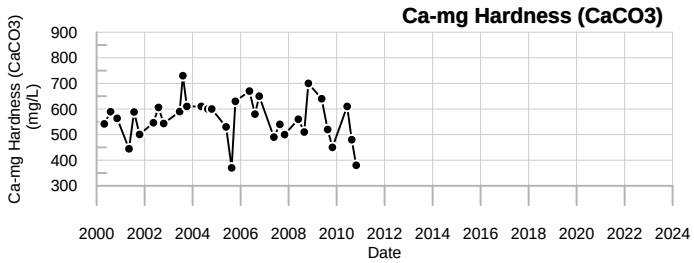


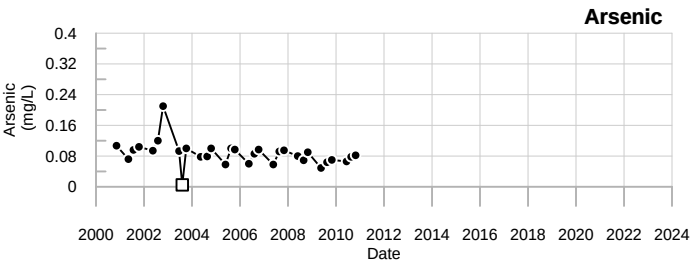


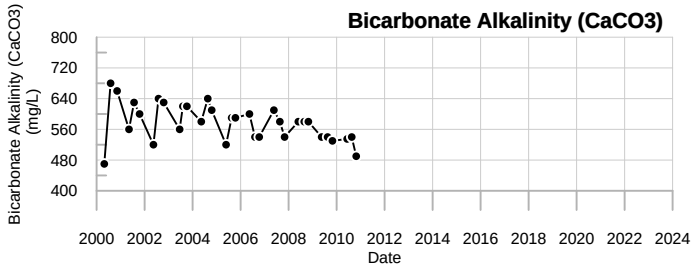


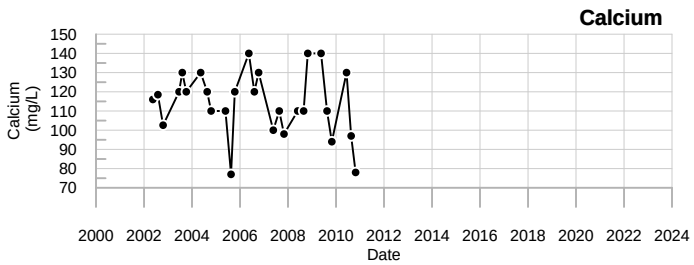


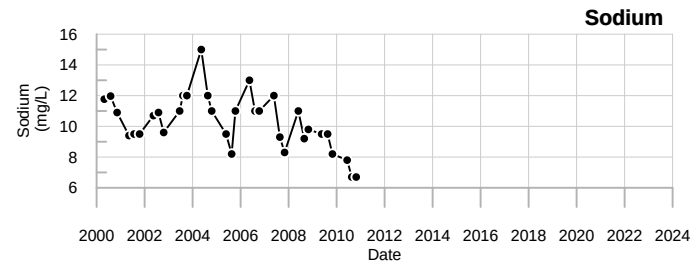


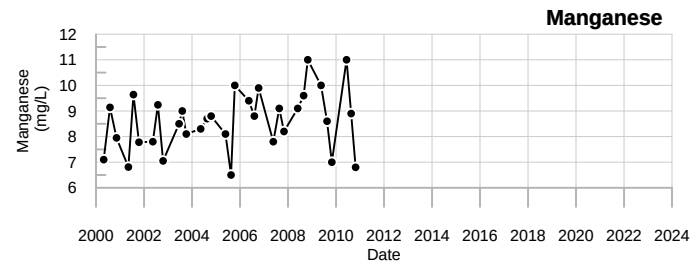


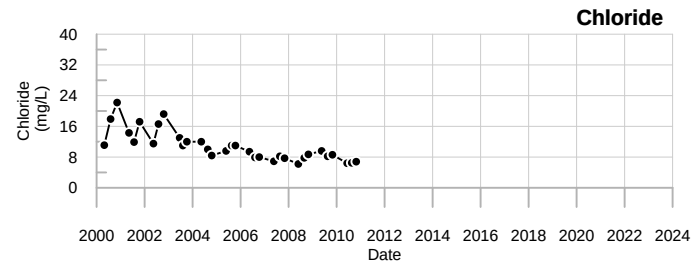












LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

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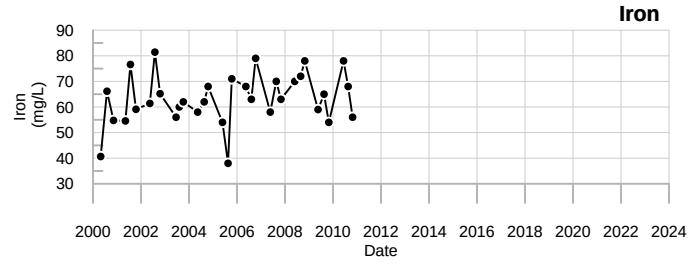
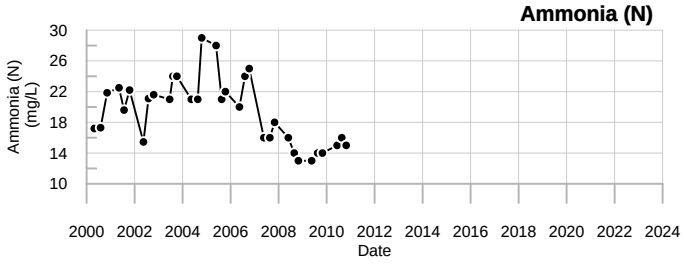
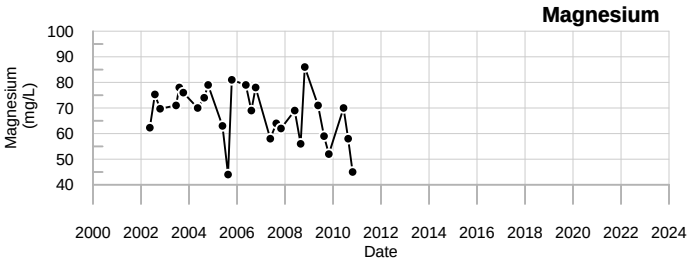
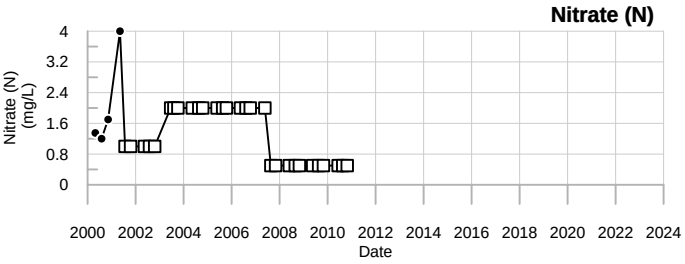
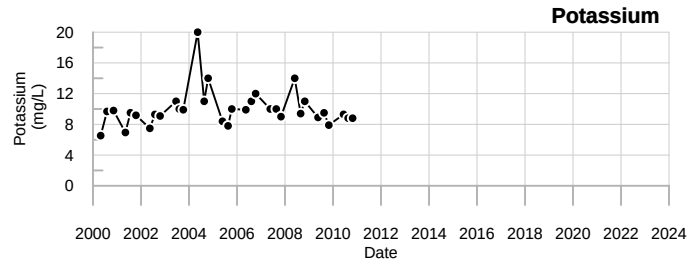
113
Dolby Landfill

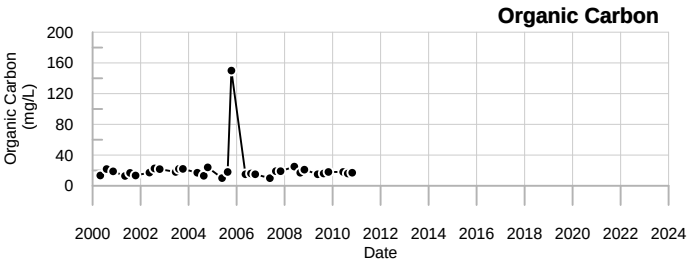


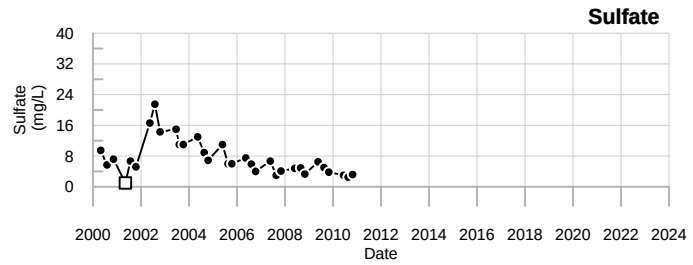


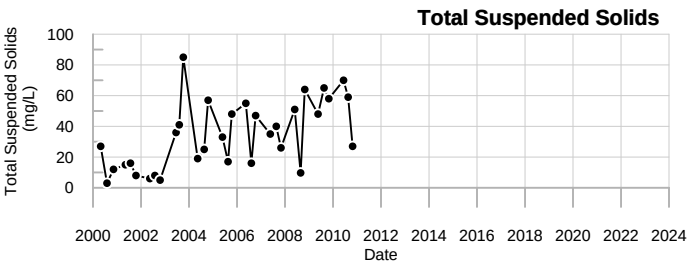


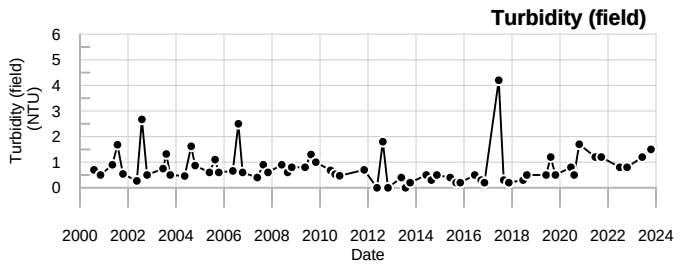












LEGEND

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- ◇ - Estimated Value (J-flagged).

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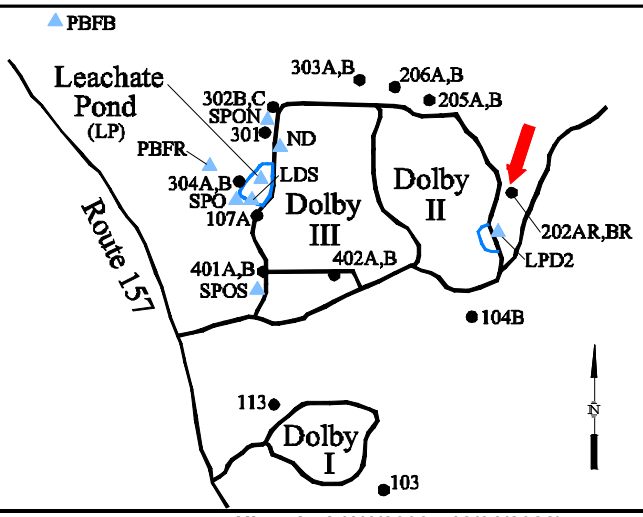
113
Dolby Landfill

Well Description

Well located downgradient to the east of the Dolby II Landfill.

Screen Interval: **71.5 ft. to 81.5 ft.**
Sampled: **2 Times Annually**
Sampled Since: **Oct-94**
Material Screened: **Bedrock**
Well Condition: **Good**
Sampling Method: **Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		1448		1437	1272	to 1995	1600 ±	23.000	66
Dissolved Oxygen (mg/L)		1.1		4.3	0.1	to 5.56	0.99 ±	0.130	65
Total Dissolved Solids (mg/L)		860		860	820	to 1176	970 ±	11.000	66
Arsenic (mg/L)		**0.014**		**0.013**	0.005 U	to 0.071	0.013 ±	0.001	64
Calcium (mg/L)		232		203	122.8	to 500	240 ±	7.300	60
Manganese (mg/L)		**16.9**		**15.3**	13.7	to 26	17 ±	0.320	66
pH (STU)		6.3		6.4	6.06	to 6.9	6.6 ±	0.016	66
Alkalinity (CaCO3) (mg/L)		910		910	100	to 1110	940 ±	16.000	66
Ca-mg Hardness (CaCO3) (mg/L)		904		843	469.3	to 1700	940 ±	23.000	66
Bicarbonate Alkalinity (CaCO3) (mg/L)		900		910	98	to 1105	910 ±	14.000	66
Sodium (mg/L)		24.6		22.6	20.7	to 39	26 ±	0.460	66
Chloride (mg/L)		18		15	14	to 41.2	23 ±	0.860	66
Iron (mg/L)		2.01		2.14	0.35	to 2.16	1.3 ±	0.048	66
Magnesium (mg/L)		78.8		81.4	39.5	to 130	82 ±	1.800	60
Potassium (mg/L)		15.7		14.6	8.32	to 17	13 ±	0.210	66
Sulfate (mg/L)		1 U		1 U	1 U	to 12.5	4.4 ±	0.370	66
Total Suspended Solids (mg/L)		4 U		4 U	0.6 U	to 17	3.4 ±	0.280	66
Turbidity (field) (NTU)		0.6		0.3	0	to 1.7	0.41 ±	0.041	65
Ammonia (N) (mg/L)		3.7		4	0.784	to 4.8	2.9 ±	0.100	66
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 2.7	0.74 ±	0.100	66
Organic Carbon (mg/L)		19		23	7.5	to 47	13 ±	0.670	66

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:49

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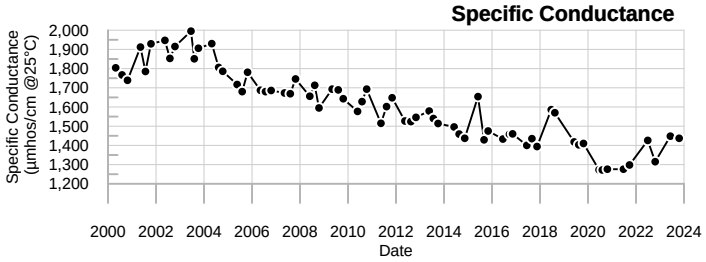

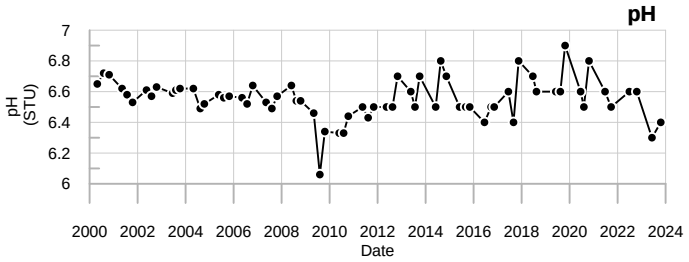

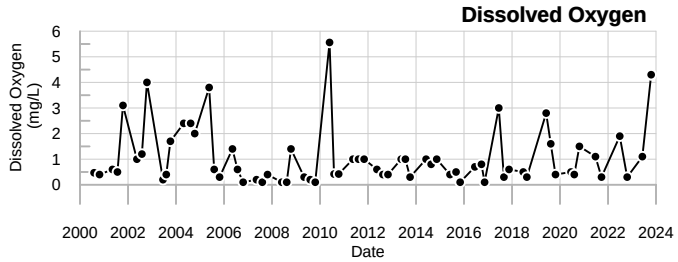

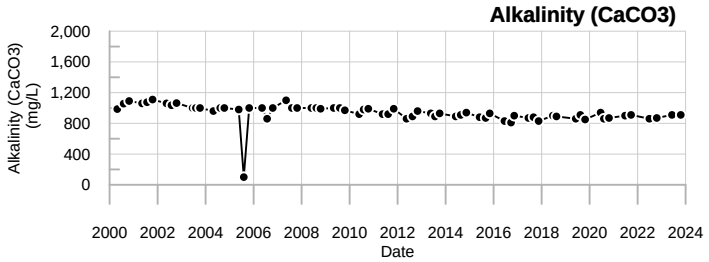

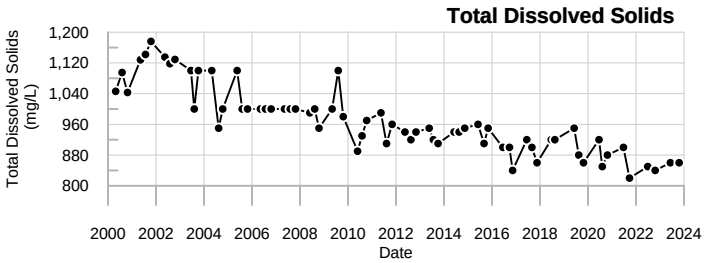

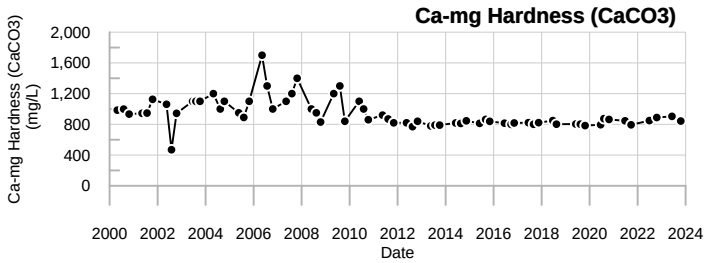

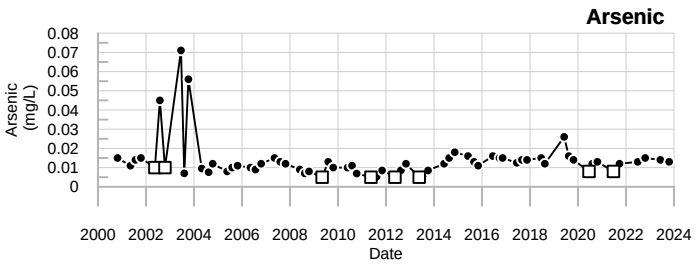

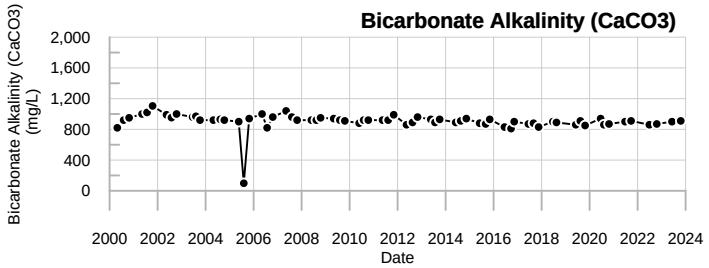

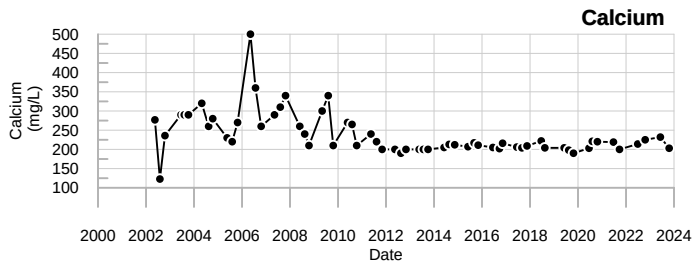

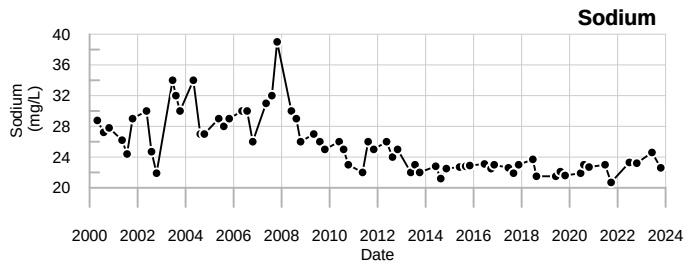

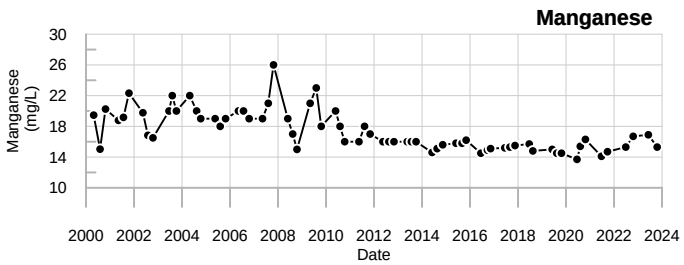

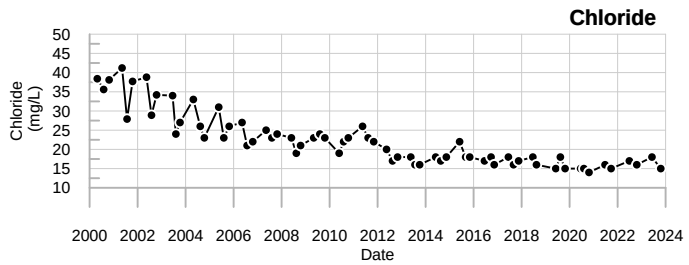

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

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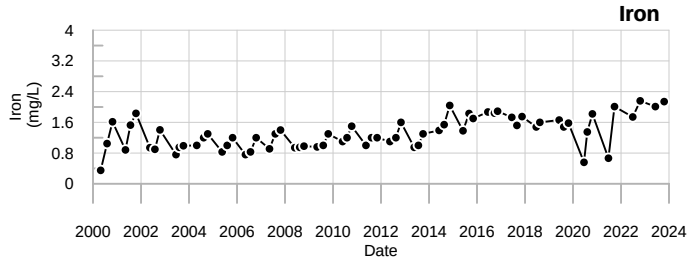
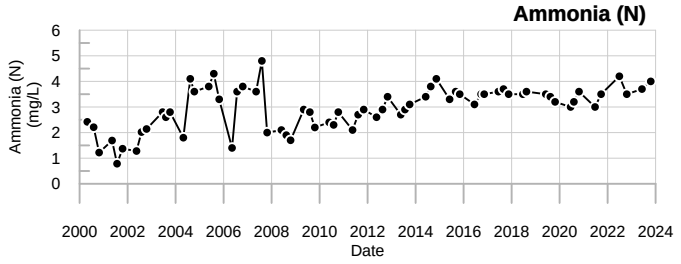
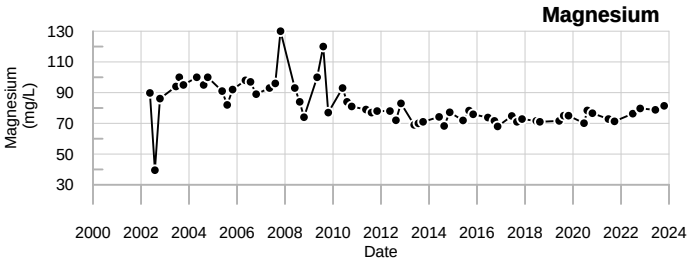
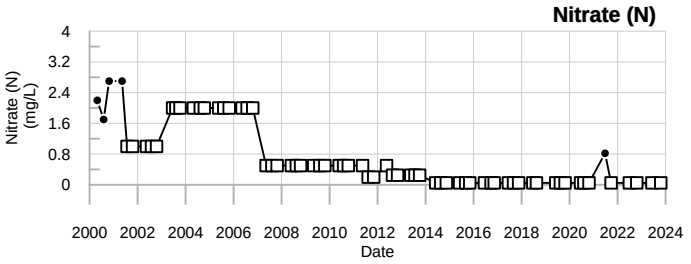
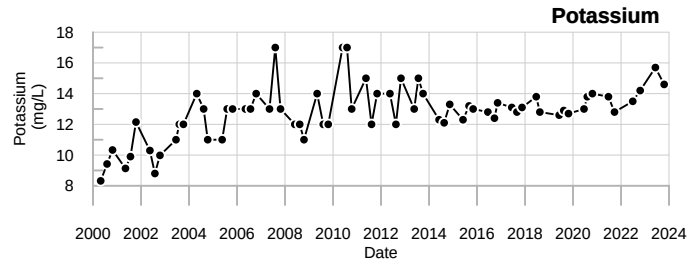
202AR
Dolby Landfill

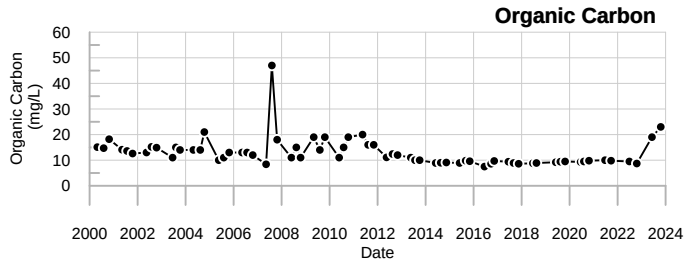


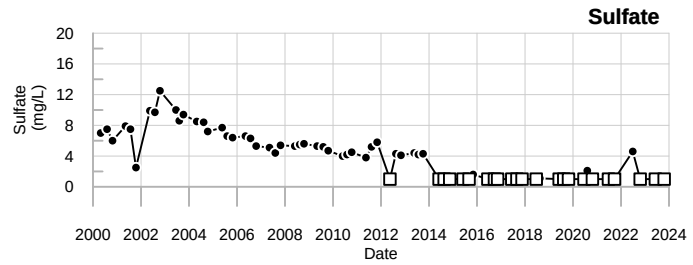


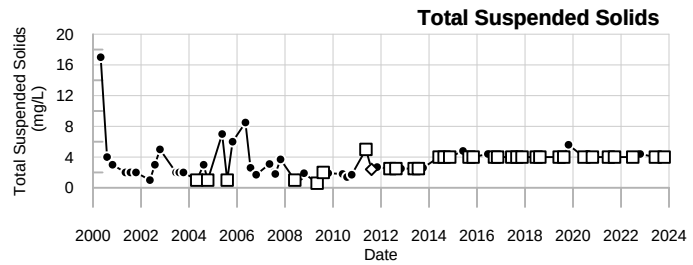


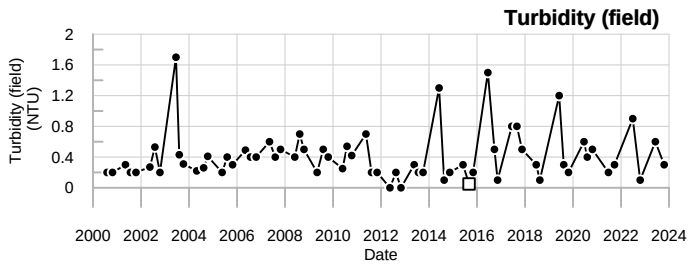












LEGEND

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202AR
Dolby Landfill

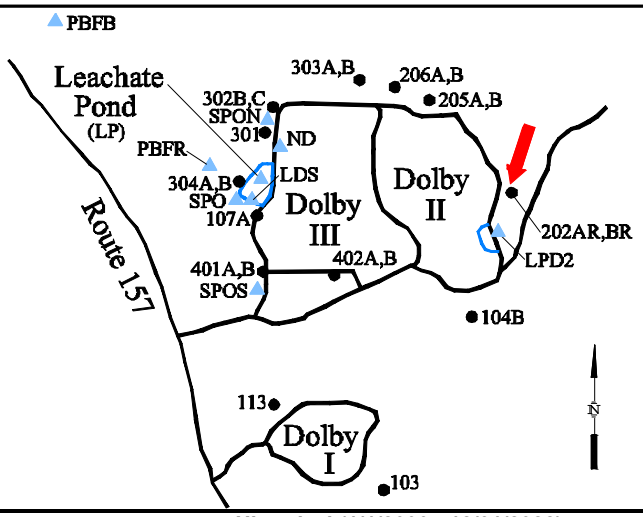
Sevee & Maher Engineers, Inc.

202B & 202BR
2023 Groundwater Stats

Well Description

Well located downgradient to the east of the Dolby II Landfill.

Screen Interval:
Sampled: **2 Times Annually**
Sampled Since: **Sep-21**
Material Screened: **Glacial Till/Bedrock**
Well Condition: **Good**
Sampling Method: **Low Flow**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		664		707	604	to 1910	1100 ±	42.000	60
Dissolved Oxygen (mg/L)		3.1		2.9	0.1	to 6.29	1 ±	0.130	59
Total Dissolved Solids (mg/L)		↓370		420	380	to 1241	660 ±	26.000	60
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.031	0.0074 ±	0.001	58
Calcium (mg/L)		82.5		84.4	25	to 230	120 ±	5.700	54
Manganese (mg/L)		**6.39**		**7.13**	3.1	to 15.96	8.8 ±	0.350	60
pH (STU)		6.4		6.3	5.96	to 7	6.5 ±	0.020	60
Alkalinity (CaCO3) (mg/L)		400		410	360	to 1196.9	640 ±	25.000	60
Ca-mg Hardness (CaCO3) (mg/L)		359		389	170	to 1100	590 ±	27.000	60
Bicarbonate Alkalinity (CaCO3) (mg/L)		400		410	360	to 1130	620 ±	23.000	60
Sodium (mg/L)		10.9		11.6	6	to 38.3	21 ±	0.880	60
Chloride (mg/L)		8.6		8.6	6.5	to 55.3	19 ±	1.300	60
Iron (mg/L)		1.3		0.82	0.02 U	to 10.6	1.4 ±	0.230	60
Magnesium (mg/L)		37.2		43.4	22	to 130	68 ±	3.200	54
Potassium (mg/L)		10.8		12.1	4	to 24.5	11 ±	0.420	60
Sulfate (mg/L)		6		5.4	1 U	to 33	8.4 ±	0.800	60
Total Suspended Solids (mg/L)		9.2		4.4	1 U	to 540	26 ±	9.700	60
Turbidity (field) (NTU)		0.5		0.6	0	to 64.7	9.8 ±	1.900	59
Ammonia (N) (mg/L)		2		2.2	0.2 U	to 5.4	2.2 ±	0.130	60
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 10	1.1 ±	0.200	60
Organic Carbon (mg/L)		6.7		10	3.7	to 47	11 ±	0.900	60

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:49

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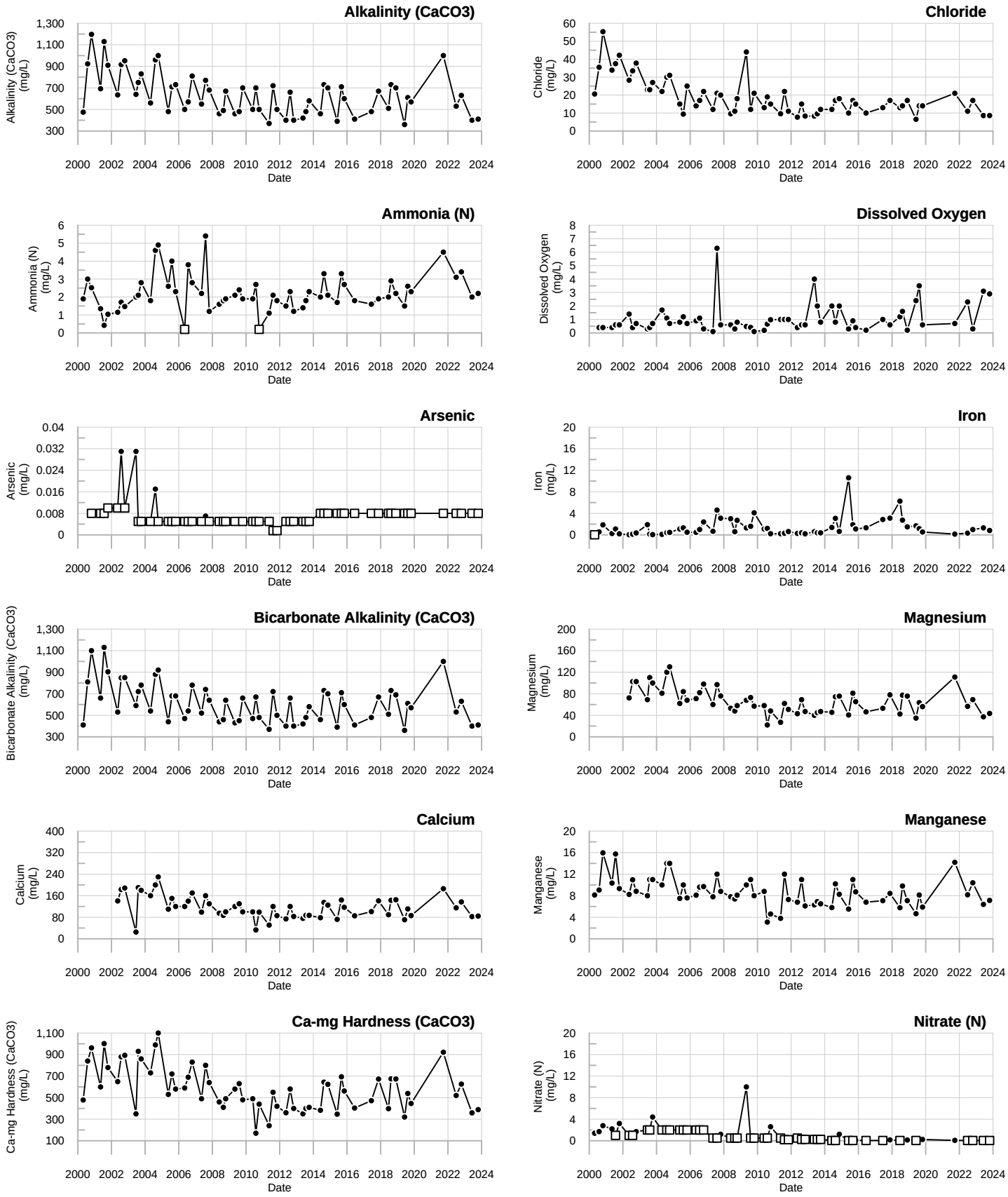

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
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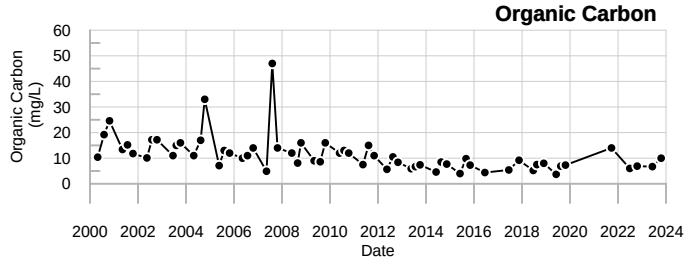
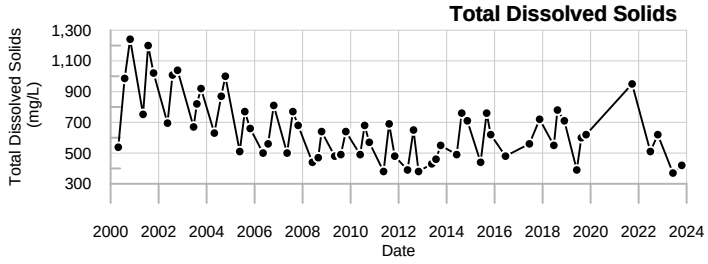
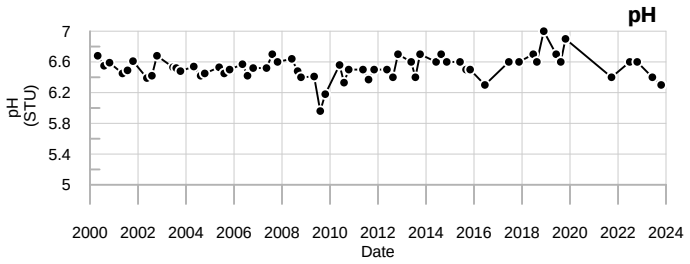
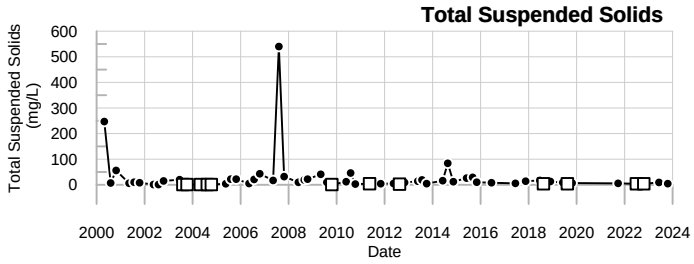
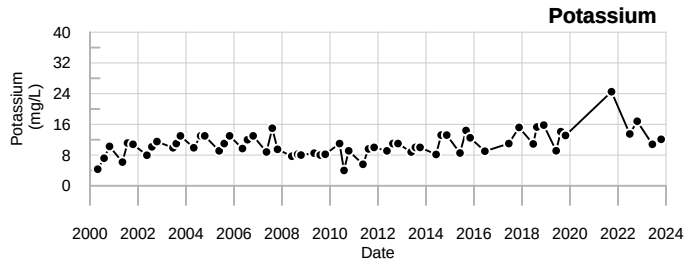
202B & 202BR
Dolby Landfill

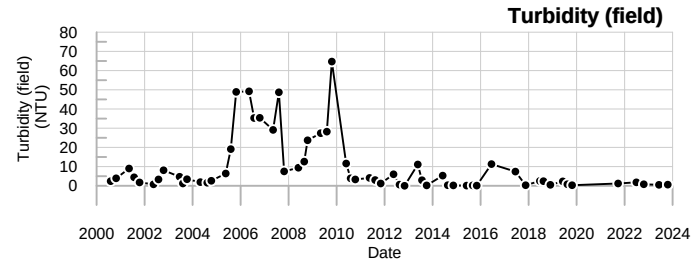


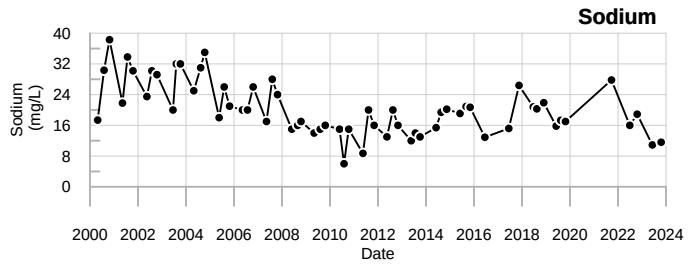


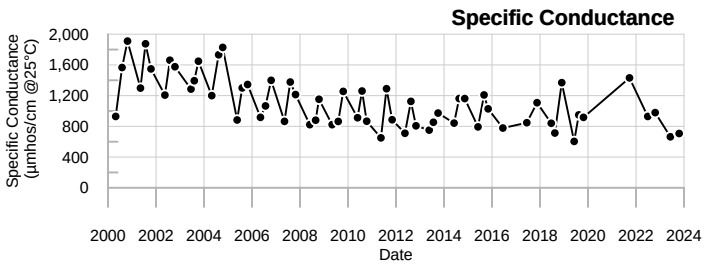


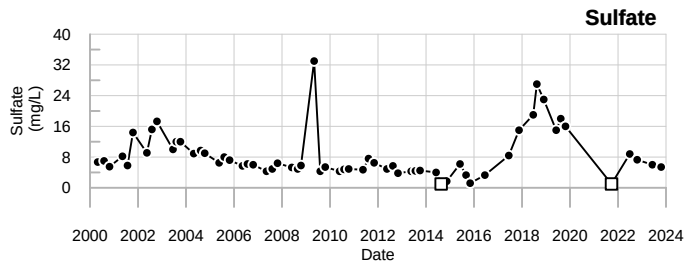












LEGEND

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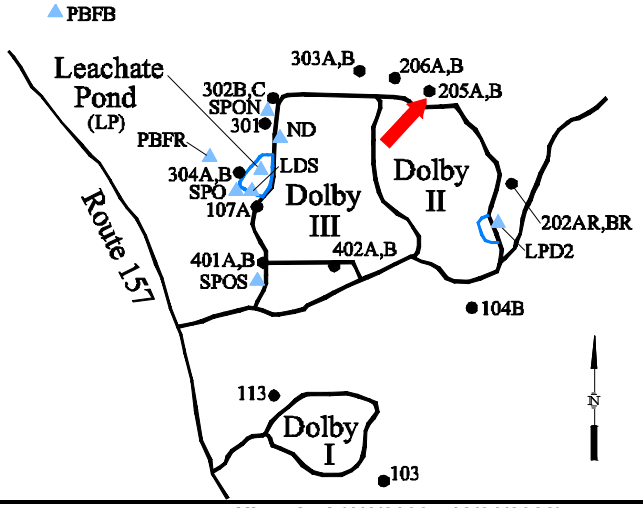
Dolby Landfill

Well Description

Well located downgradient to the north of the Dolby II Landfill.



Screen Interval:	**26 ft. to 31 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Jun-86**
Material Screened:	**Bedrock**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Initiated Aug. 2000)**

Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		440		479	381	to 1013	650	± 22.000	67
Dissolved Oxygen (mg/L)		2.2		0.5	0.1	to 8.6	1.1	± 0.150	66
Total Dissolved Solids (mg/L)		540		250	95	to 550	350	± 12.000	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.016	0.0068	± 0.000	65
Calcium (mg/L)		65.6		58.3	55.7	to 180	92	± 4.500	61
Manganese (mg/L)		0.287		**0.812**	0.16	to 1.7	0.91	± 0.036	67
pH (STU)		7.2		7.2	6.56	to 7.8	7.1	± 0.030	67
Alkalinity (CaCO3) (mg/L)		190		190	40	to 500	270	± 12.000	67
Ca-mg Hardness (CaCO3) (mg/L)		217		198	188	to 610	300	± 14.000	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		190		190	160	to 480	270	± 11.000	67
Sodium (mg/L)		21.8		20.4	14.13	to 42	24	± 0.590	67
Chloride (mg/L)		34		36	2 U	to 74.5	41	± 1.100	67
Iron (mg/L)		0.188		0.362	0.1 U	to 3.326	1.1	± 0.110	67
Magnesium (mg/L)		13		12.7	11.6	to 39	20	± 0.960	61
Potassium (mg/L)		1.91		1.93	1.44	to 4.5	2.4	± 0.092	67
Sulfate (mg/L)		8.2		6.6	3.1	to 33	9.3	± 0.420	67
Total Suspended Solids (mg/L)		4 U		4 U	1 U	to 6	2.9	± 0.160	67
Turbidity (field) (NTU)		0.8		0.8	0	to 2.9	0.58	± 0.058	66
Ammonia (N) (mg/L)		0.15		0.49	0.08 U	to 0.55	0.23	± 0.013	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 10	0.87	± 0.170	67
Organic Carbon (mg/L)		1.9		3.4	1.1	to 63.7	4.3	± 0.940	67

underlined/bold - values exceed a regulatory standard listed below.

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Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

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Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:49

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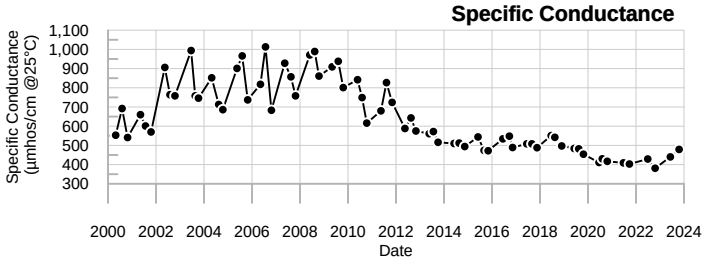

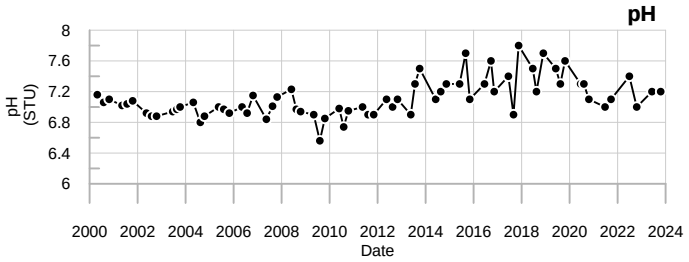

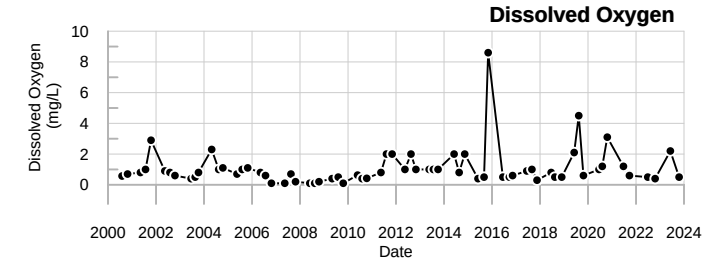

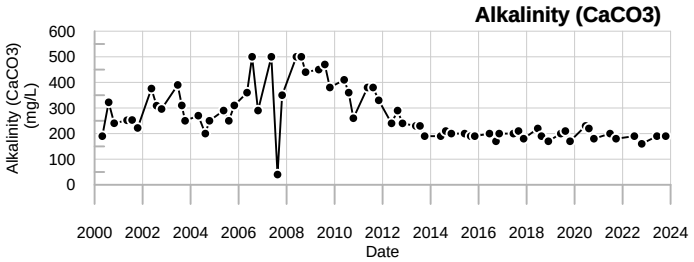

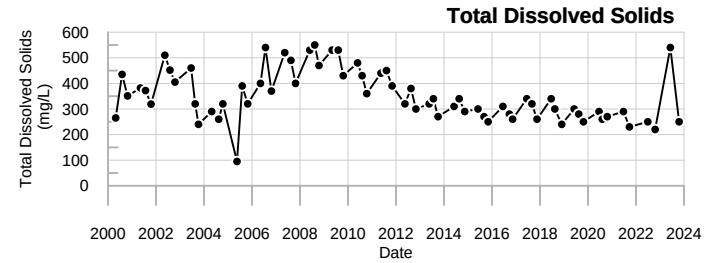

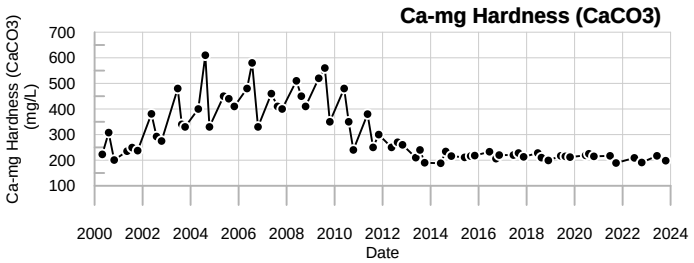

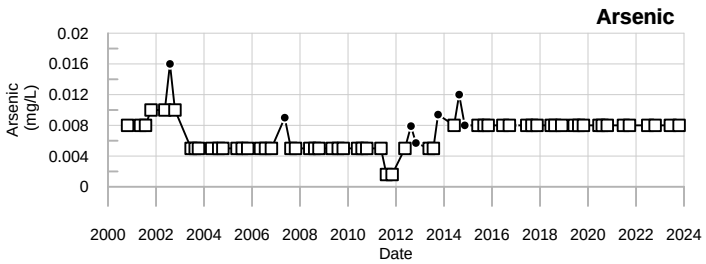

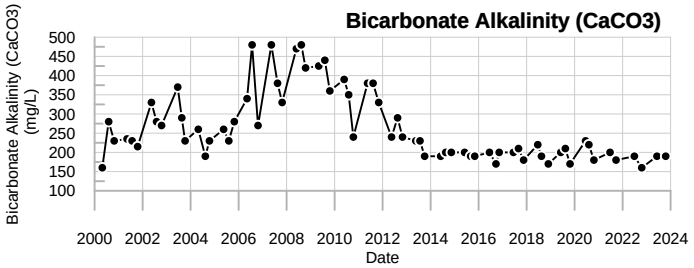

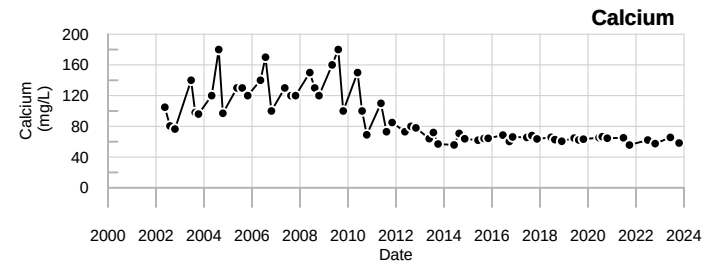

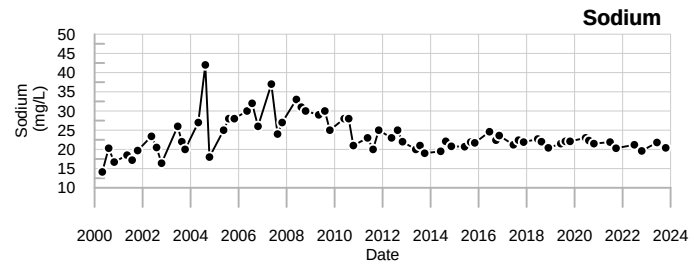

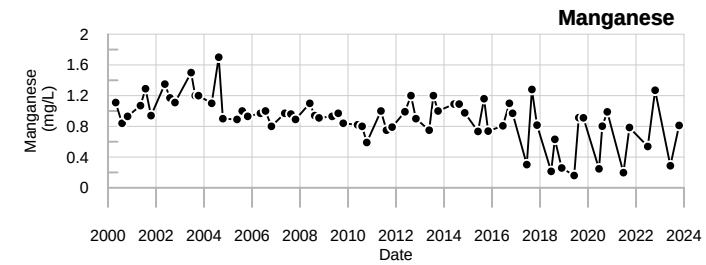

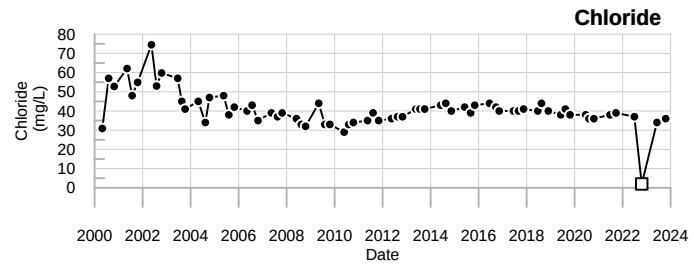

LEGEND

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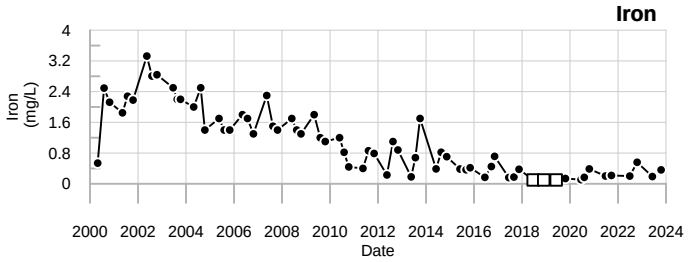
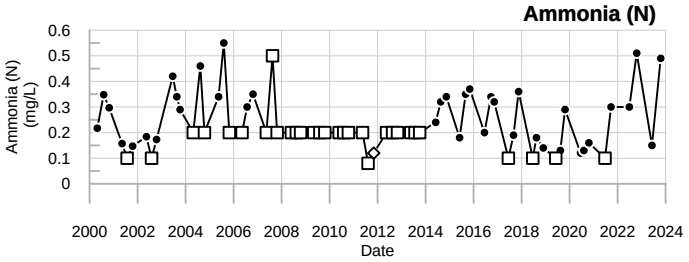
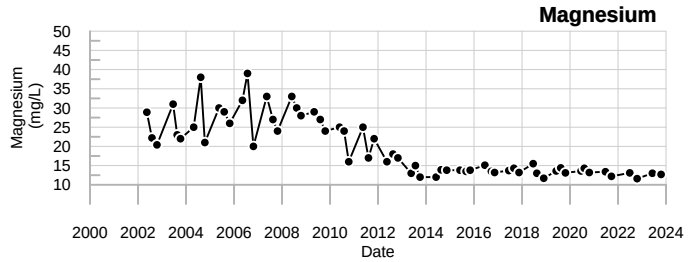
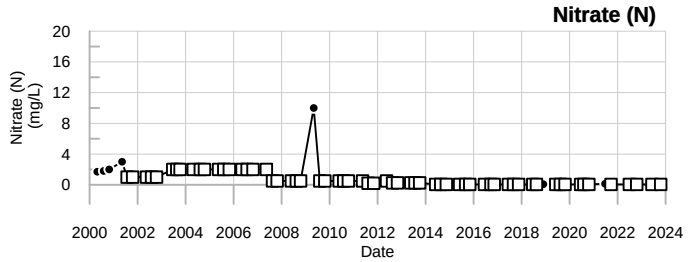
205A
Dolby Landfill

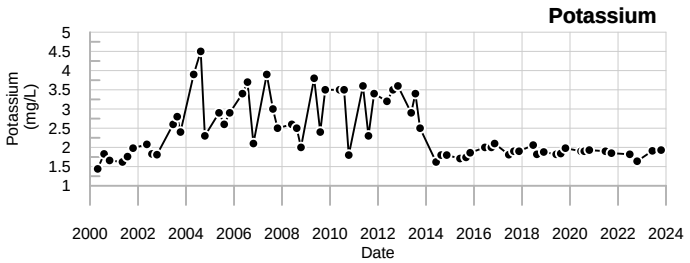
Sevee & Maher Engineers, Inc.

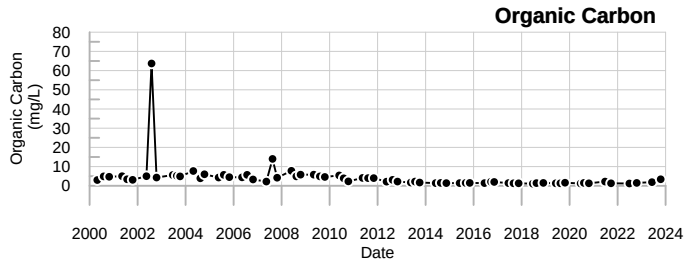


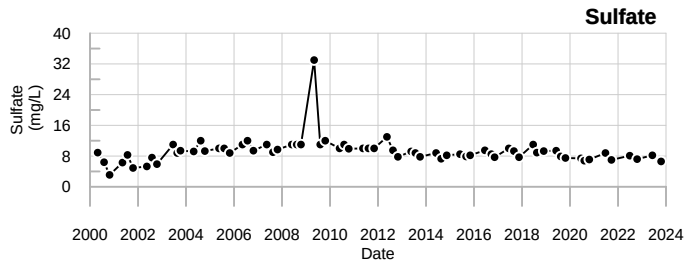


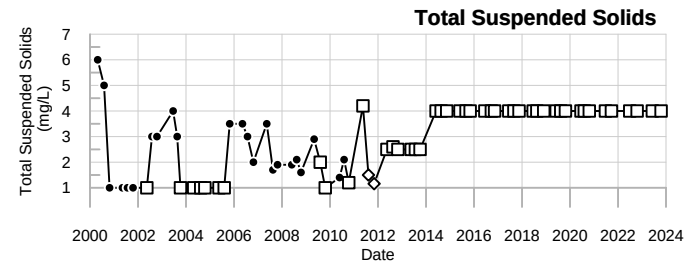


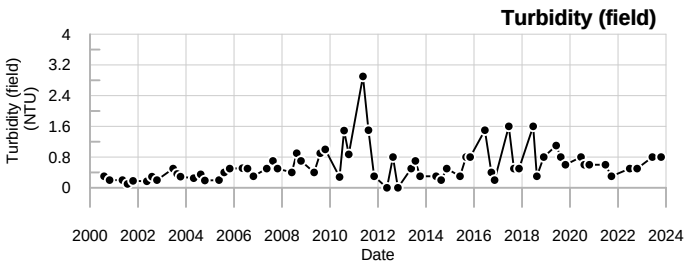












LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

SME
SEVEE & MAHER
ENGINEERS

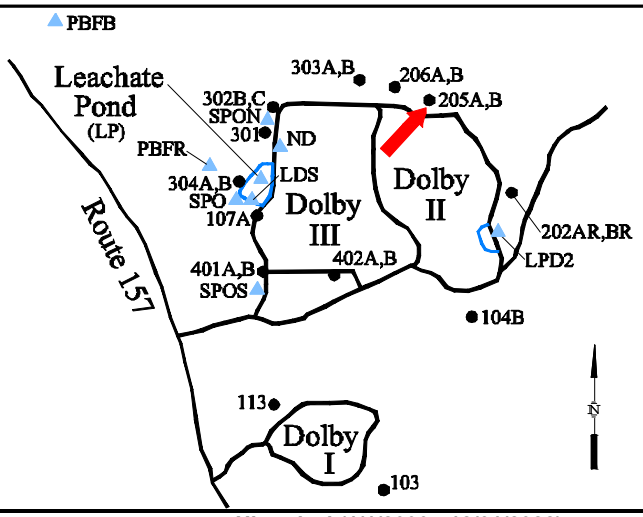
205A
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located downgradient to the north of the Dolby II Landfill.

Screen Interval:	**10 ft. to 15 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Jun-86**
Material Screened:	**Glacial Till**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		284		278	178	to 1274	440	± 31.000	67
Dissolved Oxygen (mg/L)		1.2		0.8	0.1	to 4.4	0.91	± 0.094	66
Total Dissolved Solids (mg/L)		140		150	91	to 664	220	± 13.000	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.021	0.0067	± 0.000	65
Calcium (mg/L)		47.8		40.6	23.8	to 140	54	± 3.600	61
Manganese (mg/L)		**0.599**		↓0.0574	0.065	to 9.33	1	± 0.210	67
pH (STU)		7.3		7.1	6.44	to 8	7.1	± 0.036	67
Alkalinity (CaCO3) (mg/L)		130		140	87	to 586	190	± 12.000	67
Ca-mg Hardness (CaCO3) (mg/L)		159		138	87.7	to 540.7	200	± 13.000	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		130		140	87	to 540	180	± 11.000	67
Sodium (mg/L)		4.77		4.34	3.64	to 27	8.3	± 0.570	67
Chloride (mg/L)		2 U		2 U	0.5 U	to 36	5	± 0.930	67
Iron (mg/L)		0.3		0.1 U	0.01 U	to 0.63	0.17	± 0.019	67
Magnesium (mg/L)		9.68		8.94	6.8	to 60.9	15	± 1.400	61
Potassium (mg/L)		1.03		1.15	0.96	to 2.4	1.3	± 0.044	67
Sulfate (mg/L)		4.5		4.1	2.7	to 14.6	7.7	± 0.410	67
Total Suspended Solids (mg/L)		4 U		4 U	0.32 U	to 36	2.9	± 0.530	67
Turbidity (field) (NTU)		0.4		0.1	0	to 4.24	0.56	± 0.073	66
Ammonia (N) (mg/L)		0.1 U		0.1 U	0.08 U	to 0.5	0.16	± 0.009	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 2.3	0.7	± 0.093	67
Organic Carbon (mg/L)		1.2		2.2	0.98	to 90.6	3.3	± 1.300	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

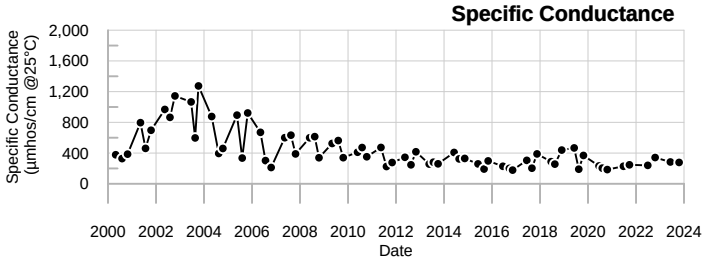
↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

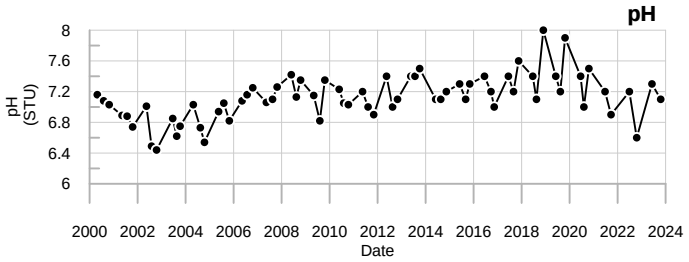
Comments

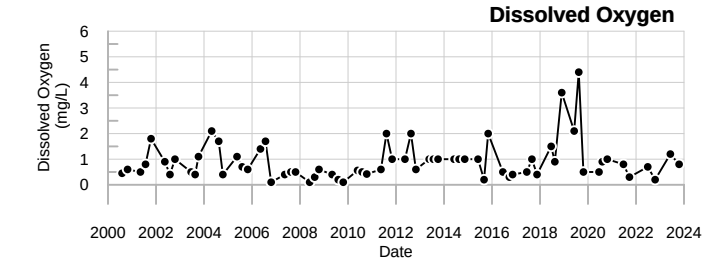
Q2= 6 - 2023
Q4= 10 - 2023

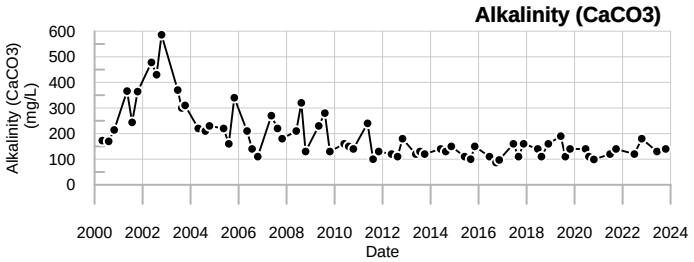
U = Not Detected above the laboratory reporting limit.

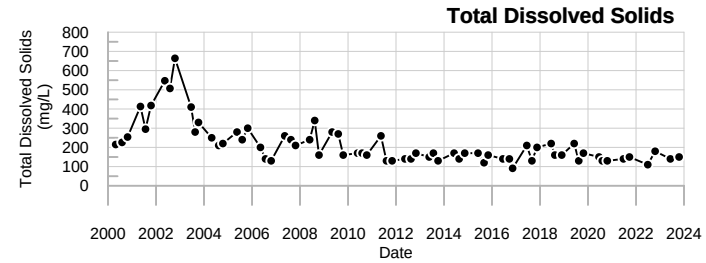
Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

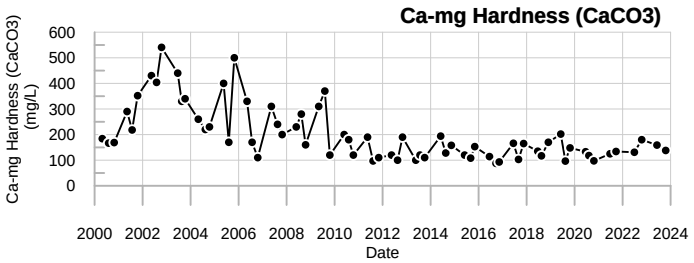


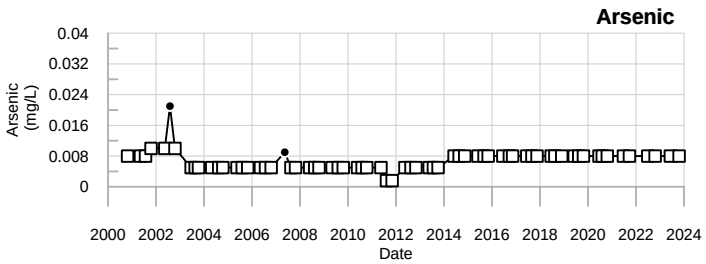


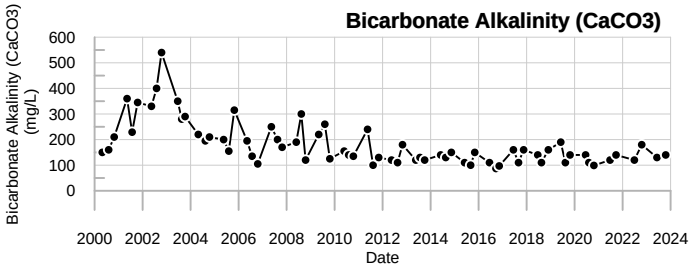


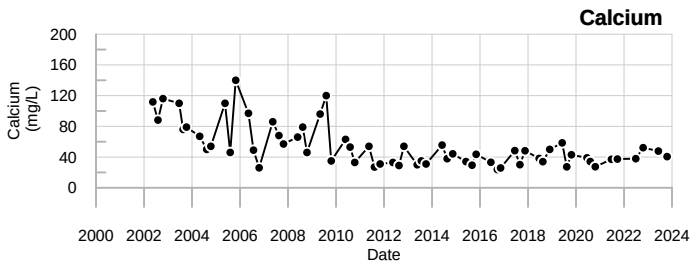


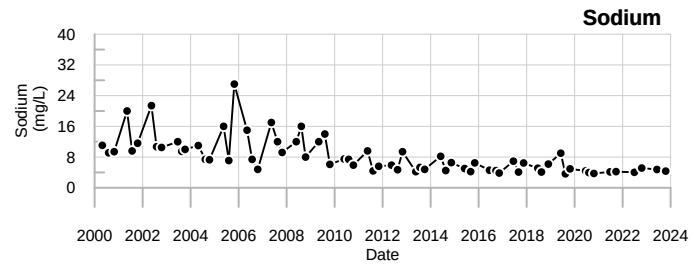


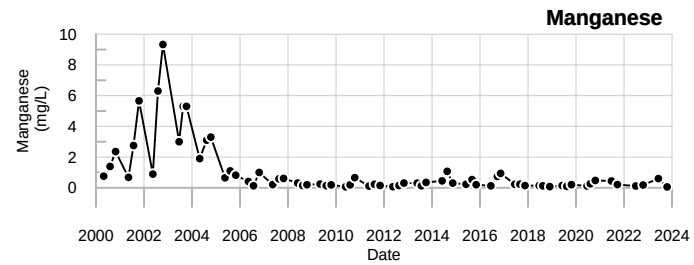


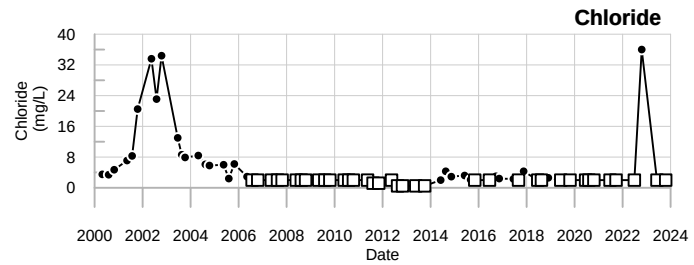












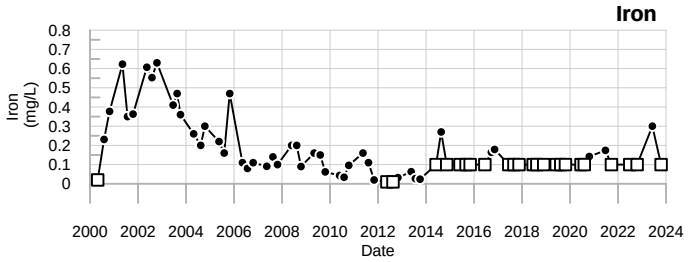
LEGEND

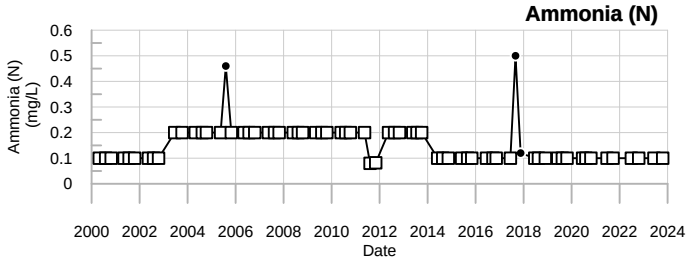
- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

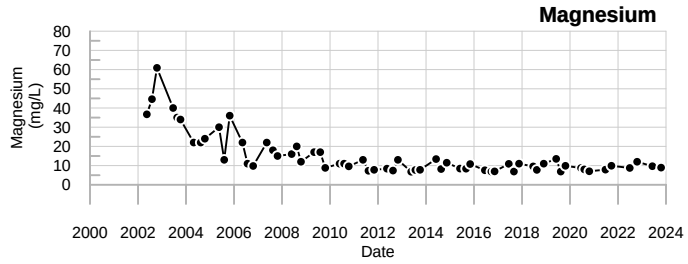
SME
SEVEE & MAHER
ENGINEERS

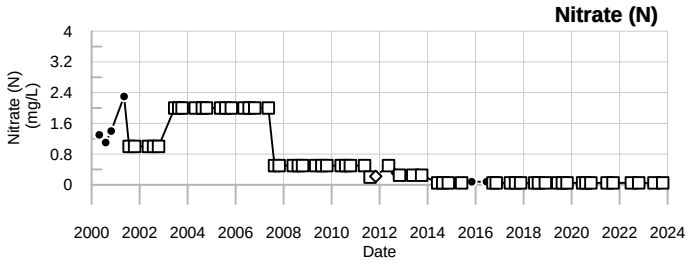
205B
Dolby Landfill

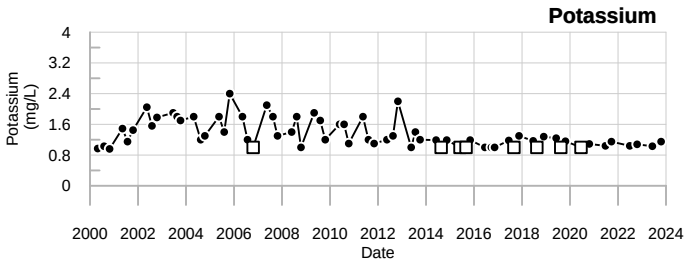
Sevee & Maher Engineers, Inc.

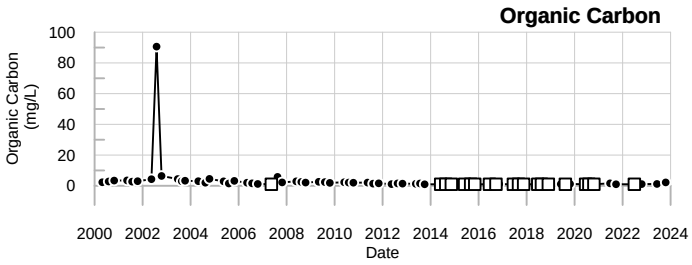


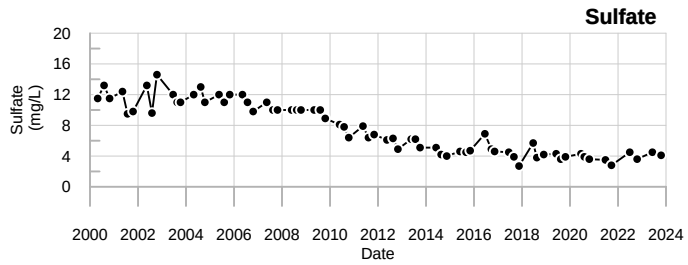


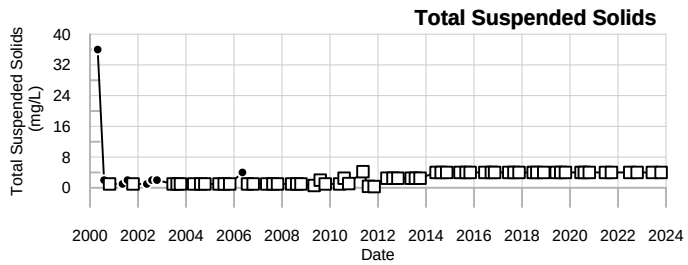


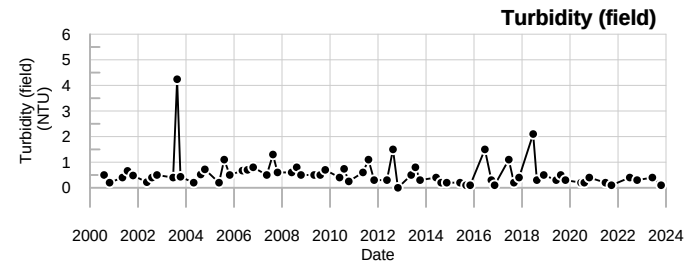












LEGEND

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SME
SEVEE & MAHER
ENGINEERS

205B
Dolby Landfill

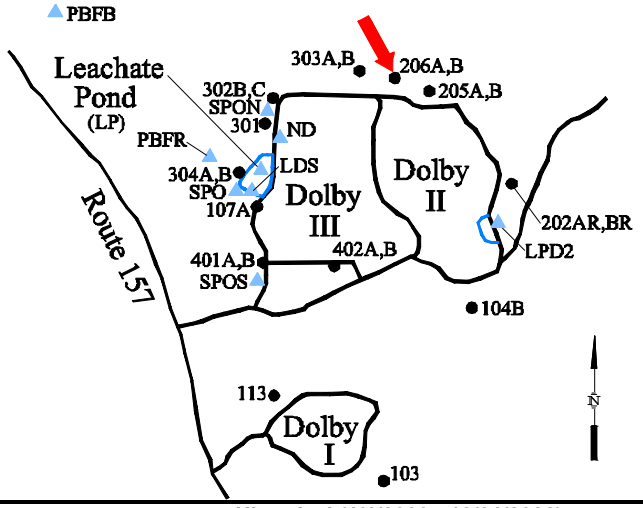
Sevee & Maher Engineers, Inc.

206A

Well Description

Well located downgradient to the northwest of the Dolby II Landfill.

Screen Interval: **23.3 ft. to 28.3 ft.**
Sampled: **2 Times Annually**
Sampled Since: **Jun-86**
Material Screened: **Bedrock**
Well Condition: **Good**
Sampling Method: **Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		1063		1118	210	to 3480	2000 ±	81.000	67
Dissolved Oxygen (mg/L)		5		5.1	0.1	to 5.1	1.1 ±	0.130	66
Total Dissolved Solids (mg/L)		700		690	440	to 2088	1100 ±	39.000	67
Arsenic (mg/L)		**0.26**		**0.216**	0.039	to 0.45	0.22 ±	0.009	65
Calcium (mg/L)		84.7		73	17.2	to 147	99 ±	3.300	61
Manganese (mg/L)		**3.21**		**2.98**	0.52	to 9	5.2 ±	0.230	67
pH (STU)		6.4		6.3	6.04	to 6.9	6.6 ±	0.020	67
Alkalinity (CaCO3) (mg/L)		850		840	36	to 2010	1200 ±	42.000	67
Ca-mg Hardness (CaCO3) (mg/L)		619		544	107	to 1500	950 ±	35.000	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		850		840	36	to 1997	1100 ±	44.000	67
Sodium (mg/L)		19.1		18.2	4.28	to 58.7	36 ±	1.400	67
Chloride (mg/L)		16		↓14	15	to 102	34 ±	2.300	67
Iron (mg/L)		**39.1**		**32.4**	2.84	to 52.3	33 ±	1.300	67
Magnesium (mg/L)		99.1		88	15.6	to 290	170 ±	6.800	61
Potassium (mg/L)		77.2		69.3	14	to 170	91 ±	2.900	67
Sulfate (mg/L)		1 U		1 U	1 U	to 15	5.2 ±	0.480	67
Total Suspended Solids (mg/L)		64		59	2	to 96	52 ±	2.900	67
Turbidity (field) (NTU)		0.6		0.5	0	to 2.1	0.68 ±	0.054	66
Ammonia (N) (mg/L)		24		28	3.1	to 54	33 ±	1.100	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 5.1	0.84 ±	0.130	67
Organic Carbon (mg/L)		14		32	1.2	to 334.4	32 ±	4.800	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:49

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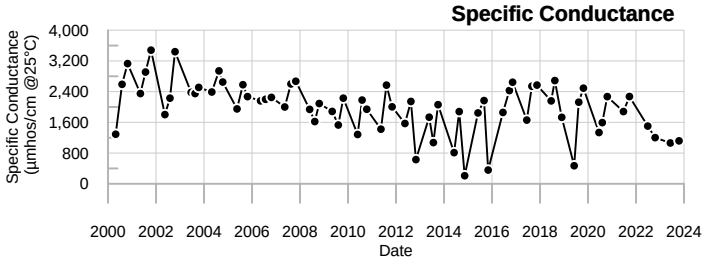

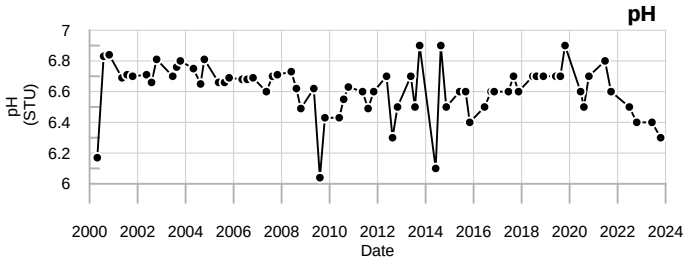

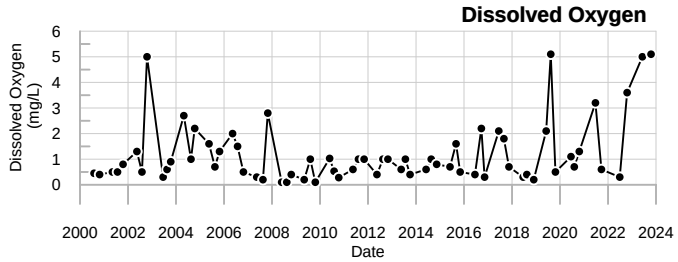

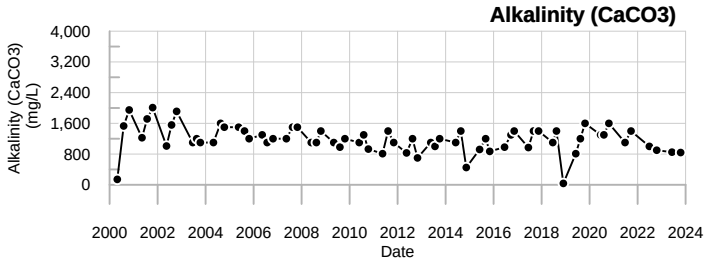

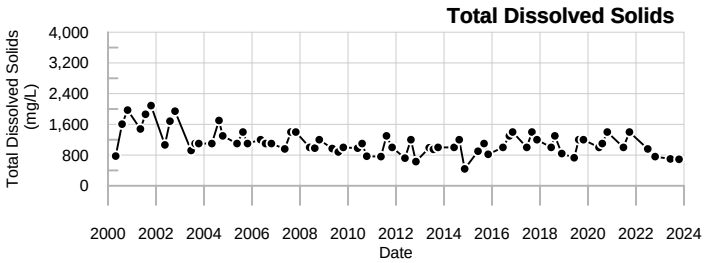

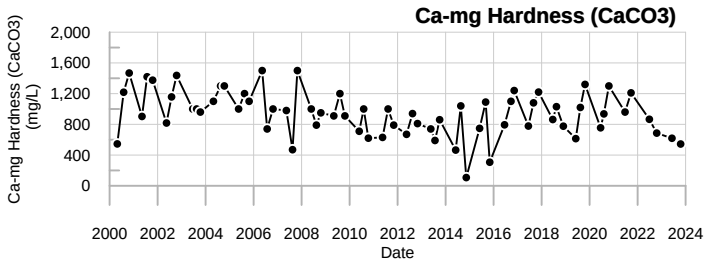

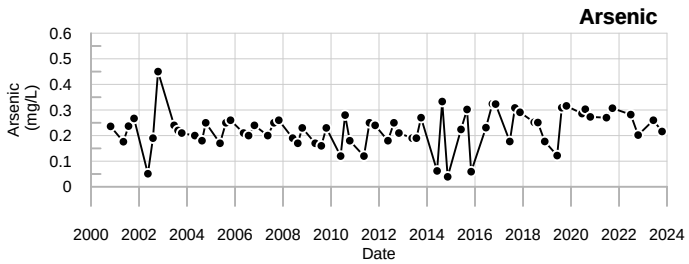

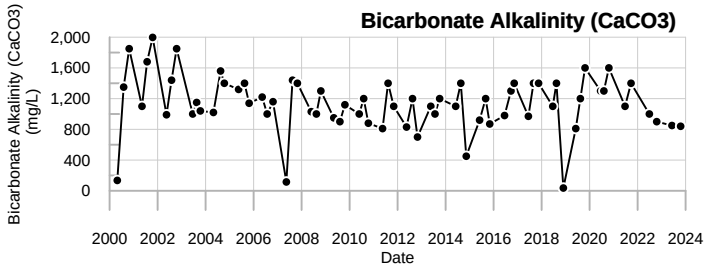

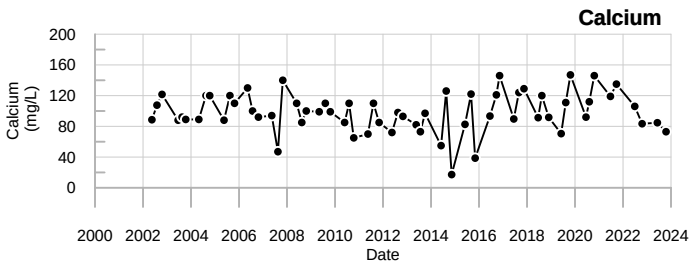

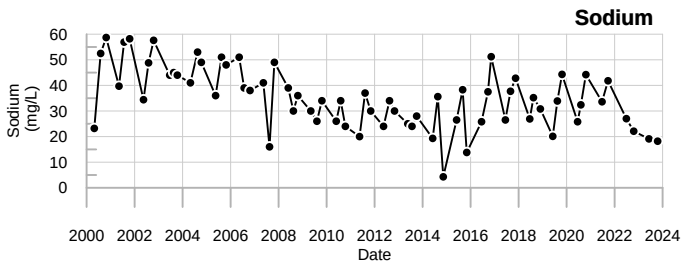

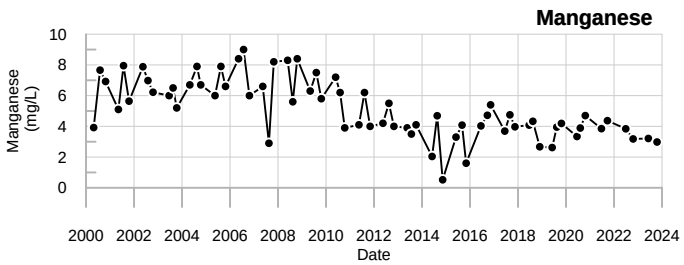

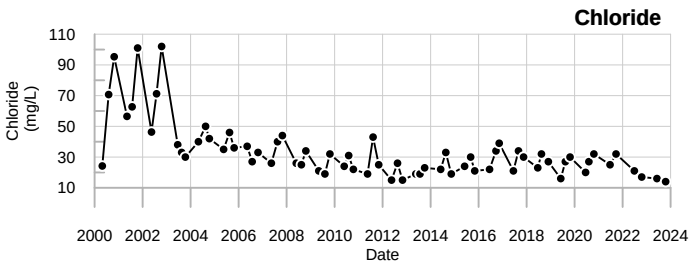

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

SME
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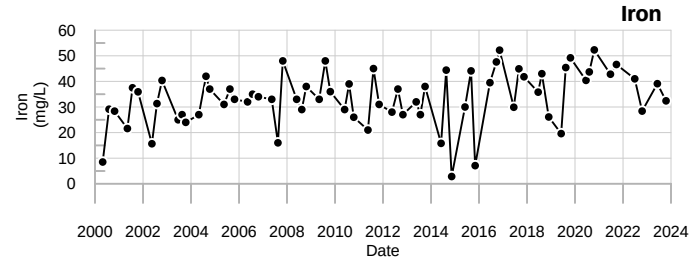
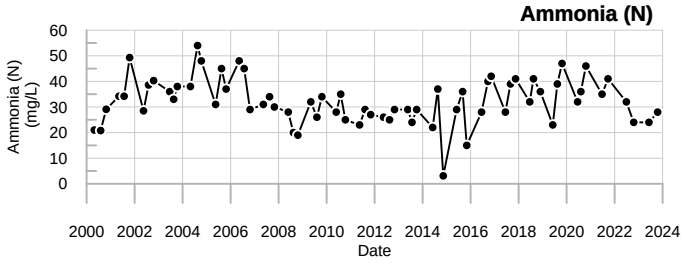
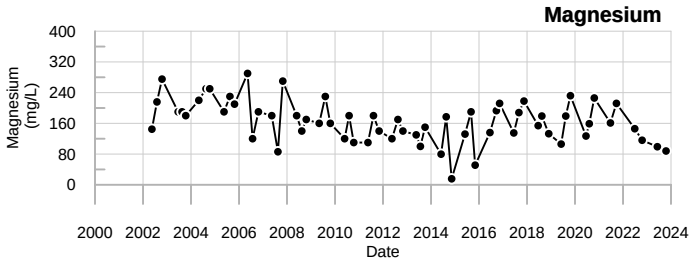
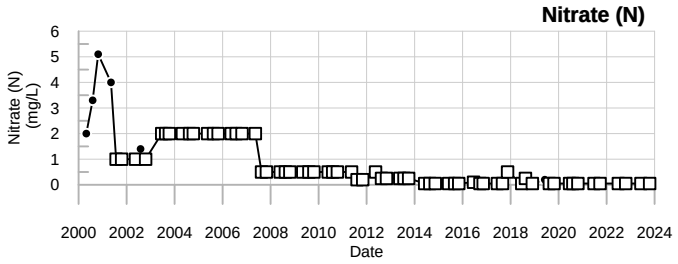
ENGINEERS

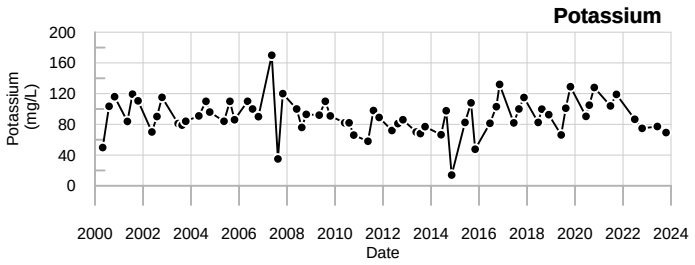
206A
Dolby Landfill

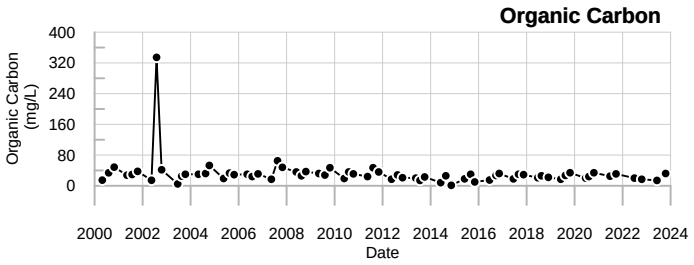


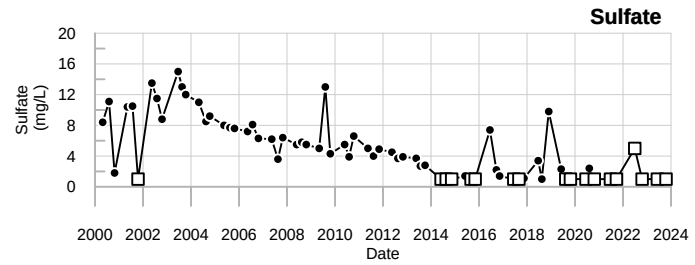


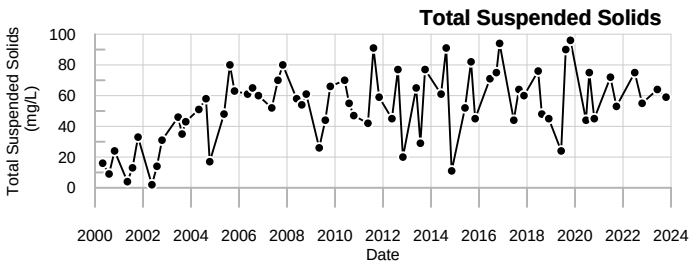


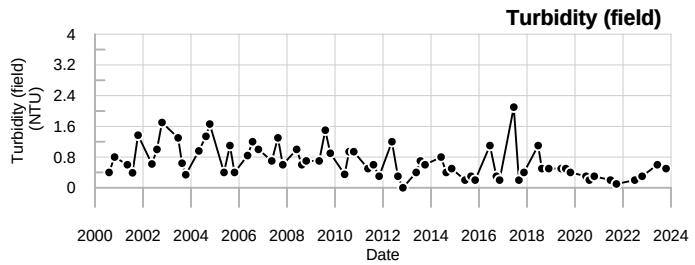












LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

SME
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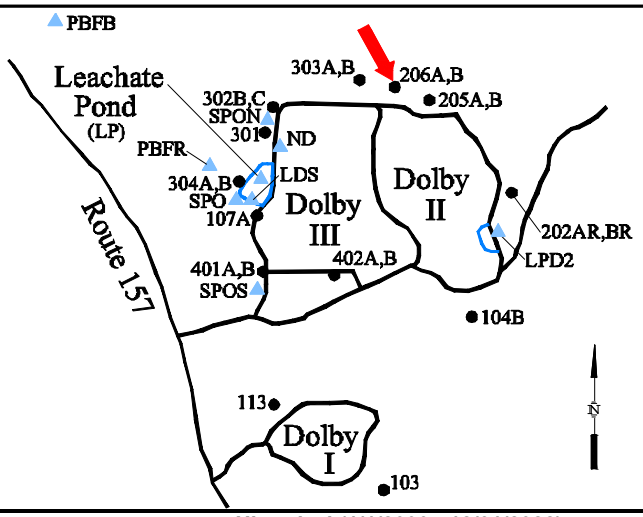
206A
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located downgradient to the northwest of the Dolby II Landfill.

Screen Interval: **12 ft. to 17 ft.**
Sampled: **2 Times Annually**
Sampled Since: **Jun-86**
Material Screened: **Glacial Till**
Well Condition: **Good**
Sampling Method: **Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		↑322		100	61	to 260	150	± 7.600	40
Dissolved Oxygen (mg/L)		6.6		3.8	2	to 10.7	5.8	± 0.360	39
Total Dissolved Solids (mg/L)		65		72	28	to 200	79	± 5.100	40
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.01 U	0.0063	± 0.000	39
Calcium (mg/L)		18.8		16	6.1	to 20	14	± 0.590	38
Manganese (mg/L)		0.113		0.0768	0.009	to 0.194	0.039	± 0.006	40
pH (STU)		6.6		6.2	5.26	to 7.7	6.5	± 0.078	40
Alkalinity (CaCO3) (mg/L)		66		65	8	to 85	54	± 3.100	40
Ca-mg Hardness (CaCO3) (mg/L)		72.9		61.6	22.1	to 89	57	± 3.100	40
Bicarbonate Alkalinity (CaCO3) (mg/L)		66		65	8	to 81	53	± 3.000	40
Sodium (mg/L)		1.82		1.64	1 U	to 4.4	2.3	± 0.130	40
Chloride (mg/L)		2 U		2 U	0.63	to 3.8	2.2	± 0.110	40
Iron (mg/L)		0.497		↑2.46	0.014	to 2.43	0.37	± 0.085	40
Magnesium (mg/L)		6.27		5.26	1.4	to 12	6	± 0.450	38
Potassium (mg/L)		5.84		5.93	3	to 7.5	4.9	± 0.180	40
Sulfate (mg/L)		5.8		4.4	1 U	to 23	9.3	± 0.790	40
Total Suspended Solids (mg/L)		7.2		12	0.32 U	to 22	4	± 0.740	40
Turbidity (field) (NTU)		1.8		2.6	0	to 12.2	2.2	± 0.390	39
Ammonia (N) (mg/L)		0.1 U		0.1 U	0.082 U	to 0.45	0.17	± 0.012	40
Nitrate (N) (mg/L)		0.34		0.21	0.1	to 2 U	0.91	± 0.110	40
Organic Carbon (mg/L)		1.3		2.4	1 U	to 5.1	2	± 0.140	40

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:50

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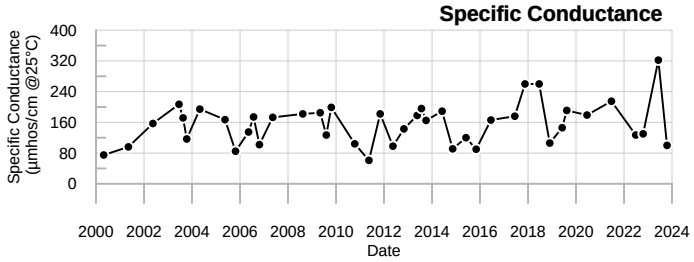

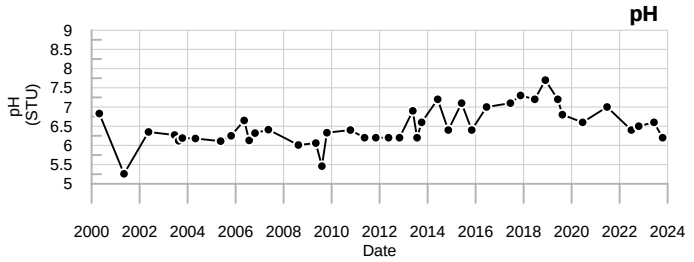

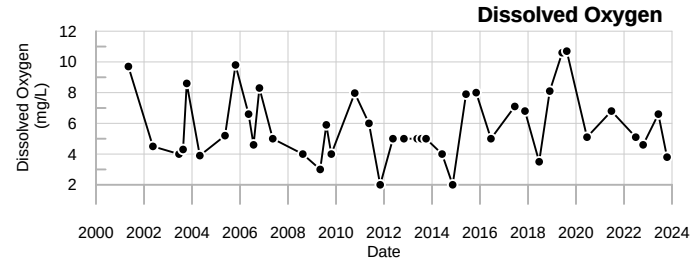

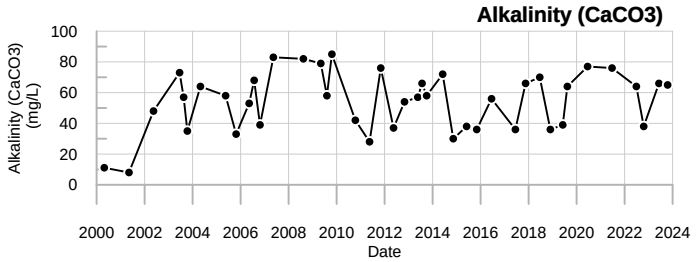

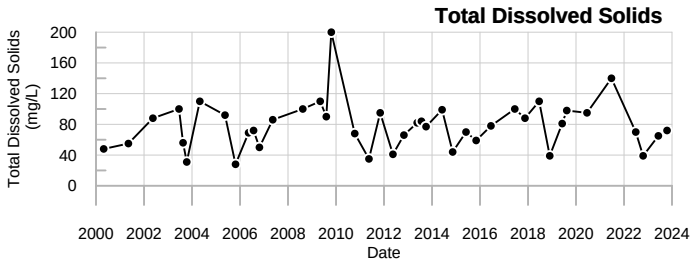

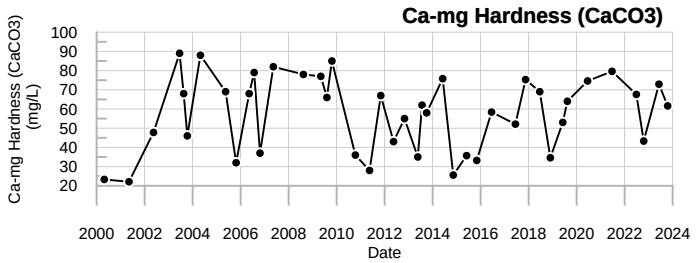

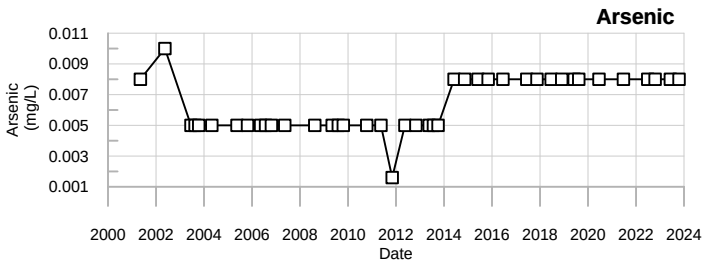

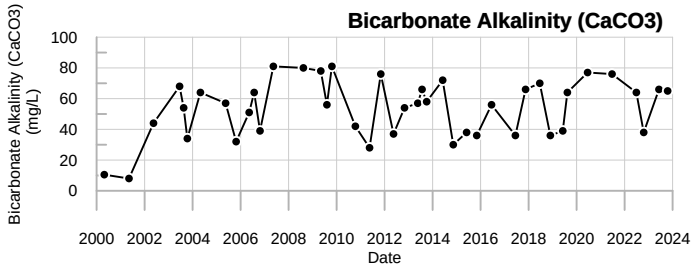

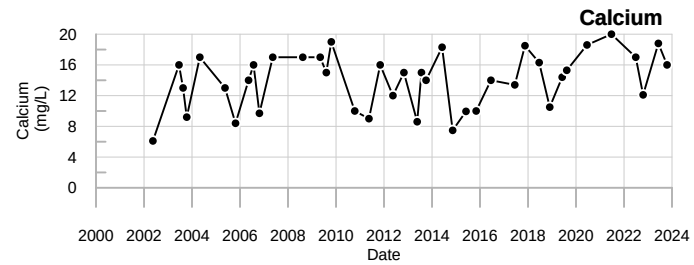

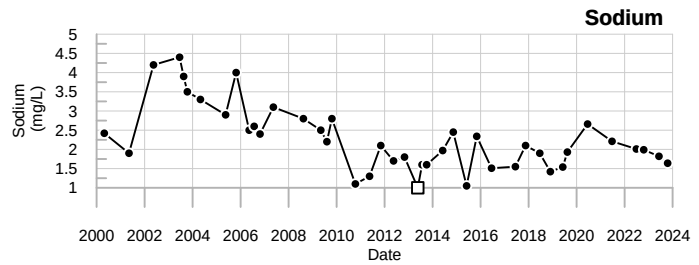

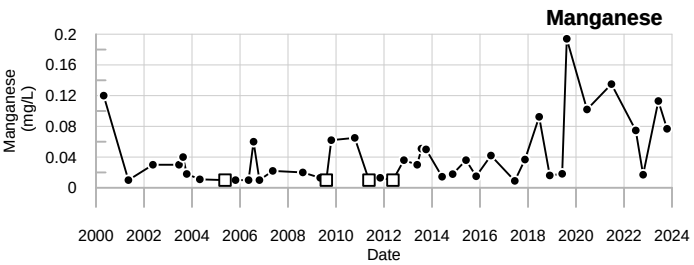

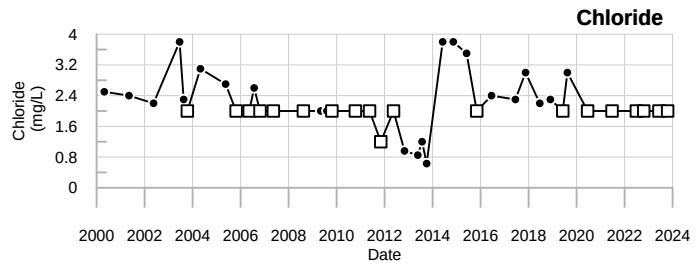

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

SME
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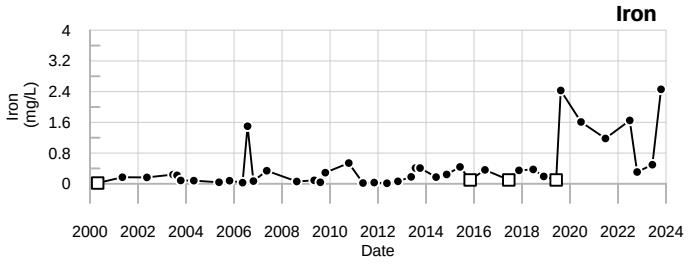
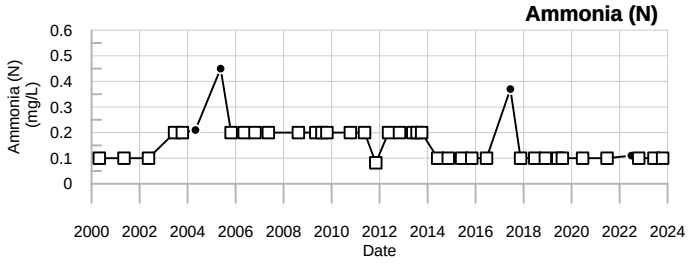
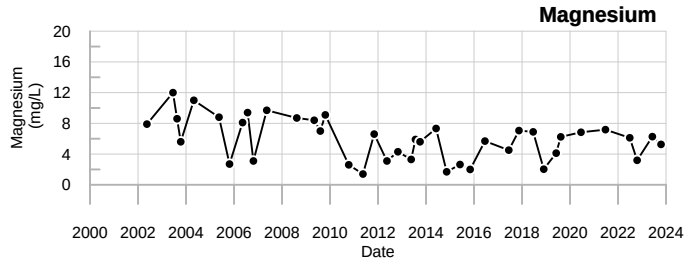
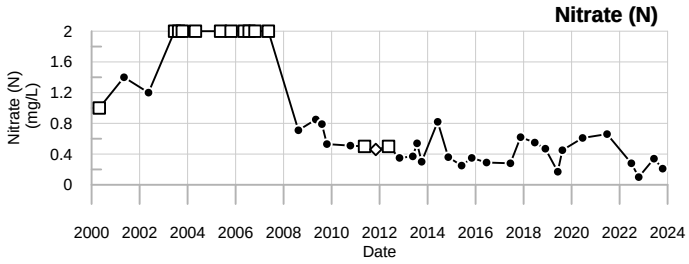
206B
Dolby Landfill

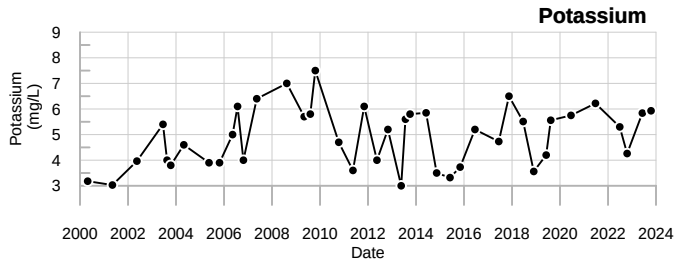
Sevee & Maher Engineers, Inc.

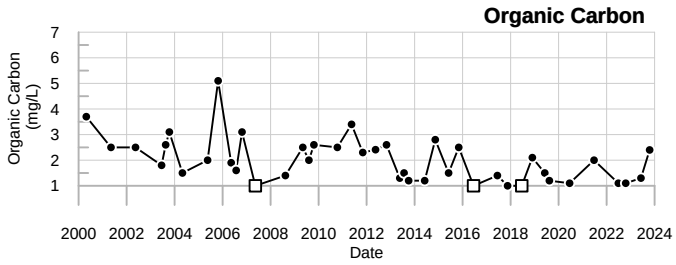


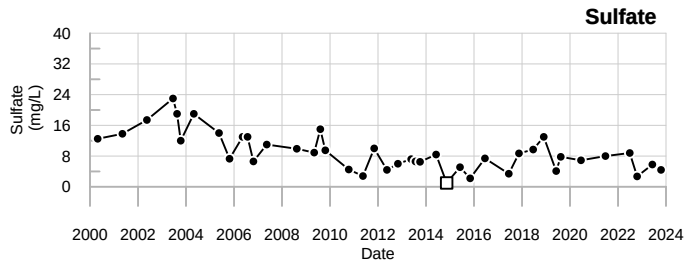


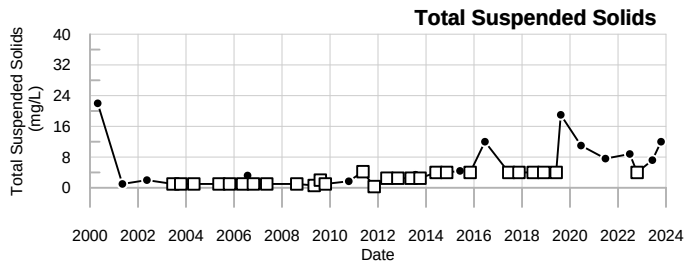


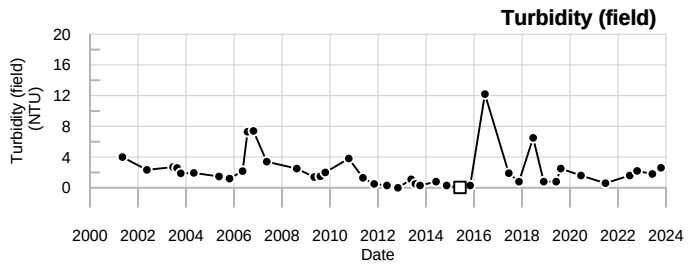












LEGEND

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SME
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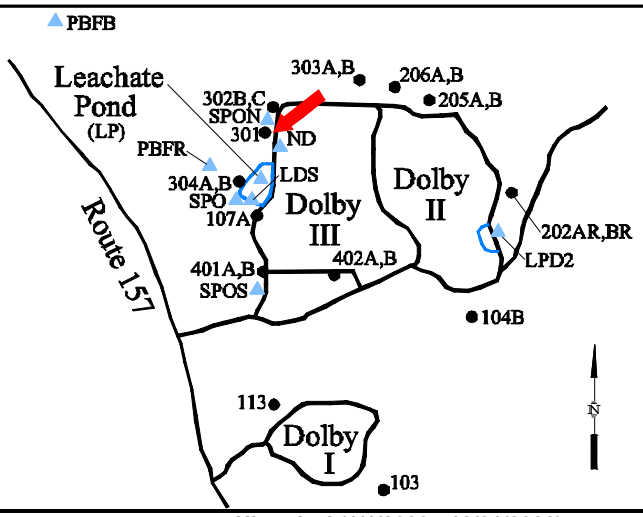
206B
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located downgradient to the west of Dolby III Landfill.

Screen Interval:	**10 ft. to 15 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Sep-83**
Material Screened:	**Glacial Till**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		1833		1975	338	to 2156	1300 ±	65.000	67
Dissolved Oxygen (mg/L)		↑5.7		0.1	0.1	to 3.02	0.81 ±	0.089	66
Total Dissolved Solids (mg/L)		1100		1200	212	to 1300	780 ±	42.000	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.01 U	0.0065 ±	0.000	65
Calcium (mg/L)		278		285	41.9	to 328	230 ±	9.700	61
Manganese (mg/L)		↑**1.22**		↑**1.3**	0.034	to 1.2	0.62 ±	0.029	67
pH (STU)		6.3		6.3	5.9	to 7.07	6.5 ±	0.025	67
Alkalinity (CaCO3) (mg/L)		1100		↑1200	125.2	to 1100	620 ±	38.000	67
Ca-mg Hardness (CaCO3) (mg/L)		1050		1080	125.8	to 1080	680 ±	38.000	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		1100		↑1200	110	to 1100	610 ±	39.000	67
Sodium (mg/L)		77.6		↑83.2	5.93	to 82.3	37 ±	2.900	67
Chloride (mg/L)		62		60	28.7	to 110	67 ±	3.300	67
Iron (mg/L)		0.261		0.227	0.02 U	to 0.83	0.16 ±	0.018	67
Magnesium (mg/L)		↑85.8		↑90.5	9	to 80.8	40 ±	3.000	61
Potassium (mg/L)		3.08		3.57	0.98	to 5.8	2.9 ±	0.130	67
Sulfate (mg/L)		21		20	9.3	to 49	26 ±	0.930	67
Total Suspended Solids (mg/L)		6.4		4 U	0.38 U	to 41	3.2 ±	0.610	67
Turbidity (field) (NTU)		0.4		0.3	0	to 1.6	0.38 ±	0.037	66
Ammonia (N) (mg/L)		0.1 U		0.1 U	0.08 U	to 0.5 U	0.15 ±	0.008	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 2 U	0.63 ±	0.087	67
Organic Carbon (mg/L)		↑39		↑50	1.1	to 24	9.8 ±	0.680	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 7
Printed: 3/4/2024 07:51

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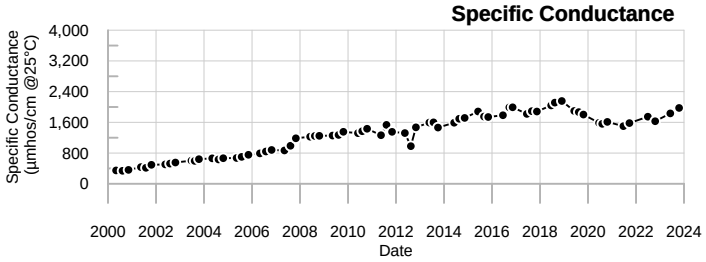

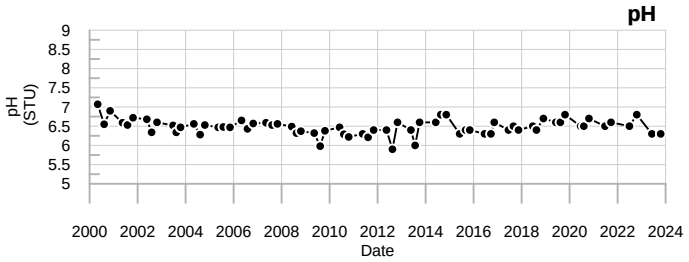

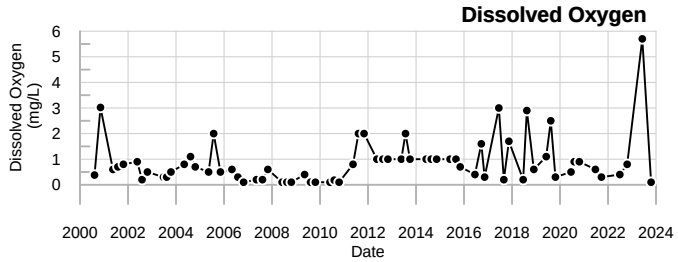

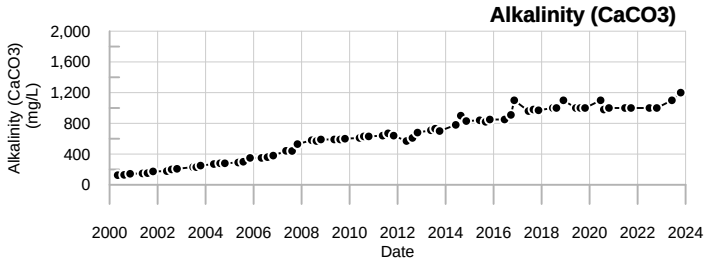

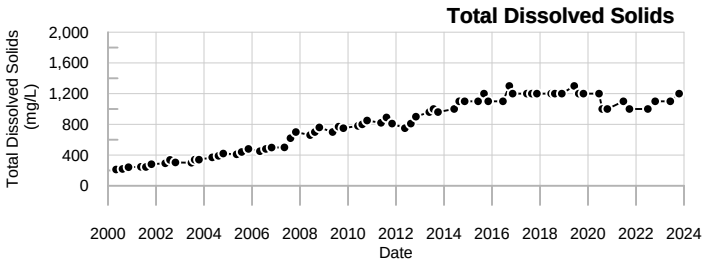

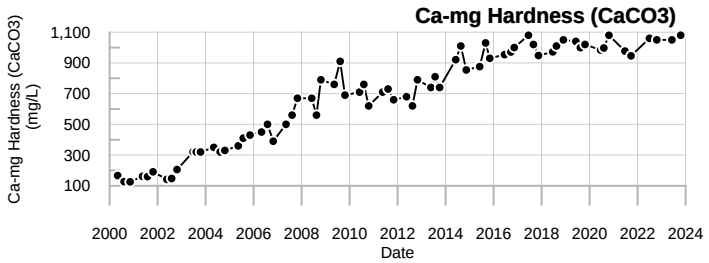

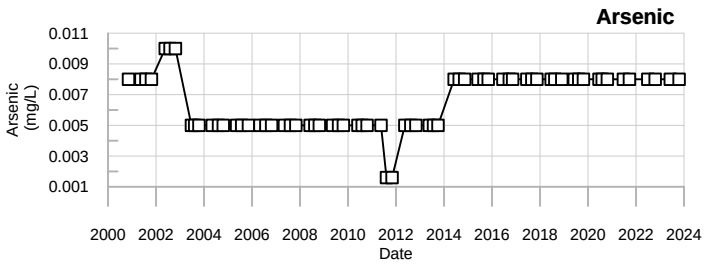

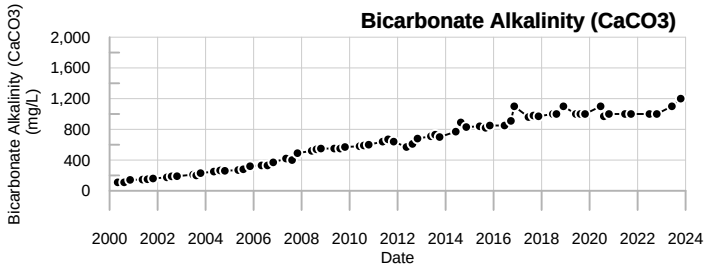

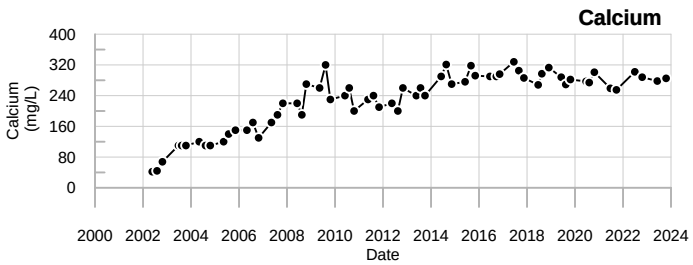

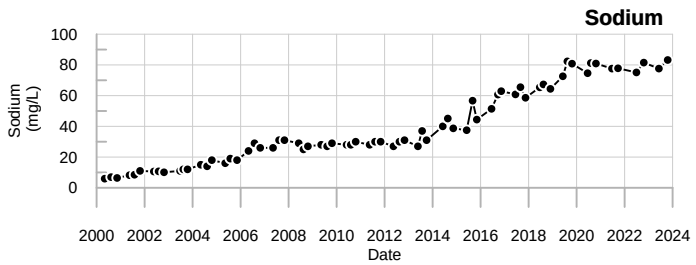

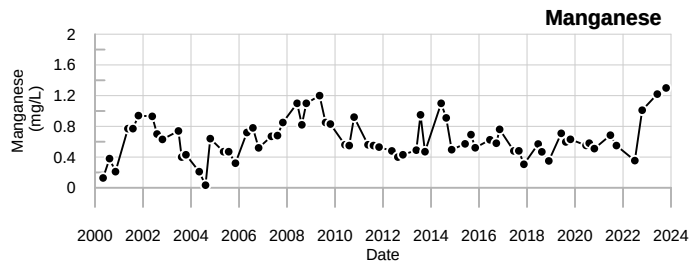

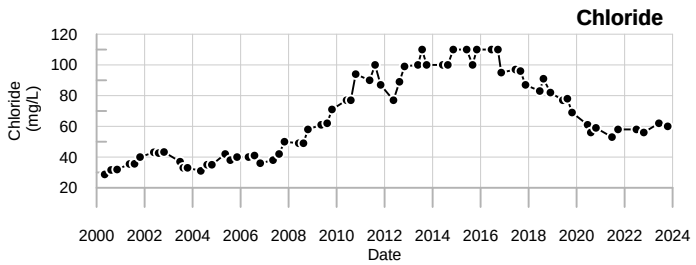

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

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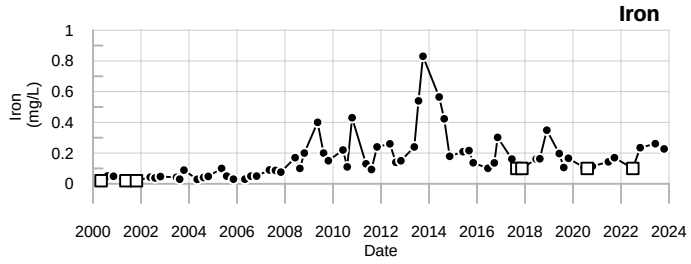
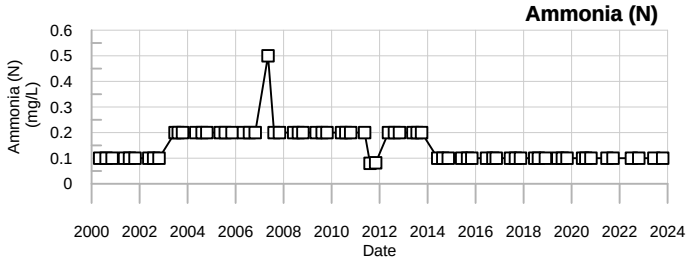
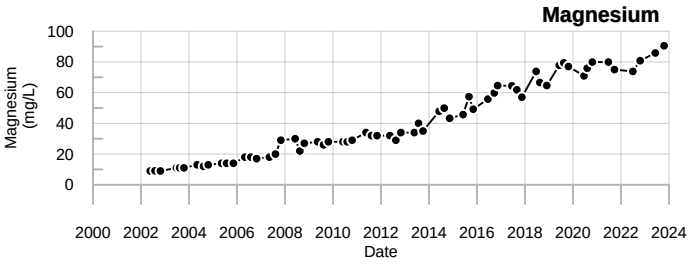
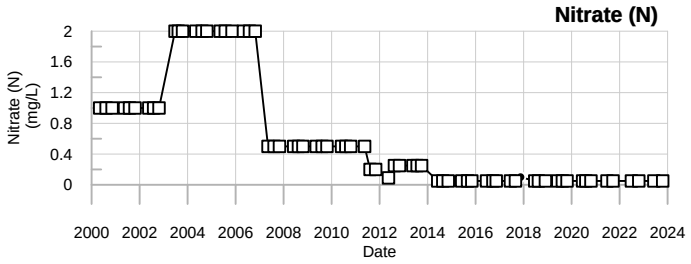
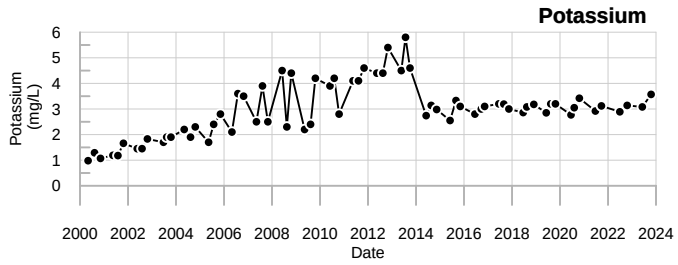
301
Dolby Landfill

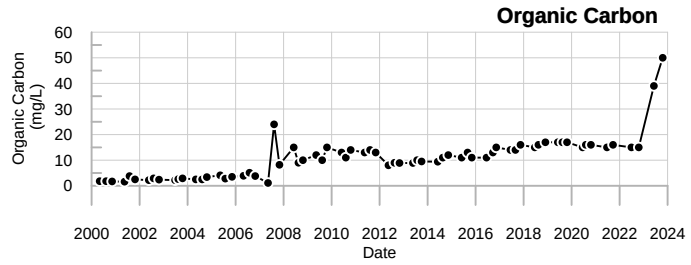


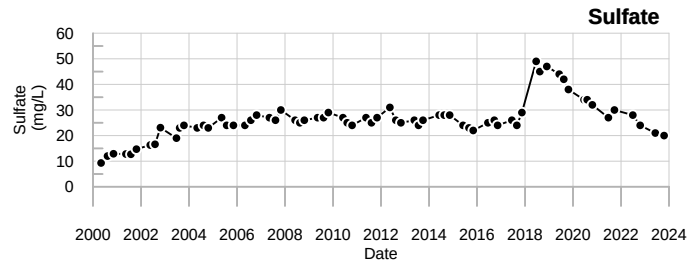


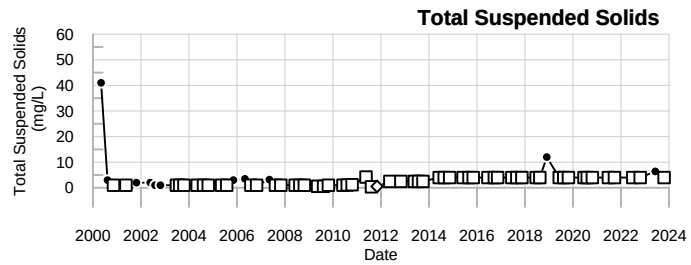


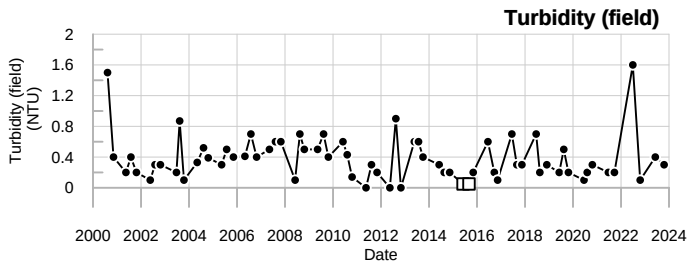












LEGEND

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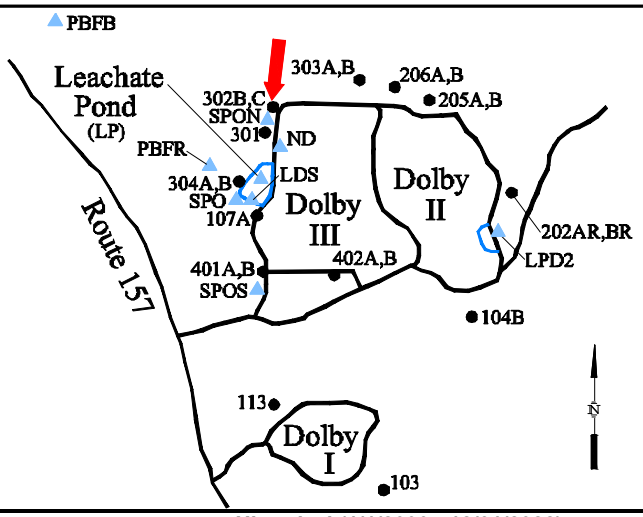
301
Dolby Landfill

Well Description

Well located downgradient to the northwest of Dolby III Landfill.

Screen Interval:	**18.8 ft. to 23.8 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Sep-83**
Material Screened:	**Bedrock**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		↑1818		↑1715	121	to 1709	1200 ±	45.000	67
Dissolved Oxygen (mg/L)		6.7		7.7	0.1	to 12.5	1.2 ±	0.210	66
Total Dissolved Solids (mg/L)		↑1200		1100	224	to 1100	740 ±	29.000	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.04 U	0.0072 ±	0.001	65
Calcium (mg/L)		258		247	82.2	to 610	200 ±	8.700	61
Manganese (mg/L)		**35.4**		**37.8**	1.118	to 89.5	19 ±	1.800	67
pH (STU)		6.3		6.5	5.77	to 8.9	6.4 ±	0.049	67
Alkalinity (CaCO3) (mg/L)		950		1000	88.9	to 1000	580 ±	29.000	67
Ca-mg Hardness (CaCO3) (mg/L)		938		908	143.9	to 2160	610 ±	34.000	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		950		1000	81	to 1000	570 ±	29.000	67
Sodium (mg/L)		73.8		73.5	6.5	to 152	38 ±	2.800	67
Chloride (mg/L)		60		59	38	to 82	59 ±	1.600	67
Iron (mg/L)		0.158		0.1 U	0.01 U	to 0.5 U	0.073 ±	0.009	67
Magnesium (mg/L)		71.2		70.9	7.3	to 156	37 ±	3.000	61
Potassium (mg/L)		9.56		10	1.16	to 12.4	3.2 ±	0.230	67
Sulfate (mg/L)		1 U		1 U	1 U	to 78	25 ±	2.300	67
Total Suspended Solids (mg/L)		4 U		4 U	0.32 U	to 9	2.5 ±	0.210	67
Turbidity (field) (NTU)		0.8		0.4	0	to 1.8	0.41 ±	0.034	66
Ammonia (N) (mg/L)		1.5		1.4	0.08 U	to 2	0.34 ±	0.042	67
Nitrate (N) (mg/L)		0.066		0.05 U	0.05 U	to 2 U	0.65 ±	0.086	67
Organic Carbon (mg/L)		↑40		↑71	3.1	to 34	19 ±	0.890	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 7
Printed: 3/4/2024 07:51

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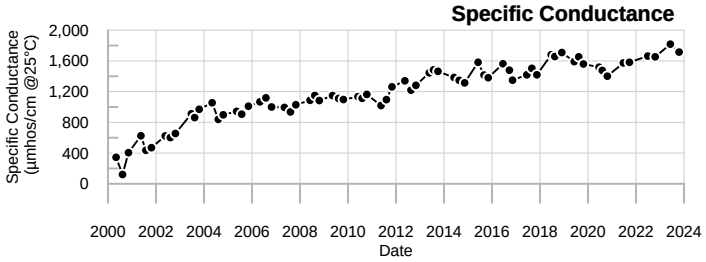

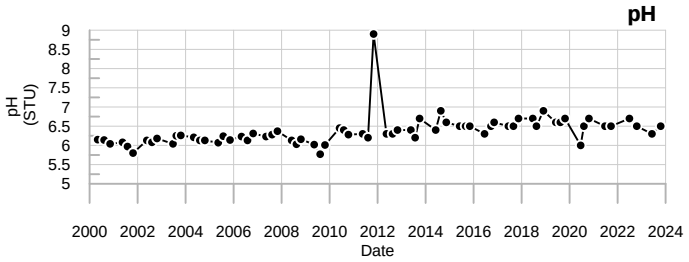

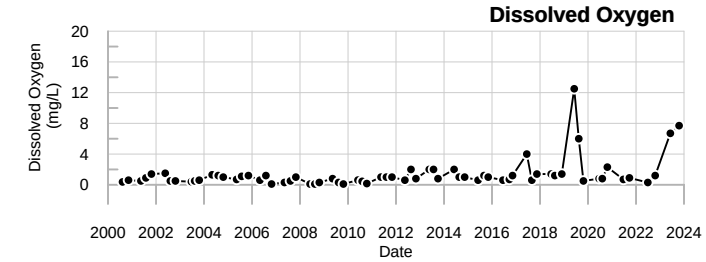

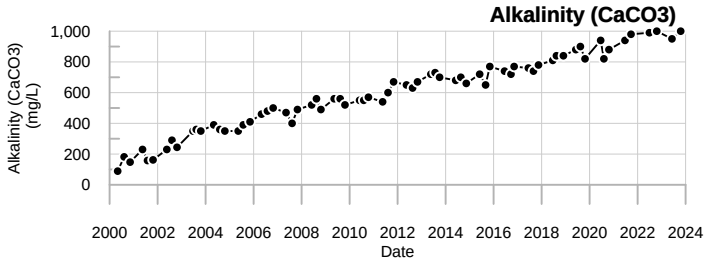

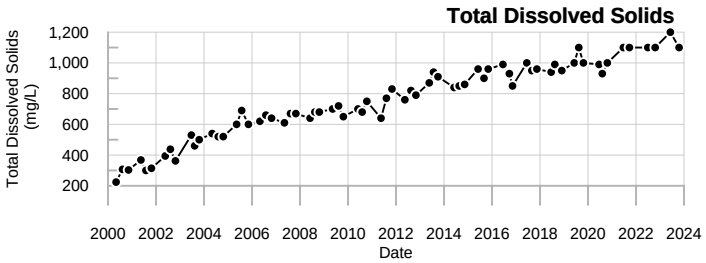

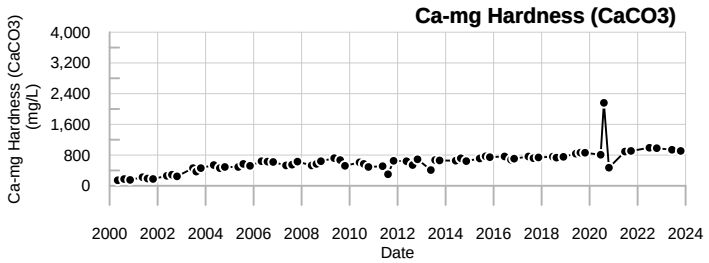

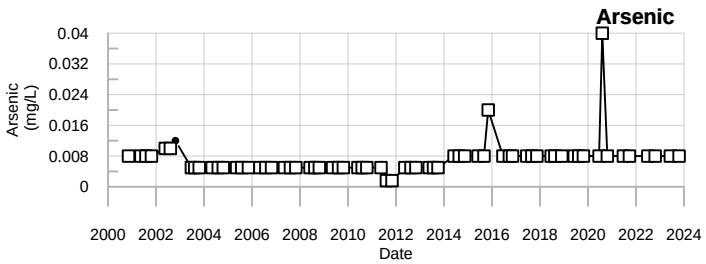

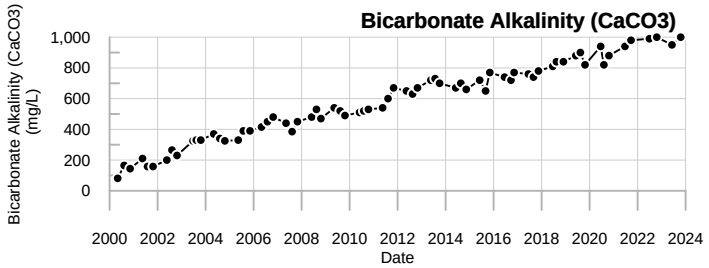

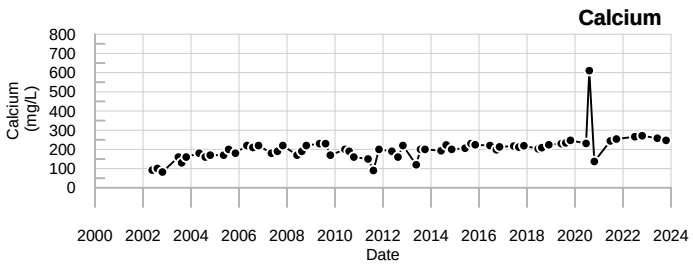

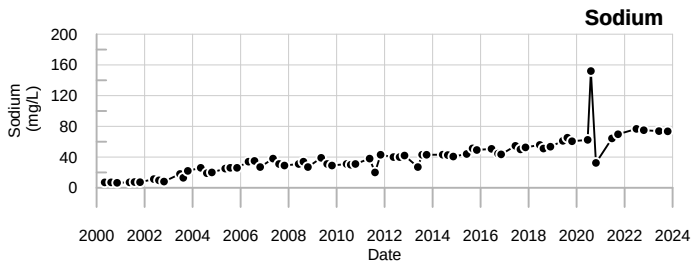

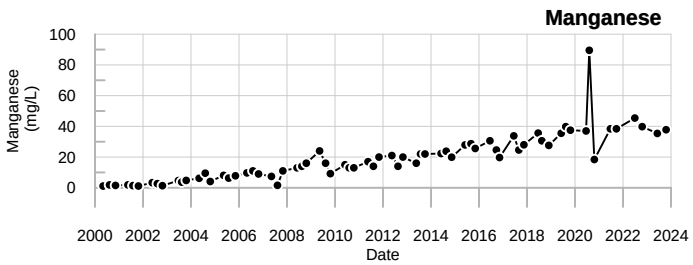

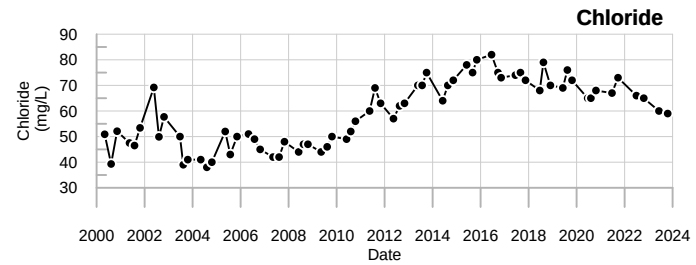

LEGEND

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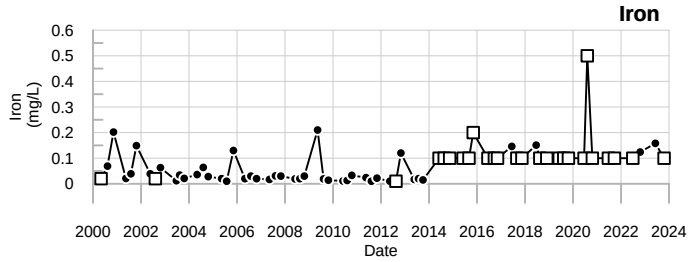
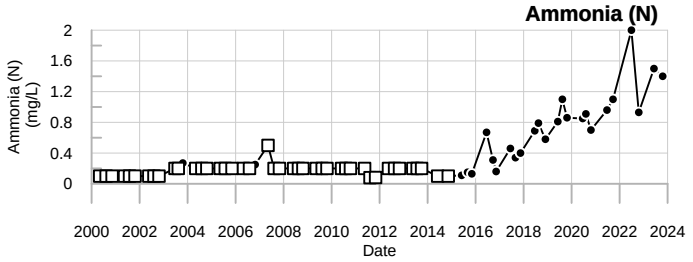
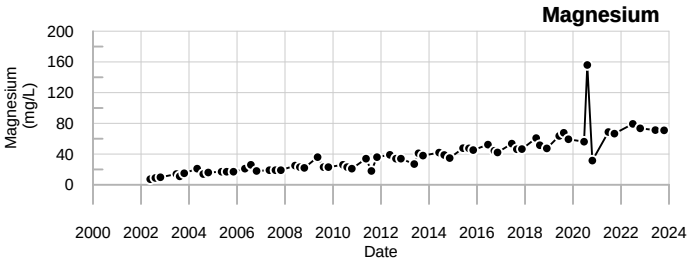
SME
SEVEE & MAHER ENGINEERS

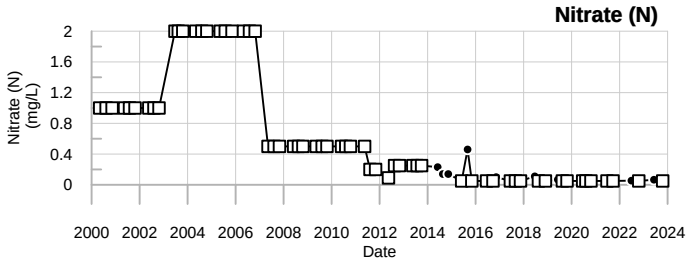
302B
Dolby Landfill

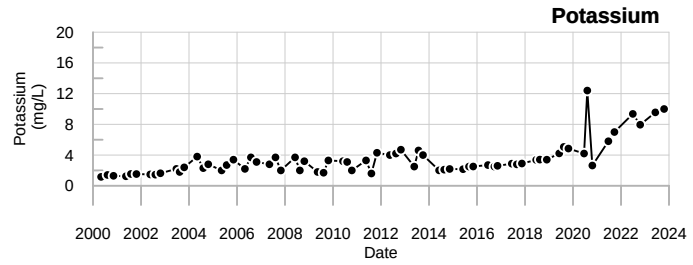
Sevee & Maher Engineers, Inc.

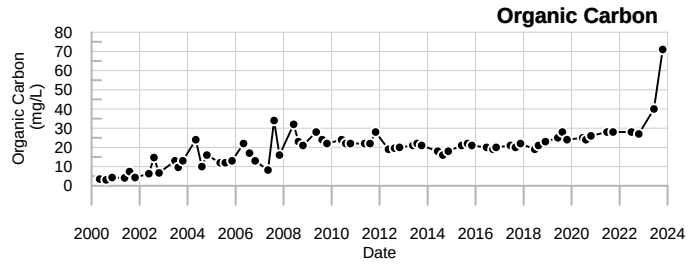


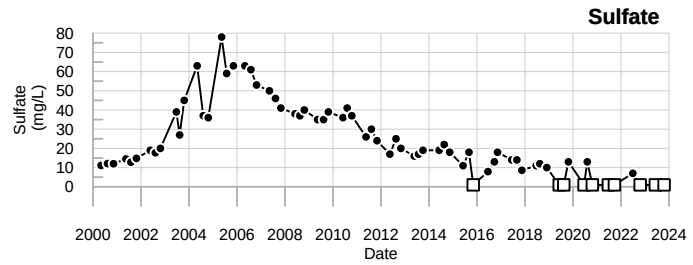


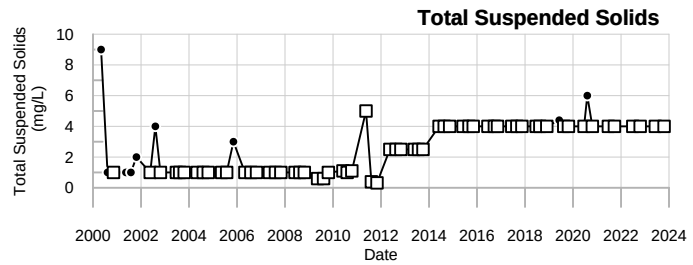


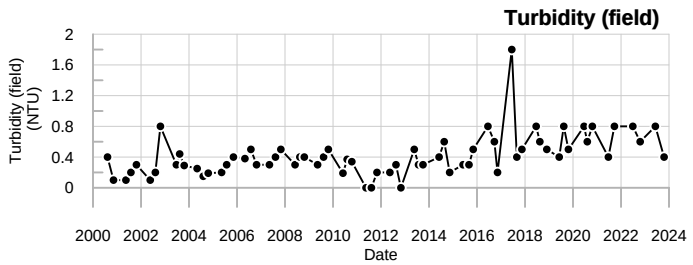












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SME
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302B
Dolby Landfill

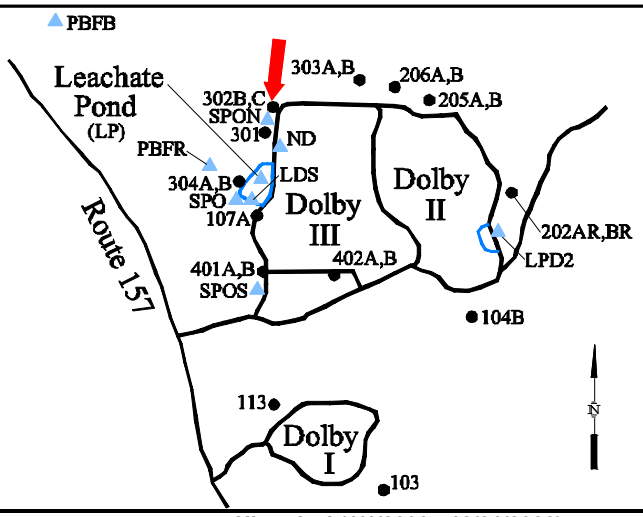
Sevee & Maher Engineers, Inc.

302C

Well Description

Well located downgradient to the northwest of Dolby III Landfill.

Screen Interval:	**6 ft. to 11 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Sep-83**
Material Screened:	**Glacial Till**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		↑1807		1729	292	to 1793	1100 ±	44.000	67
Dissolved Oxygen (mg/L)		↑7.4		0.3	0.1	to 6.6	0.86 ±	0.120	66
Total Dissolved Solids (mg/L)		1200		1000	189	to 1200	690 ±	29.000	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.04 U	0.0072 ±	0.001	65
Calcium (mg/L)		230		182	72	to 243	160 ±	4.500	61
Manganese (mg/L)		**54**		**46.8**	0.171	to 60.5	25 ±	2.200	67
pH (STU)		6.3		6.3	5.71	to 7.4	6.3 ±	0.036	67
Alkalinity (CaCO3) (mg/L)		1000		920	47.3	to 1100	560 ±	31.000	67
Ca-mg Hardness (CaCO3) (mg/L)		936		770	105.5	to 977	540 ±	24.000	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		1000		920	39	to 1100	540 ±	32.000	67
Sodium (mg/L)		76.1		66.5	6.98	to 81.9	40 ±	2.100	67
Chloride (mg/L)		52		46	26	to 140	54 ±	1.900	67
Iron (mg/L)		0.855		0.455	0.02 U	to 2.442	0.66 ±	0.065	67
Magnesium (mg/L)		87.7		76.8	9.2	to 90.1	42 ±	2.500	61
Potassium (mg/L)		26		↑29.1	1.19	to 28.9	4.5 ±	0.560	67
Sulfate (mg/L)		1 U		1 U	1 U	to 79	22 ±	2.700	67
Total Suspended Solids (mg/L)		4 U		4 U	0.32 U	to 23	2.7 ±	0.350	67
Turbidity (field) (NTU)		0.5		0.2	0	to 1.2	0.33 ±	0.027	66
Ammonia (N) (mg/L)		5.3		6.3	0.08 U	to 6.5	0.78 ±	0.150	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 2 U	0.63 ±	0.087	67
Organic Carbon (mg/L)		↑53		↑56	2.6	to 48	19 ±	0.980	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 7
Printed: 3/4/2024 07:51

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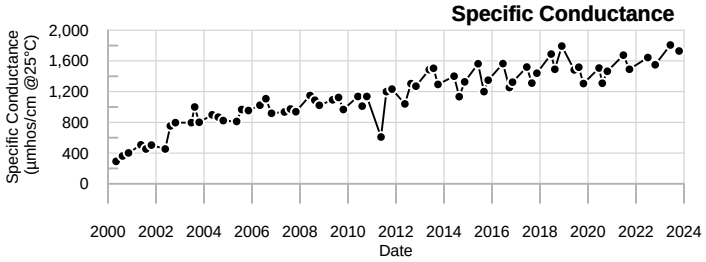
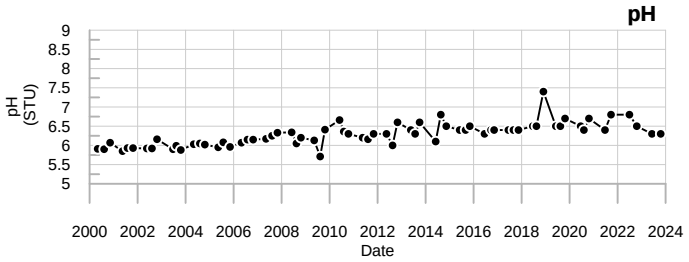
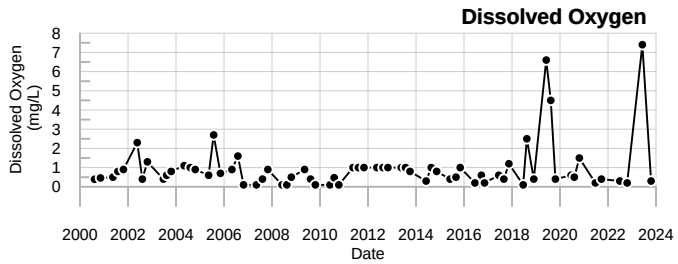
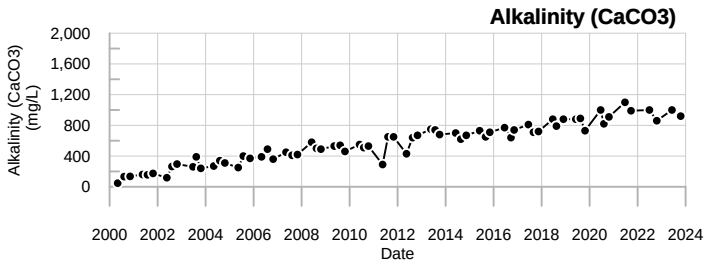
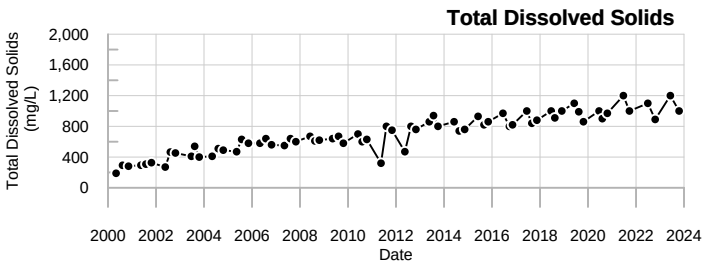
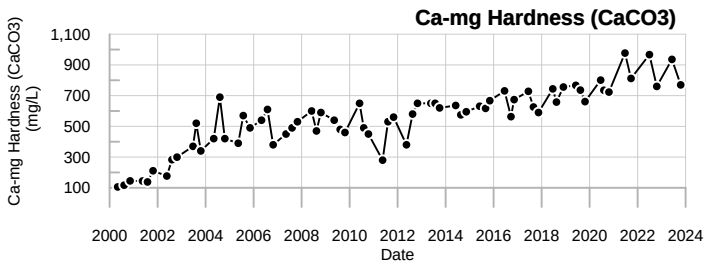


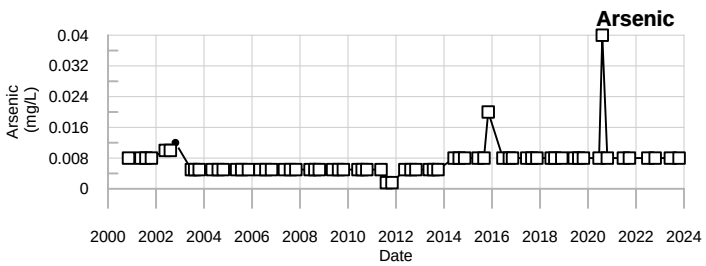


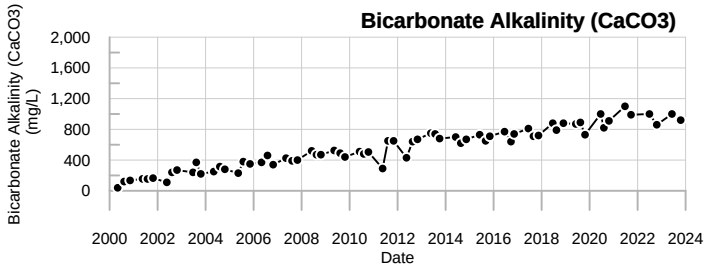


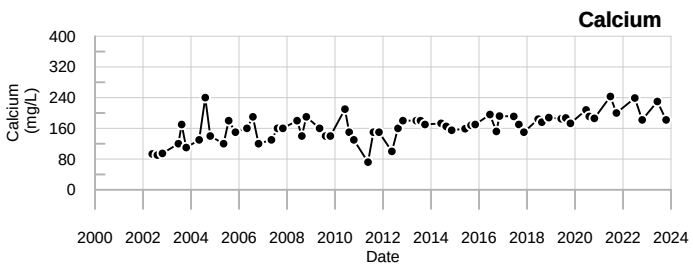


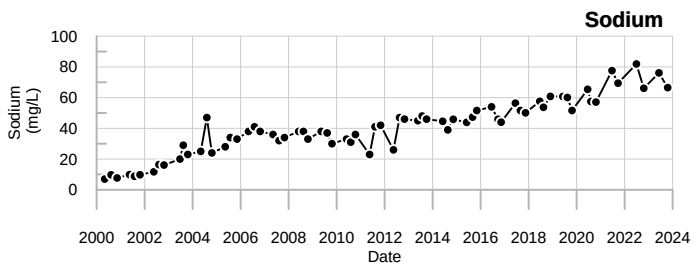


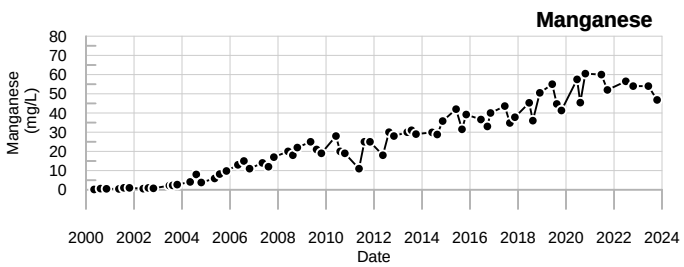


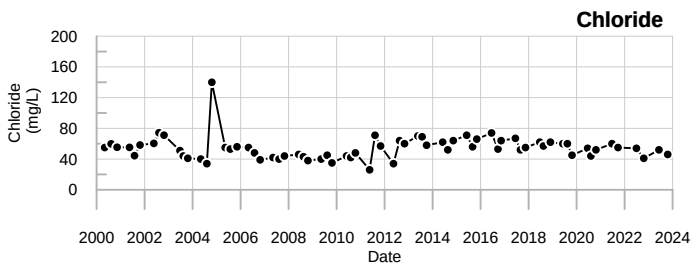












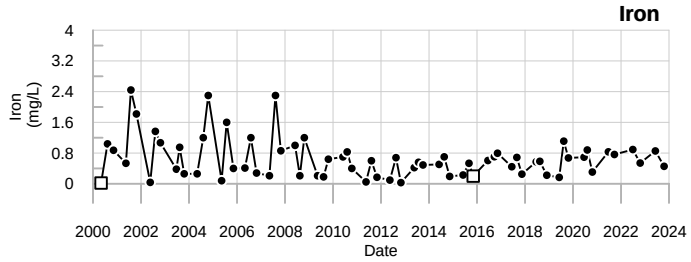
LEGEND

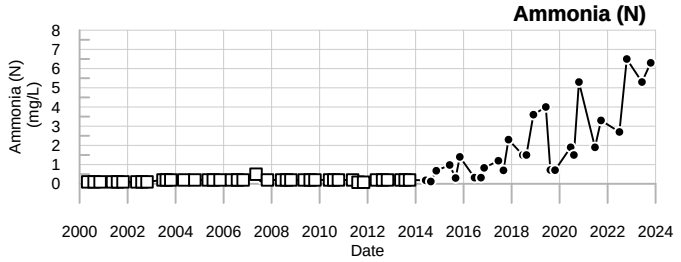
- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

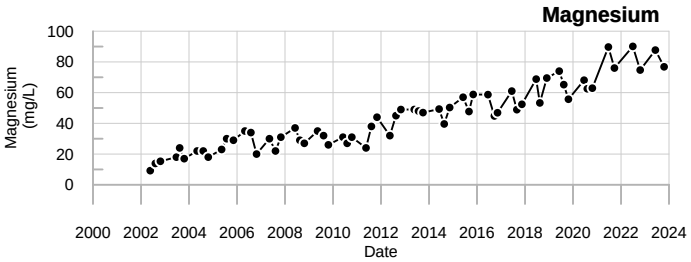
SME
SEVEE & MAHER ENGINEERS

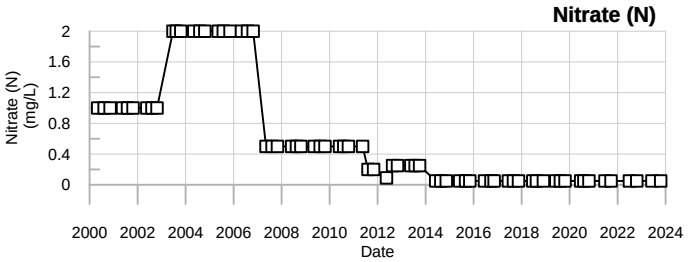
302C
Dolby Landfill

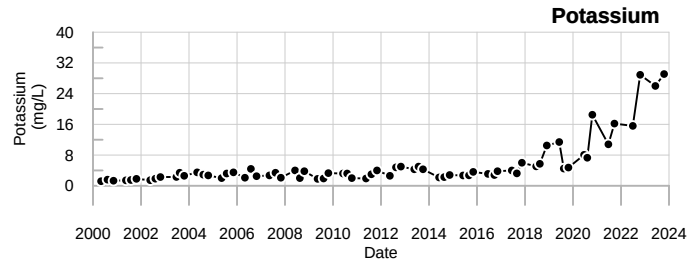
Sevee & Maher Engineers, Inc.

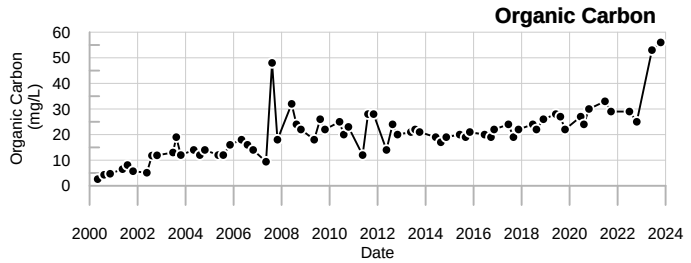


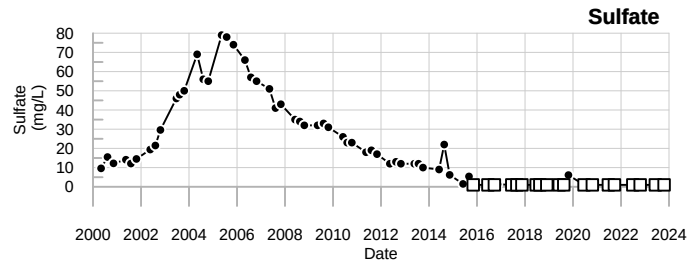


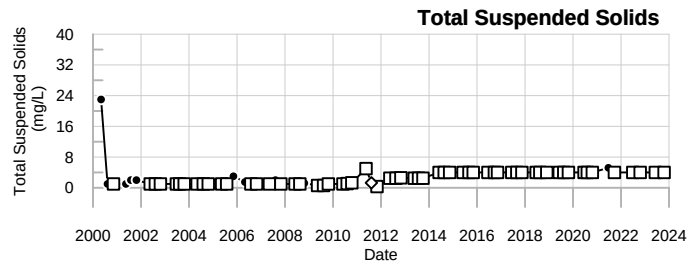


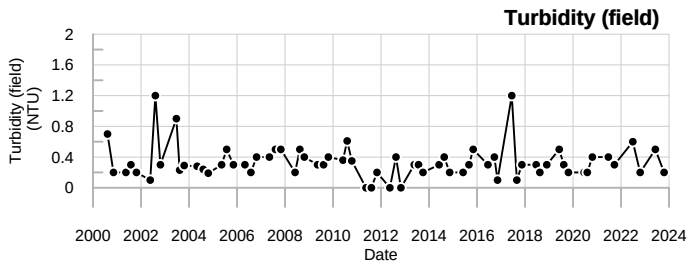












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SME
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ENGINEERS

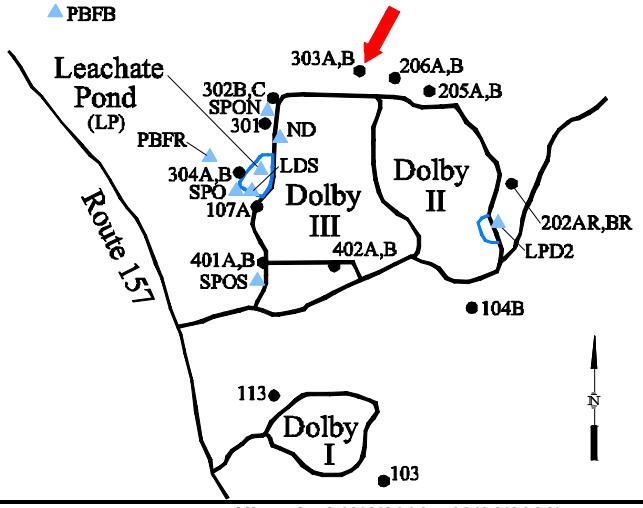
302C
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located downgradient to the northwest of the Dolby II Landfill.

Screen Interval:	**32.6 ft. to 42.6 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Jun-85**
Material Screened:	**Bedrock**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		780		847	90	to 2650	1200 ±	62.000	67
Dissolved Oxygen (mg/L)		4.1		↑7.1	0.1	to 4.9	0.83 ±	0.110	66
Total Dissolved Solids (mg/L)		370		410	300	to 1537	640 ±	35.000	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.022	0.0067 ±	0.000	65
Calcium (mg/L)		52.3		54.9	37.2	to 180	86 ±	4.700	61
Manganese (mg/L)		**7.58**		**8.49**	5.11	to 21	11 ±	0.390	67
pH (STU)		6.2		6.2	6	to 7.2	6.6 ±	0.027	67
Alkalinity (CaCO3) (mg/L)		390		460	200	to 1470	620 ±	34.000	67
Ca-mg Hardness (CaCO3) (mg/L)		336		366	221	to 1274.3	570 ±	33.000	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		390		460	180	to 1470	600 ±	32.000	67
Sodium (mg/L)		10.6		11.6	7.6	to 54.3	22 ±	1.500	67
Chloride (mg/L)		7.8		10	3.2	to 83.9	22 ±	2.200	67
Iron (mg/L)		0.3		0.998	0.013	to 2.84	0.36 ±	0.057	67
Magnesium (mg/L)		49.8		55.7	31.2	to 190	77 ±	4.700	61
Potassium (mg/L)		32.2		31	23	to 71	39 ±	1.500	67
Sulfate (mg/L)		14		12	9	to 41	15 ±	0.520	67
Total Suspended Solids (mg/L)		4 U		4 U	0.32 U	to 7	2.8 ±	0.200	67
Turbidity (field) (NTU)		0.4		0.3	0	to 2	0.49 ±	0.046	66
Ammonia (N) (mg/L)		5.7		5.9	4.4	to 24	8.3 ±	0.450	67
Nitrate (N) (mg/L)		3.1		0.93	0.05 U	to 8	1.8 ±	0.210	67
Organic Carbon (mg/L)		9.2		14	2.9	to 158.5	12 ±	2.300	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

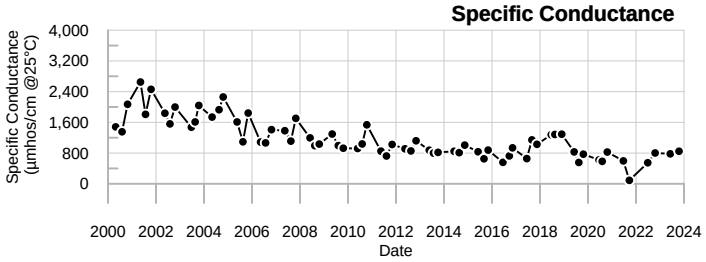
↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

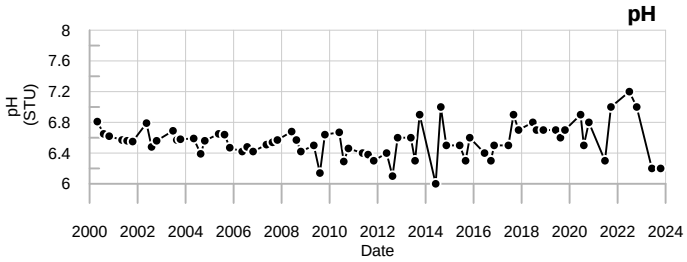
Comments

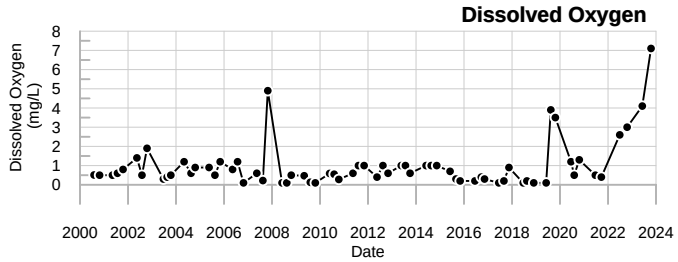
Q2= 6 - 2023
Q4= 10 - 2023

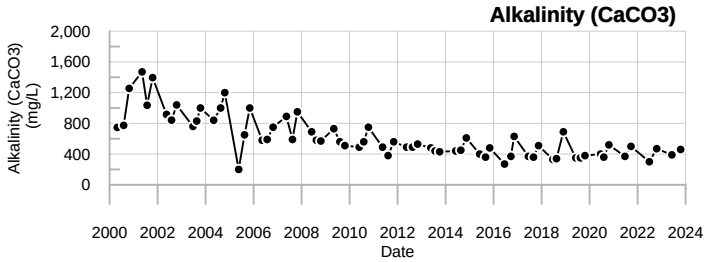
U = Not Detected above the laboratory reporting limit.

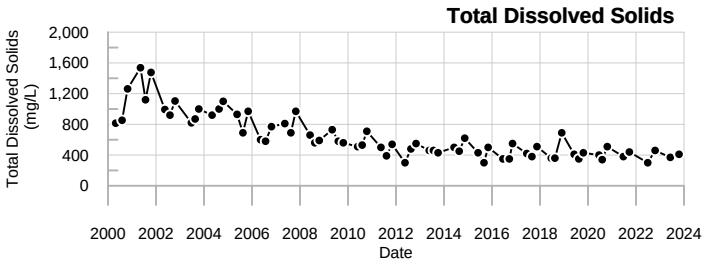
Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

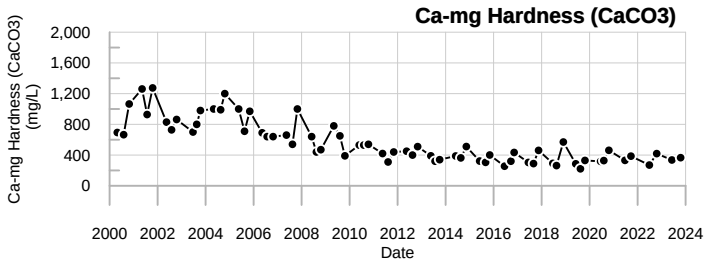


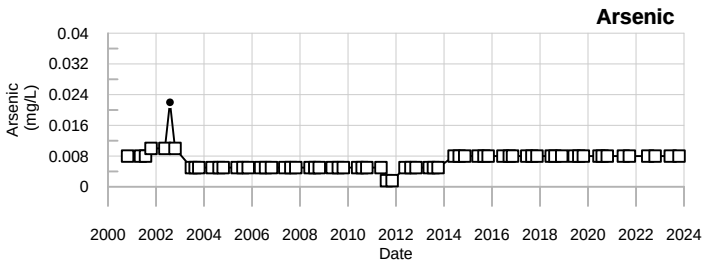


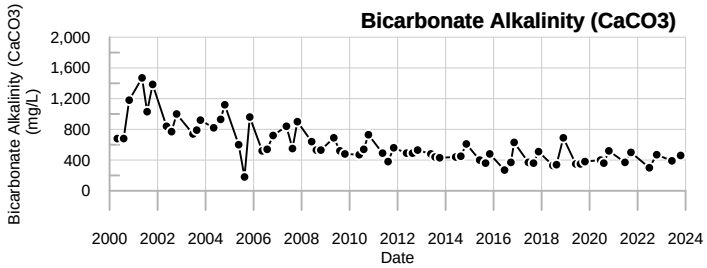


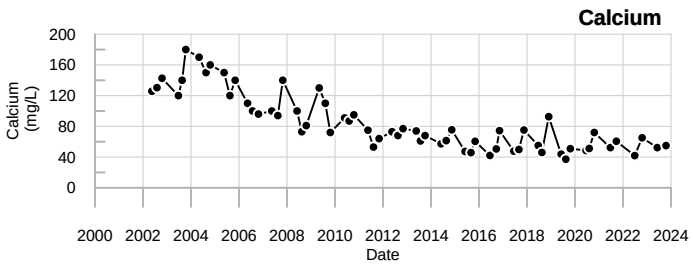


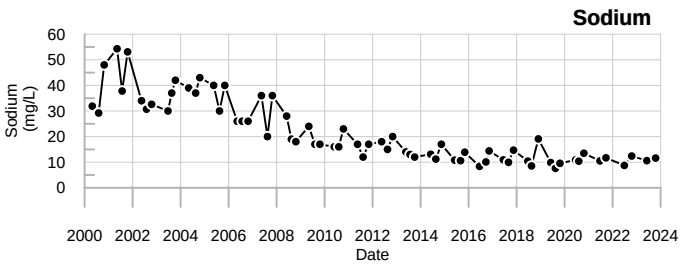


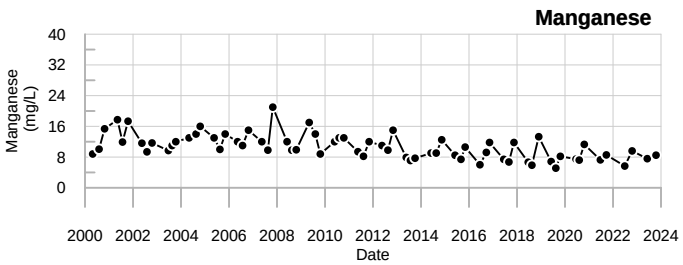


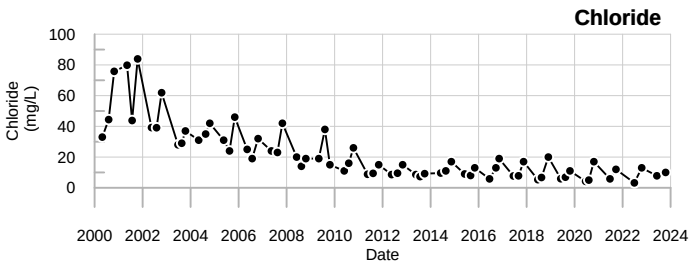












LEGEND

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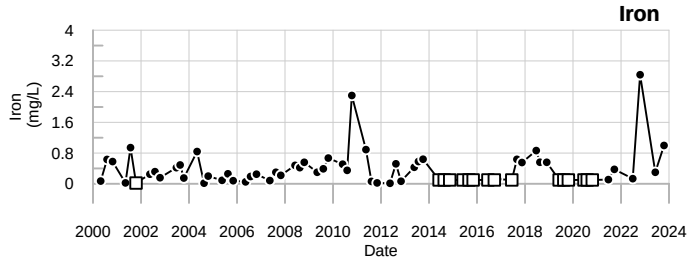
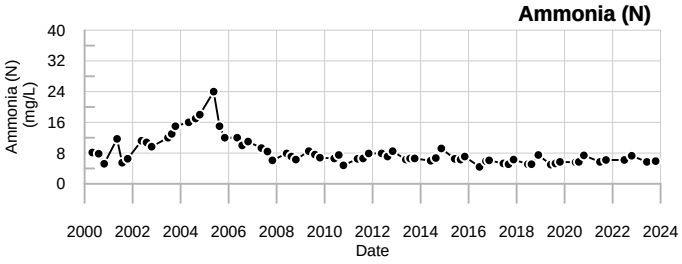
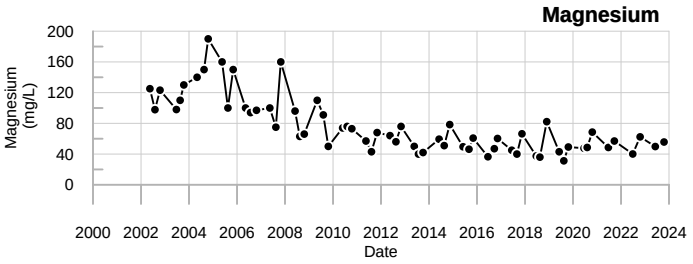
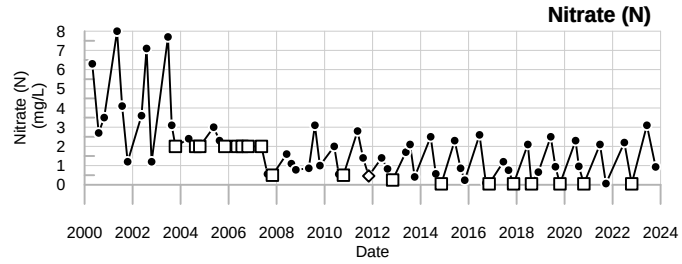
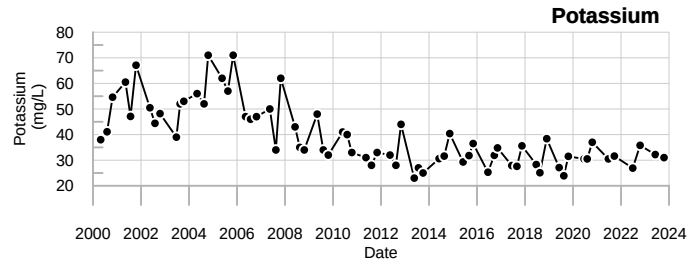
303A
Dolby Landfill

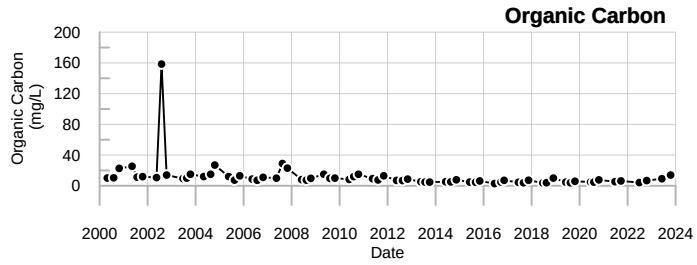


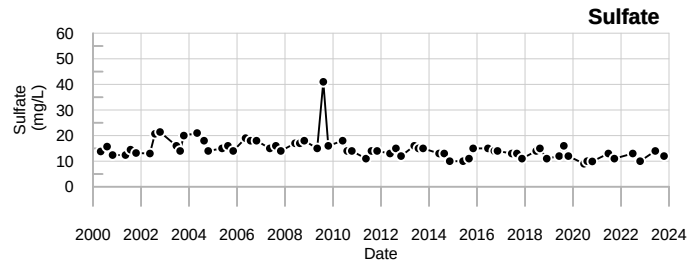


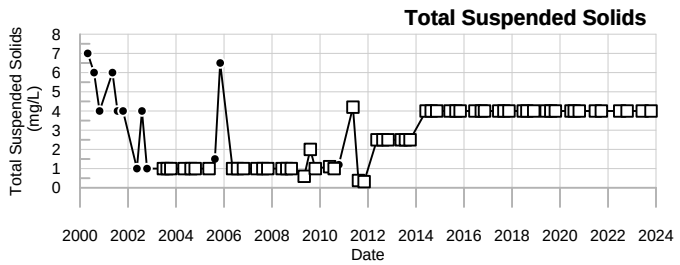


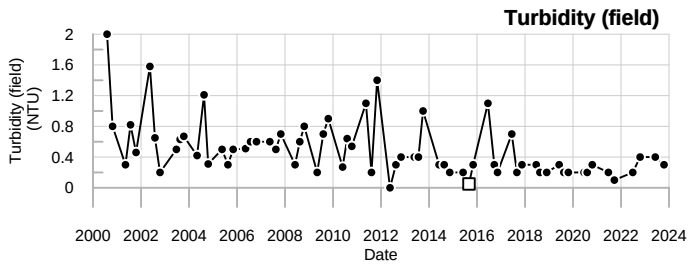












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SME
SEVEE & MAHER
ENGINEERS

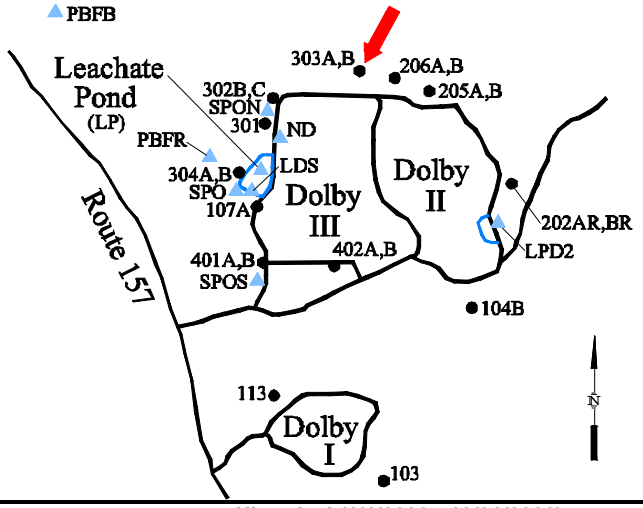
303A
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located downgradient to the northwest of the Dolby II Landfill.

Screen Interval:	**13.3 ft. to 23.3 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Jun-85**
Material Screened:	**Glacial Till**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		578		739	383	to 2630	1000	± 66.000	67
Dissolved Oxygen (mg/L)		↑5.6		↑5.1	0.1	to 4.2	0.91	± 0.091	66
Total Dissolved Solids (mg/L)		280		380	100	to 1605	560	± 40.000	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.021	0.0067	± 0.000	65
Calcium (mg/L)		43.4		59	24.6	to 150	64	± 4.100	61
Manganese (mg/L)		**5.48**		**7.27**	4.07	to 28.06	9.3	± 0.530	67
pH (STU)		6.2		6.1	5.9	to 6.8	6.5	± 0.022	67
Alkalinity (CaCO3) (mg/L)		300		410	170	to 1545.3	530	± 38.000	67
Ca-mg Hardness (CaCO3) (mg/L)		274		367	157	to 1392.2	480	± 37.000	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		290		410	170	to 1514	510	± 36.000	67
Sodium (mg/L)		8.33		11.8	4.96	to 59.8	19	± 1.600	67
Chloride (mg/L)		5.9		9.1	2.8	to 86.1	20	± 2.300	67
Iron (mg/L)		0.1 U		0.1 U	0.0039	to 0.187	0.054	± 0.006	67
Magnesium (mg/L)		40.3		53.3	10 U	to 190	67	± 5.500	61
Potassium (mg/L)		23.8		27.2	17.5	to 69.3	34	± 1.500	67
Sulfate (mg/L)		13		13	6.2	to 35	12	± 0.490	67
Total Suspended Solids (mg/L)		4 U		4 U	0.32 U	to 35	3.1	± 0.520	67
Turbidity (field) (NTU)		0.3		0.1	0	to 1.1	0.34	± 0.024	66
Ammonia (N) (mg/L)		3.6		4	0.21	to 20 U	6.1	± 0.400	67
Nitrate (N) (mg/L)		3.2		1.6	0.16	to 13	3.2	± 0.320	67
Organic Carbon (mg/L)		7.1		13	1 U	to 37	9.3	± 0.850	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:50

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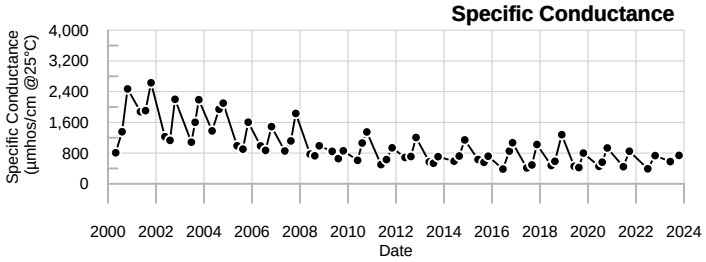

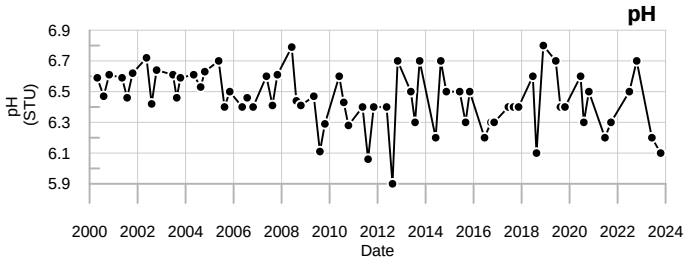

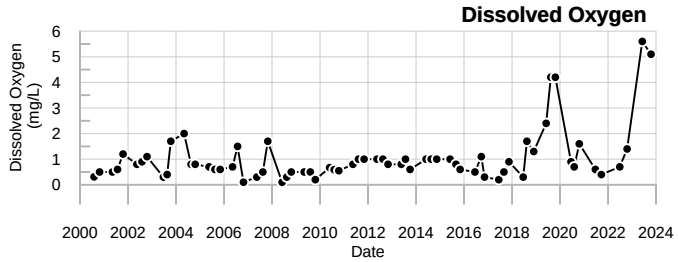

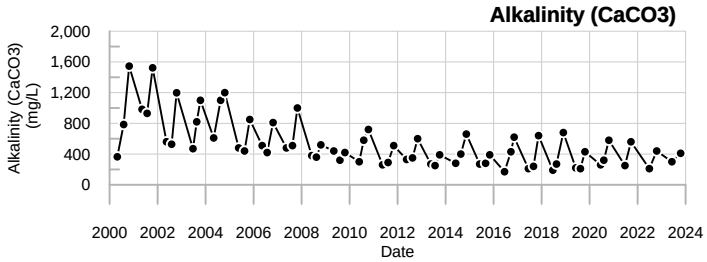

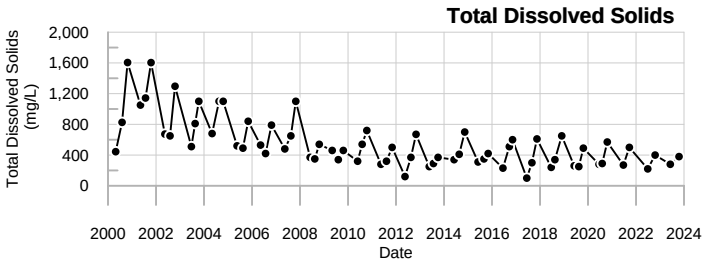

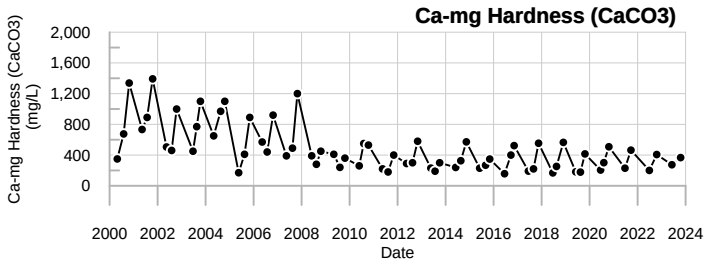

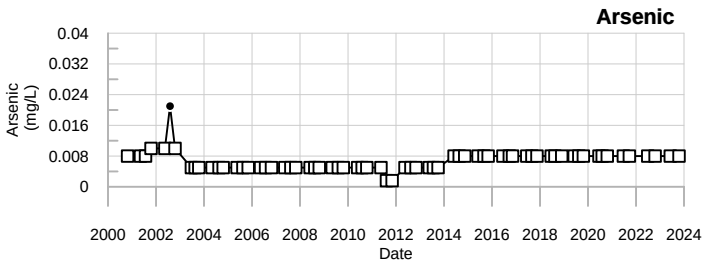

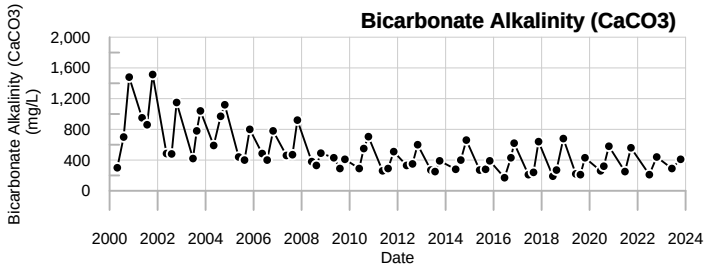

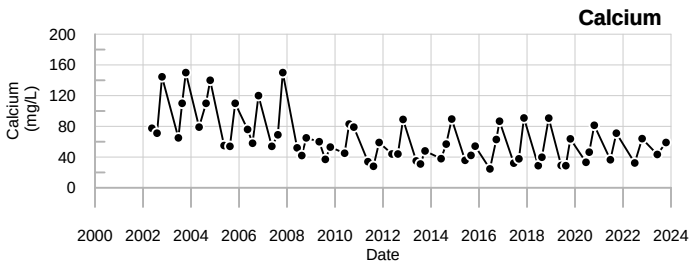

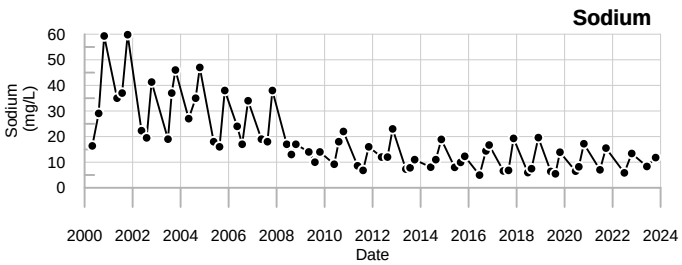

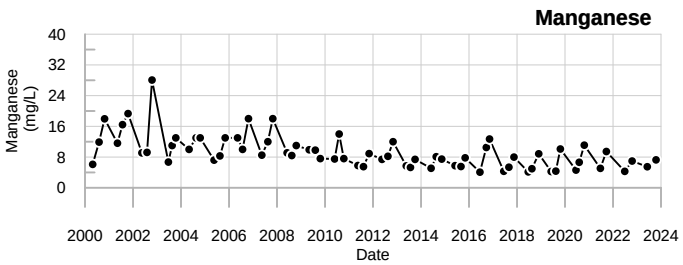

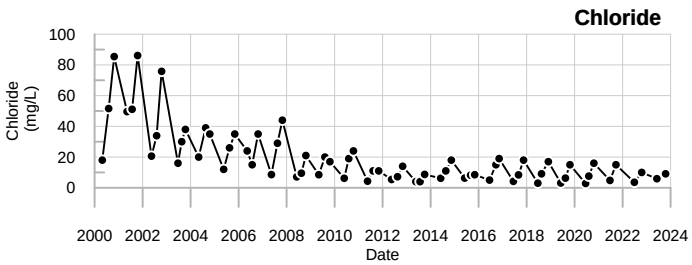

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

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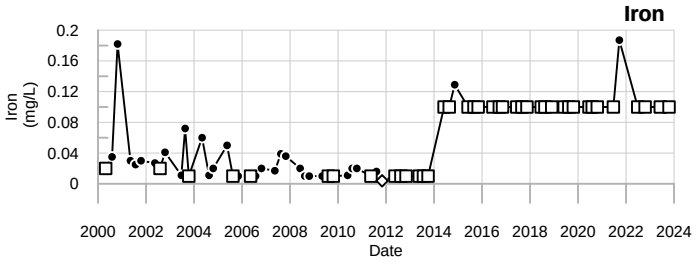
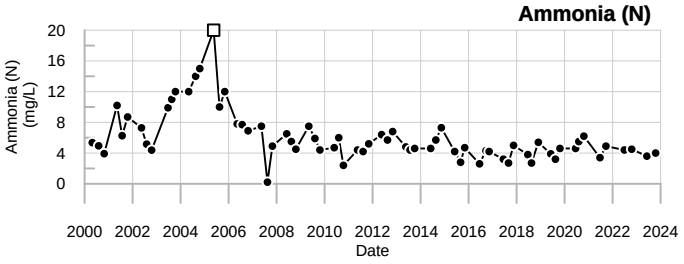
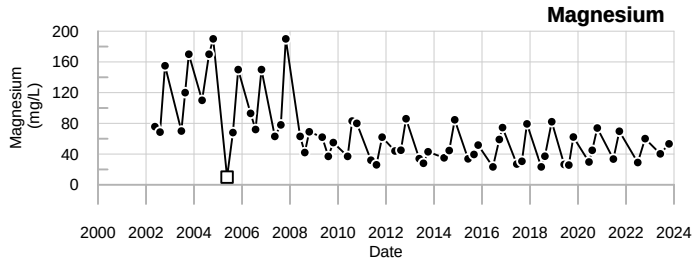
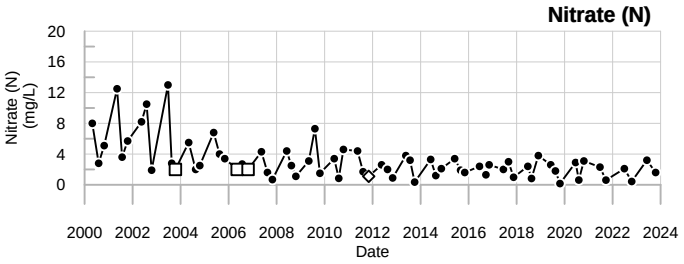
ENGINEERS

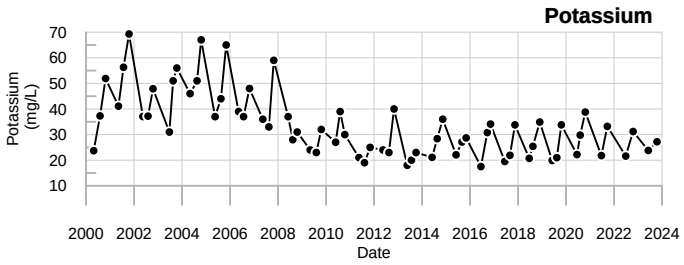
303B
Dolby Landfill

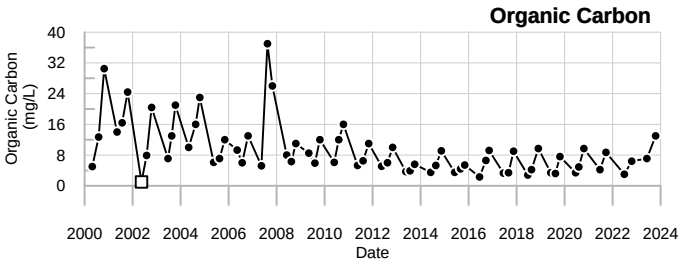


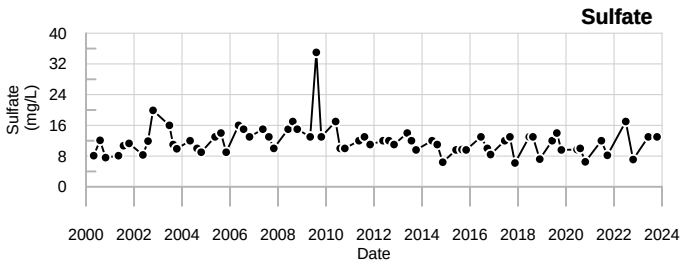


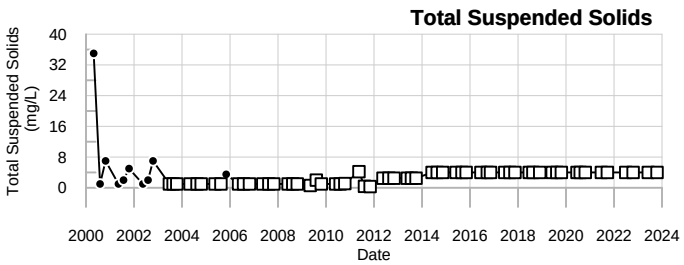


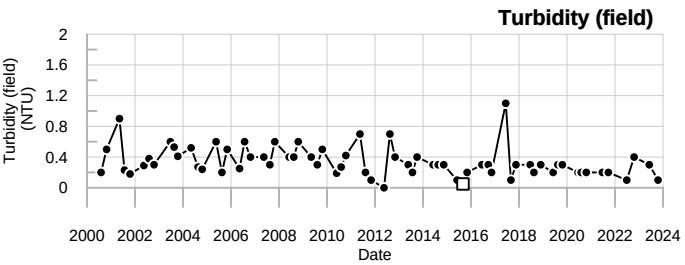












LEGEND

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ENGINEERS

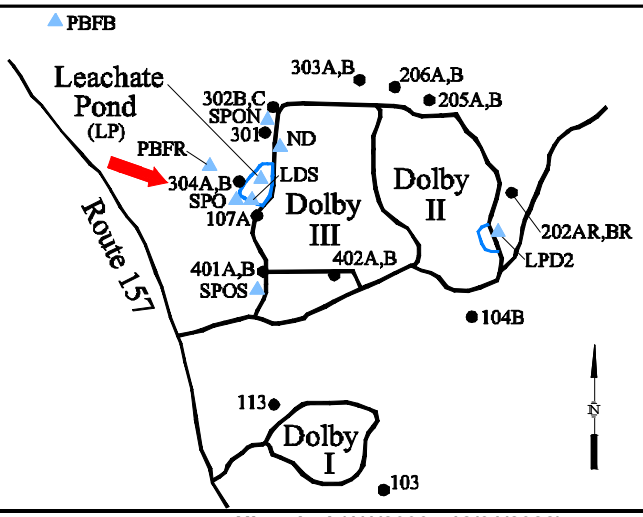
303B
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located downgradient to the west of the landfill.

Screen Interval: **Unknown TOS to 21.5 ft.**
Sampled: **2 Times Annually**
Sampled Since: **Sep-85**
Material Screened: **Bedrock**
Well Condition: **Good**
Sampling Method: **Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		296		273	211	to 473	320	± 8.400	67
Dissolved Oxygen (mg/L)		2.1		2.7	0.2	to 8.5	1.5	± 0.170	66
Total Dissolved Solids (mg/L)		160		170	99	to 320	190	± 5.800	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.01 U	0.0065	± 0.000	65
Calcium (mg/L)		39		39.9	28	to 93	46	± 2.100	61
Manganese (mg/L)		0.0508		0.034	0.005 U	to 0.24	0.032	± 0.006	67
pH (STU)		7.5		7.5	6.6	to 8.8	7.6	± 0.050	67
Alkalinity (CaCO3) (mg/L)		140		150	110	to 220	150	± 4.000	67
Ca-mg Hardness (CaCO3) (mg/L)		129		134	70.3	to 270	140	± 5.500	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		140		150	110	to 205	150	± 3.300	67
Sodium (mg/L)		12.7		12	7	to 18	12	± 0.290	67
Chloride (mg/L)		4.9		4.3	2 U	to 18	7.2	± 0.470	67
Iron (mg/L)		0.493		0.207	0.0054	to 2.1	0.12	± 0.034	67
Magnesium (mg/L)		7.77		8.38	5	to 13	8.1	± 0.210	61
Potassium (mg/L)		1.05		1.28	0.89	to 2.4	1.4	± 0.043	67
Sulfate (mg/L)		13		12	5.6	to 19.5	13	± 0.290	67
Total Suspended Solids (mg/L)		4 U		4 U	0.32 U	to 23	3.1	± 0.400	67
Turbidity (field) (NTU)		0.4		0.3	0	to 38	1.3	± 0.580	66
Ammonia (N) (mg/L)		0.1 U		0.1 U	0.08 U	to 0.5 U	0.15	± 0.008	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 2 U	0.65	± 0.089	67
Organic Carbon (mg/L)		1 U		1.6	0.58	to 7.6	1.3	± 0.110	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:50

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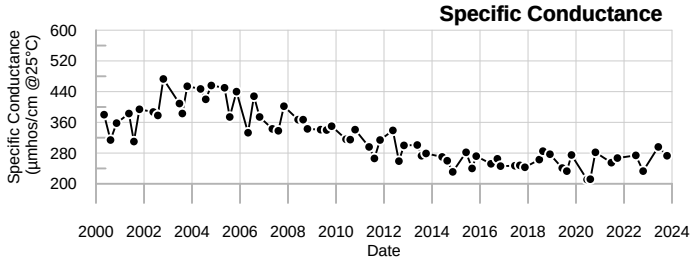

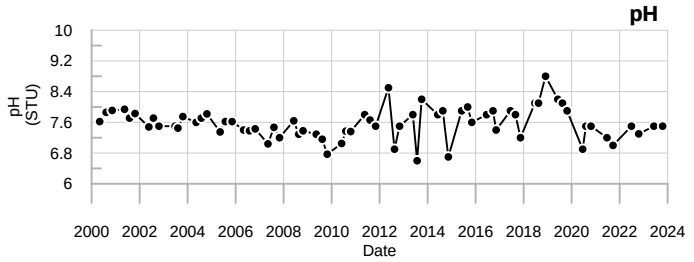

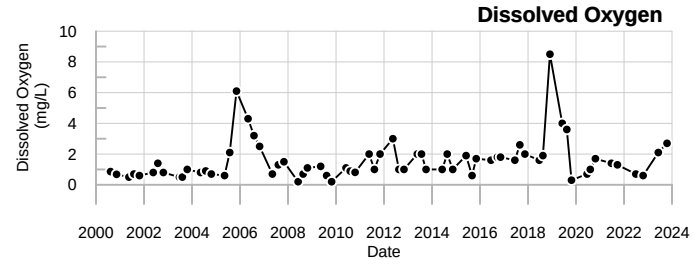

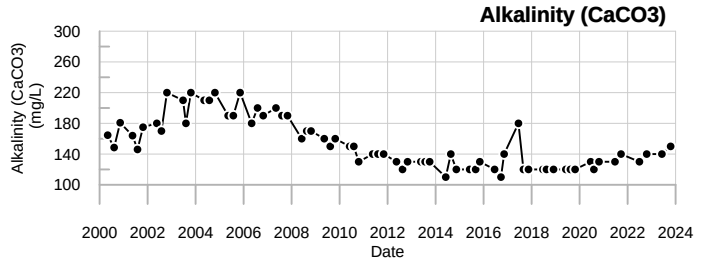

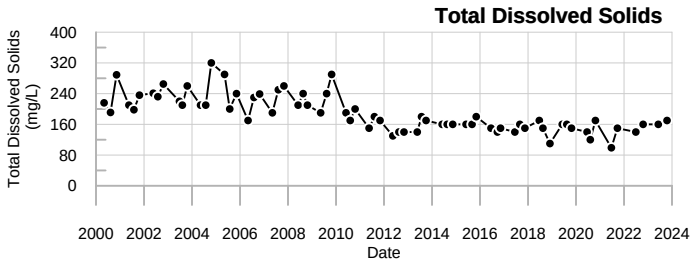

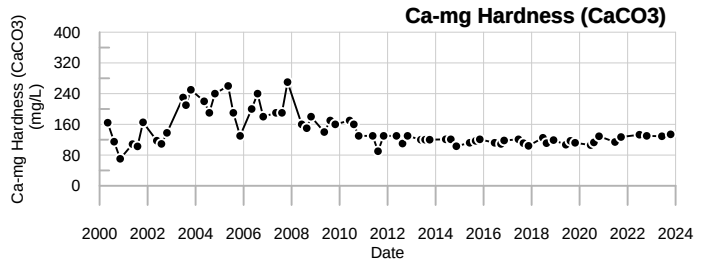

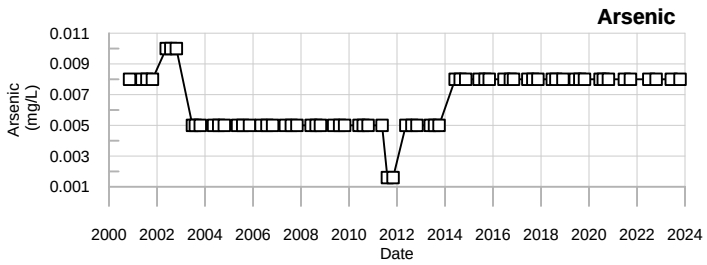

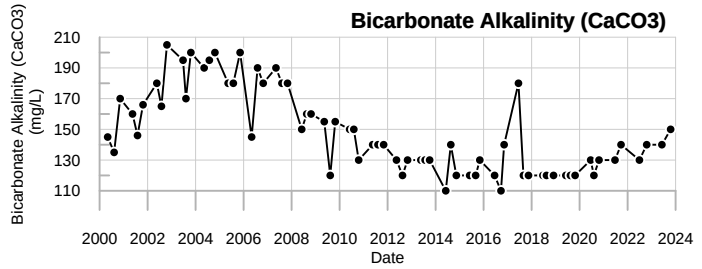

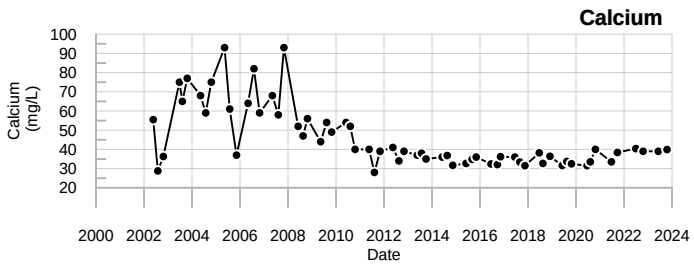

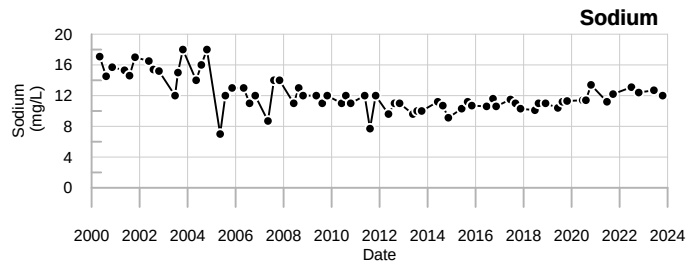

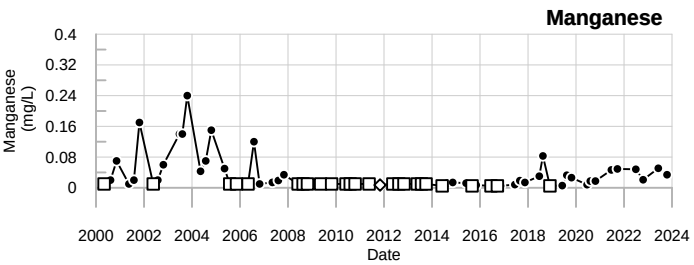

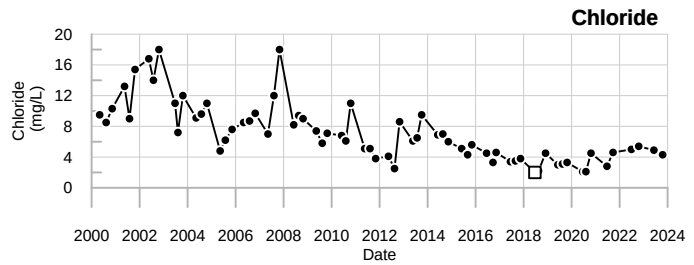

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

SME
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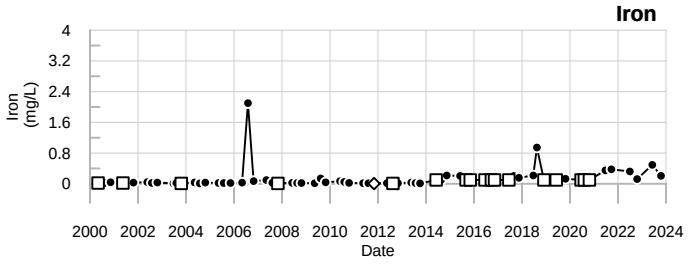
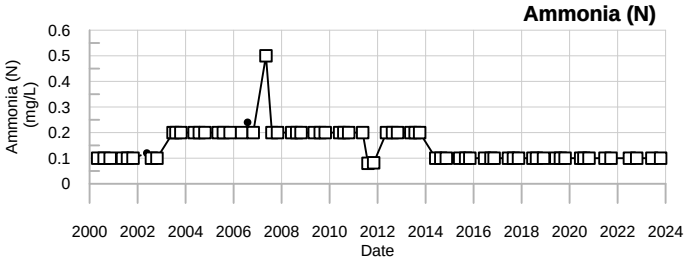
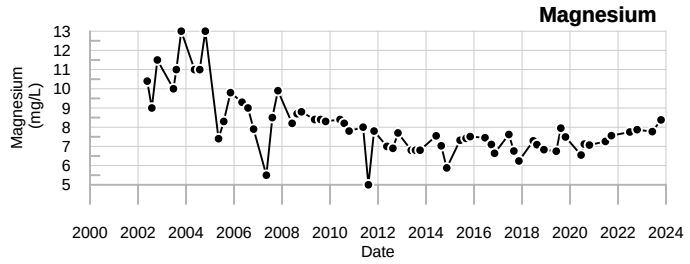
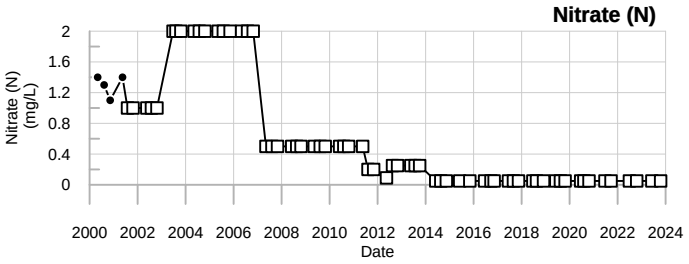
ENGINEERS

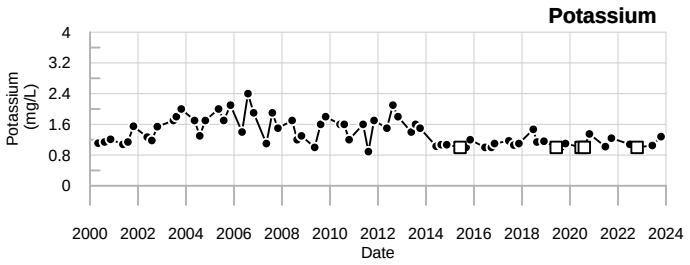
304A
Dolby Landfill

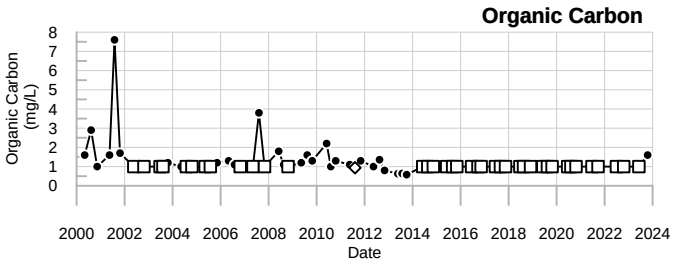


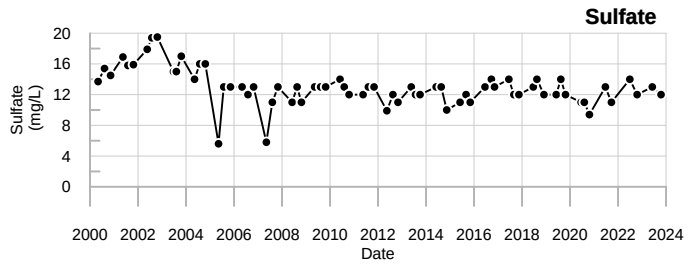


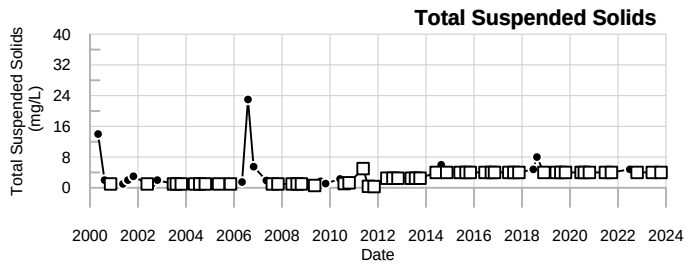


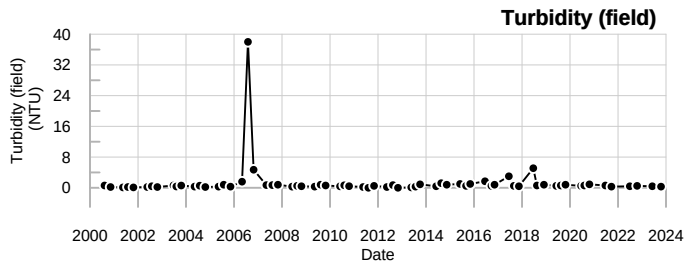












LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

SME
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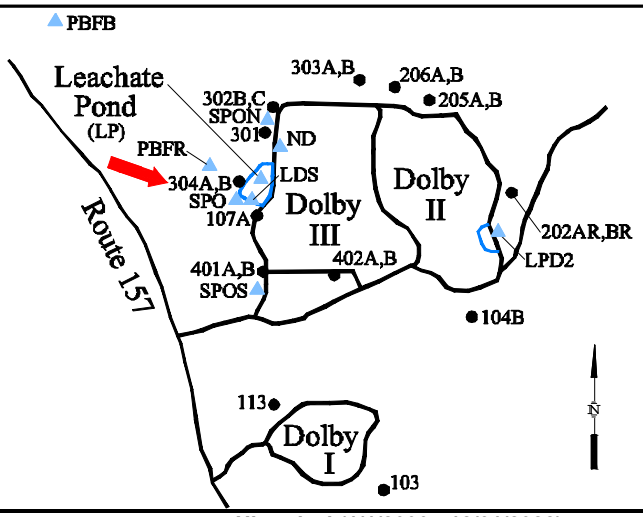
304A
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located downgradient to the west of the landfill.

Screen Interval:	**Unknown TOS to 8.6 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Sep-85**
Material Screened:	**Glacial Till**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Intiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		87		134	41	341	160	9.400	66
Dissolved Oxygen (mg/L)		2.3		5.6	0.9	13.5	4.9	0.260	65
Total Dissolved Solids (mg/L)		40		82	13	220	99	5.600	66
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	0.01 U	0.0064	0.000	64
Calcium (mg/L)		14.8		18.6	6.34	43	19	1.200	61
Manganese (mg/L)		0.0805		0.0522	0.005 U	0.315	0.038	0.006	66
pH (STU)		6.4		6.6	5.46	8	6.6	0.055	66
Alkalinity (CaCO3) (mg/L)		56		70	24	122	56	3.000	66
Ca-mg Hardness (CaCO3) (mg/L)		44.2		54.6	18.2	130	55	3.400	66
Bicarbonate Alkalinity (CaCO3) (mg/L)		56		70	22	120	55	2.900	66
Sodium (mg/L)		6.72		9.25	1.89	21	9.7	0.460	66
Chloride (mg/L)		2 U		2	1.4	63.7	13	1.400	66
Iron (mg/L)		0.959		0.364	0.01 U	2.48	0.22	0.046	66
Magnesium (mg/L)		1.75		1.99	0.584	5	2.1	0.140	61
Potassium (mg/L)		1 U		1 U	0.44	1.9	1	0.020	66
Sulfate (mg/L)		1 U		3.7	1 U	20.7	5.8	0.440	65
Total Suspended Solids (mg/L)		11		7.2	0.32 U	86	7.3	1.800	66
Turbidity (field) (NTU)		0.5		0.3	0	17.5	1.3	0.310	65
Ammonia (N) (mg/L)		0.1 U		0.1 U	0.08 U	0.67	0.16	0.011	66
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	2 U	0.63	0.089	66
Organic Carbon (mg/L)		1		1.4	0.69	5	1.2	0.072	66

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:50

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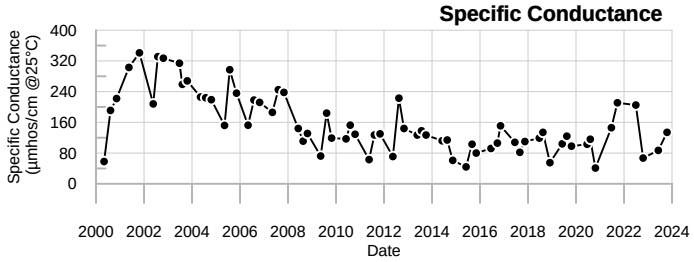

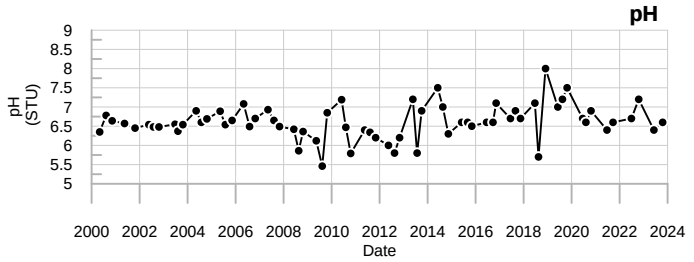

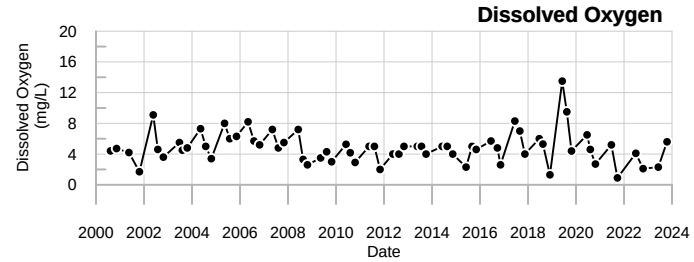

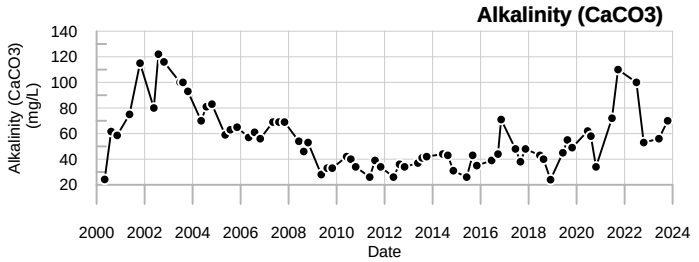

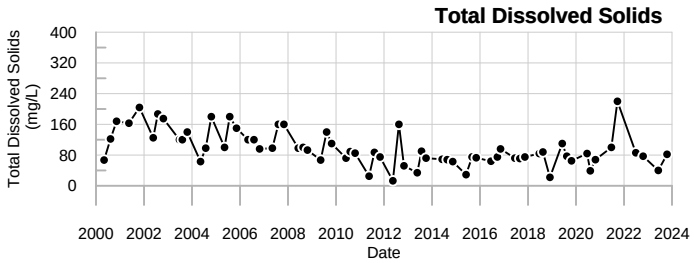

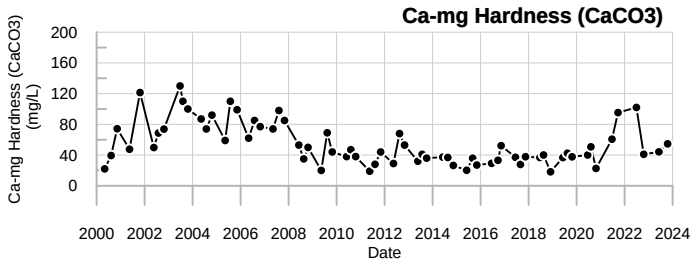

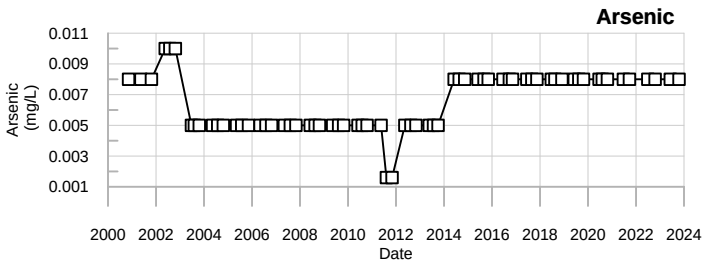

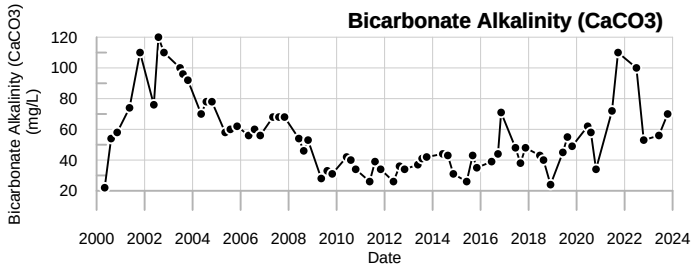

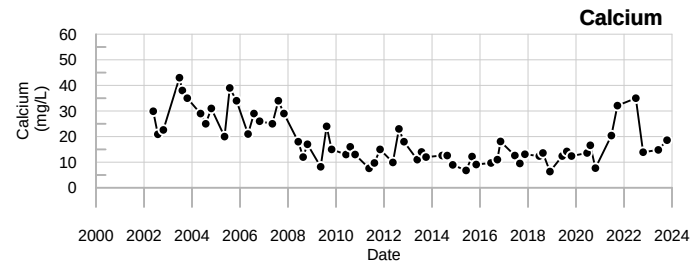

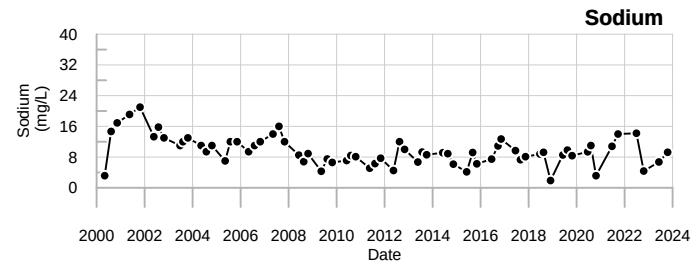

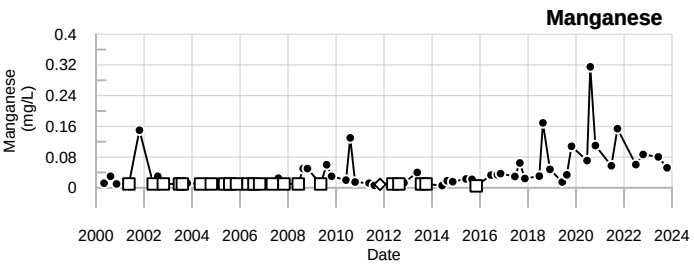

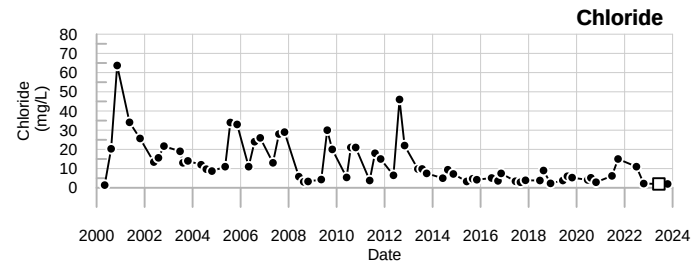

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
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SME
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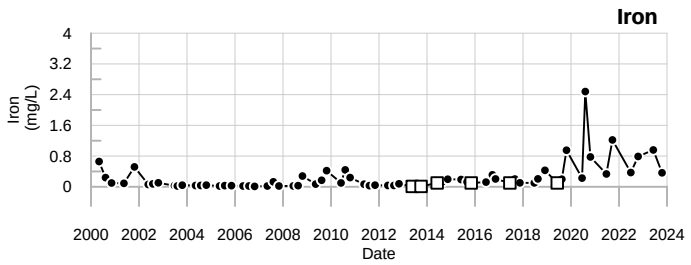
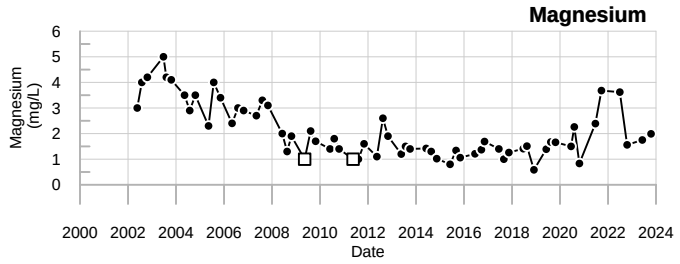
ENGINEERS

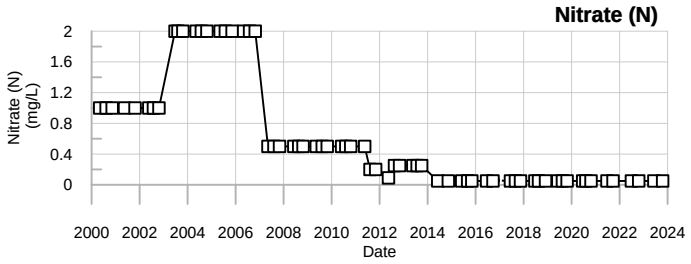
304B
Dolby Landfill

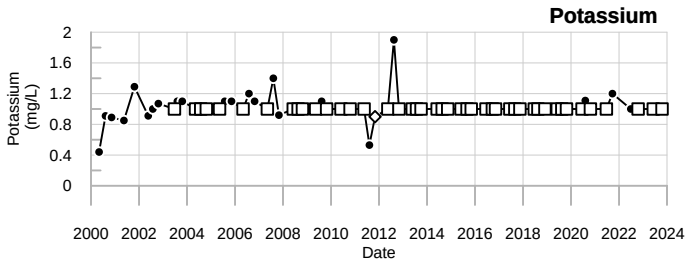
Sevee & Maher Engineers, Inc.

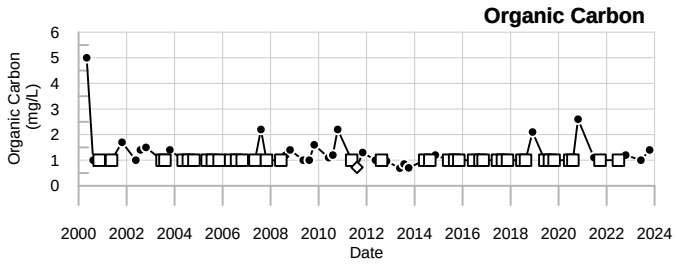


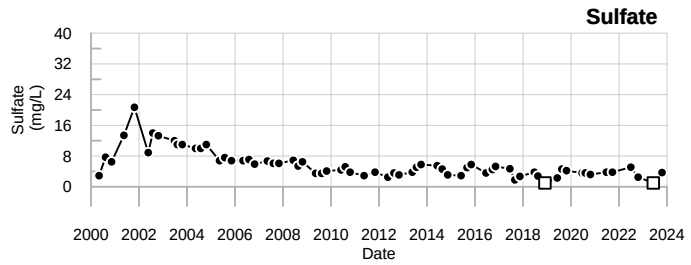


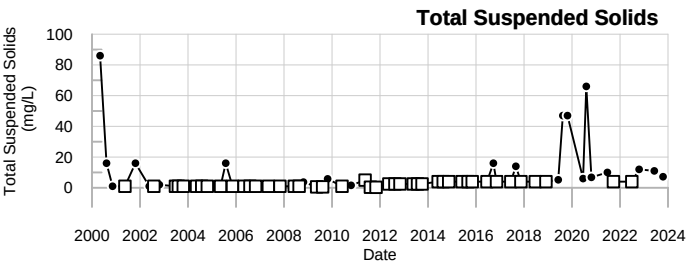


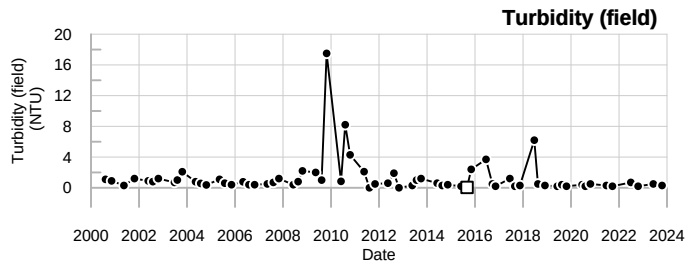












LEGEND

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- ◇ - Estimated Value (J-flagged).

SME
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ENGINEERS

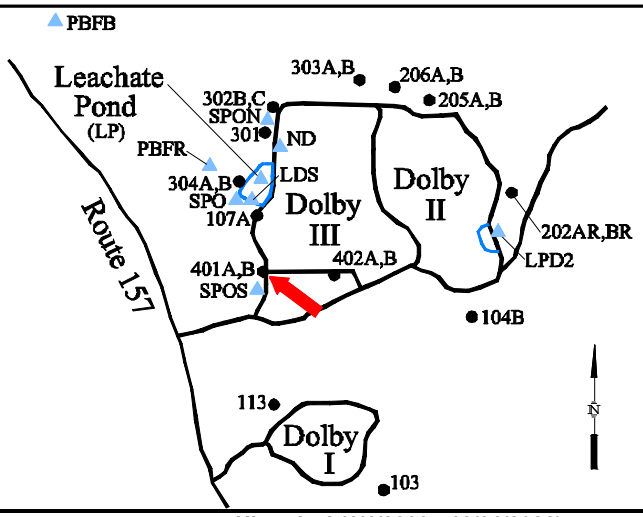
304B
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located downgradient to the southwest of the landfill.

Screen Interval:	**30.5 ft. to 40.5 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Jun-90**
Material Screened:	**Bedrock**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		298		285	182	to 515	260	± 5.600	67
Dissolved Oxygen (mg/L)		5.9		3.3	0.67	to 10.9	4.2	± 0.250	66
Total Dissolved Solids (mg/L)		160		180	2	to 200	140	± 3.800	67
Arsenic (mg/L)		**0.148**		**0.149**	0.08	to 0.29	0.16	± 0.004	65
Calcium (mg/L)		↑43.2		39.5	14.9	to 42	33	± 0.730	61
Manganese (mg/L)		0.005 U		0.005 U	0.0002	to 0.08	0.01	± 0.001	67
pH (STU)		6.8		7.1	6.4	to 8.2	7.7	± 0.038	67
Alkalinity (CaCO3) (mg/L)		110		120	12	to 120	97	± 1.600	67
Ca-mg Hardness (CaCO3) (mg/L)		↑141		132	49.8	to 139	110	± 2.600	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		110		110	12	to 120	96	± 1.700	67
Sodium (mg/L)		11.7		11	6.6	to 12	9.8	± 0.130	67
Chloride (mg/L)		10		9.1	2.8	to 14	7.9	± 0.330	67
Iron (mg/L)		0.1 U		0.1 U	0.01 U	to 0.359	0.066	± 0.009	67
Magnesium (mg/L)		8.12		8.17	4.2	to 8.44	6.5	± 0.120	61
Potassium (mg/L)		1.84		1.73	1.1	to 2.4	1.7	± 0.033	67
Sulfate (mg/L)		25		26	5.4	to 41	18	± 0.810	67
Total Suspended Solids (mg/L)		4 U		4 U	0.32 U	to 15	2.8	± 0.290	67
Turbidity (field) (NTU)		0.8		0.4	0.2	to 5	0.81	± 0.099	66
Ammonia (N) (mg/L)		0.1 U		0.1 U	0.08 U	to 0.5 U	0.15	± 0.008	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 2 U	0.64	± 0.087	67
Organic Carbon (mg/L)		1.2		1.5	0.53	to 12	1.2	± 0.170	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:50

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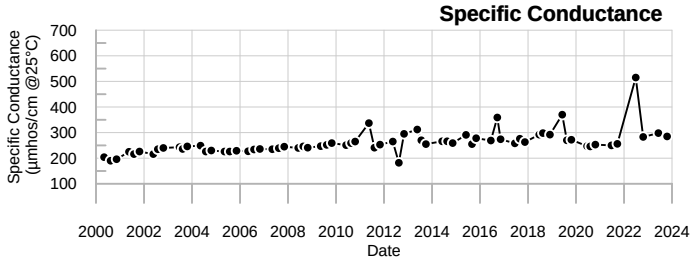

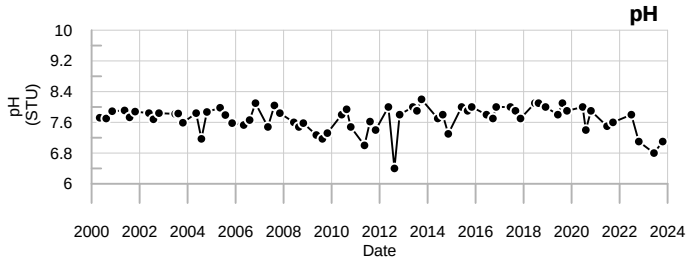

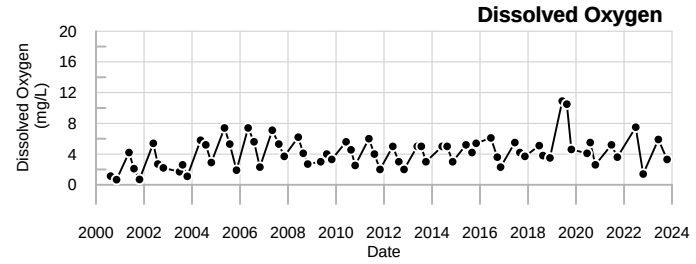

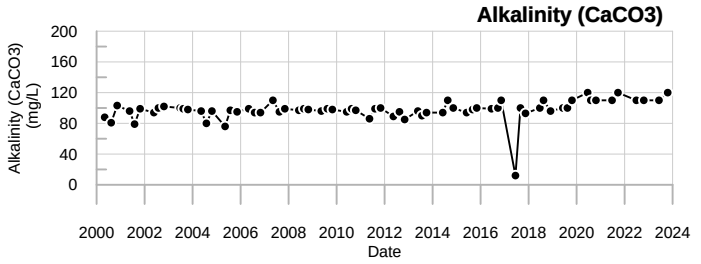

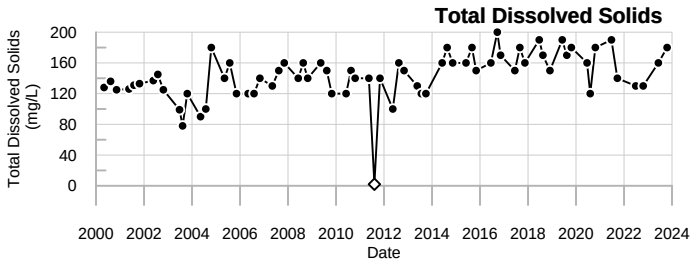

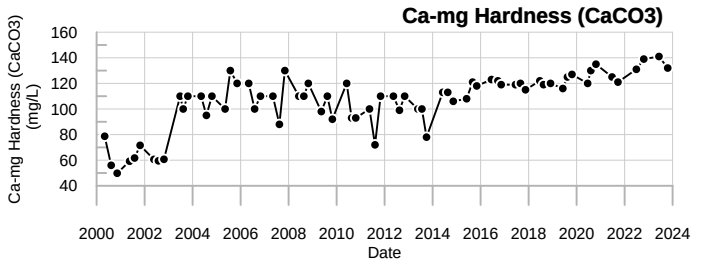

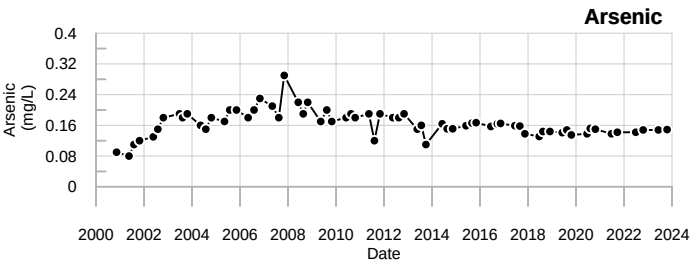

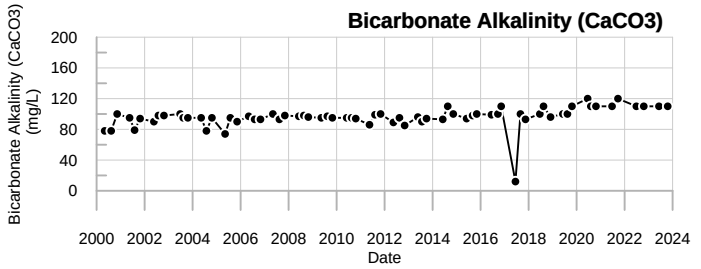

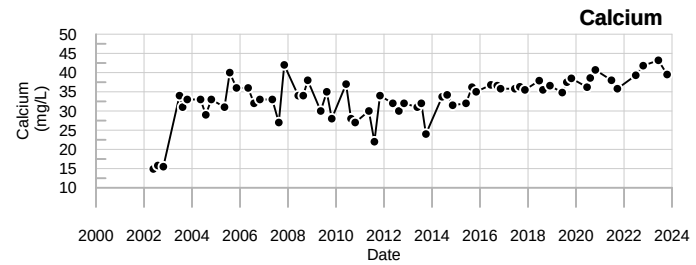

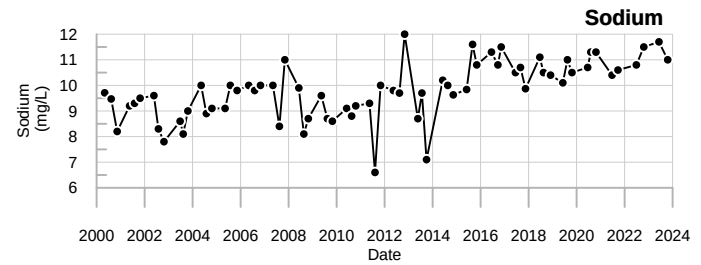

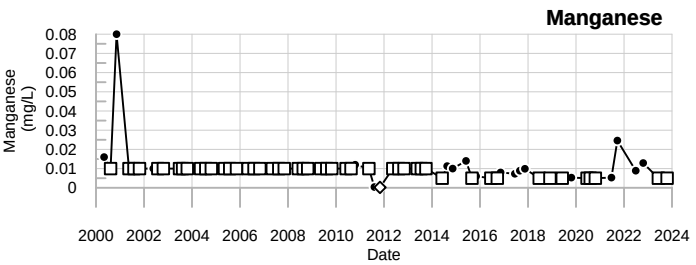

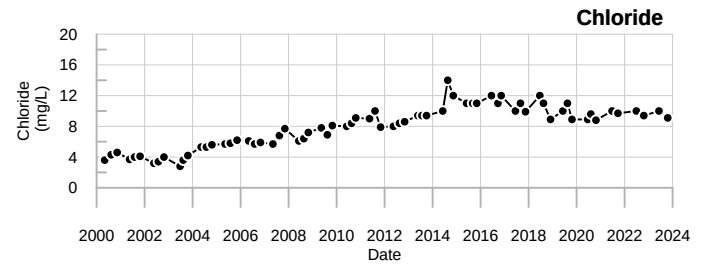

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

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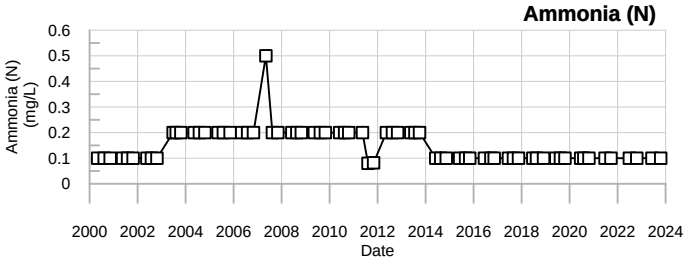
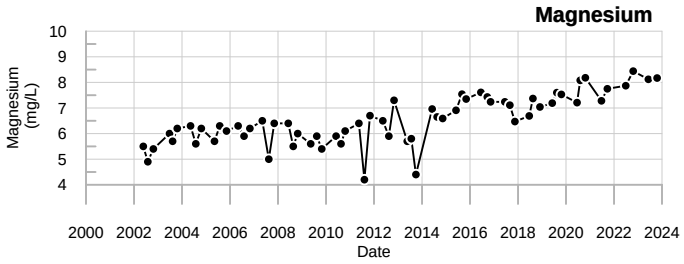
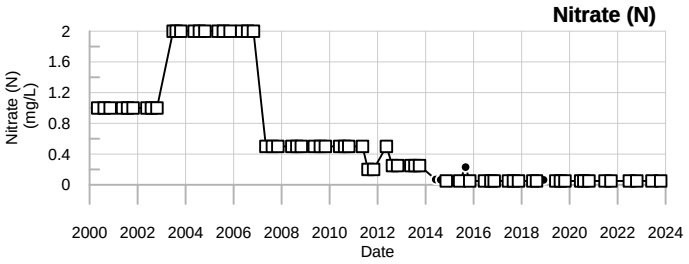
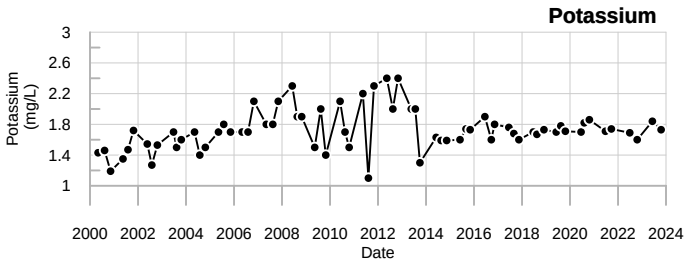
401A
Dolby Landfill

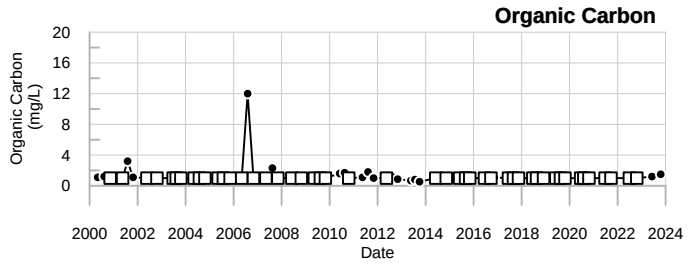


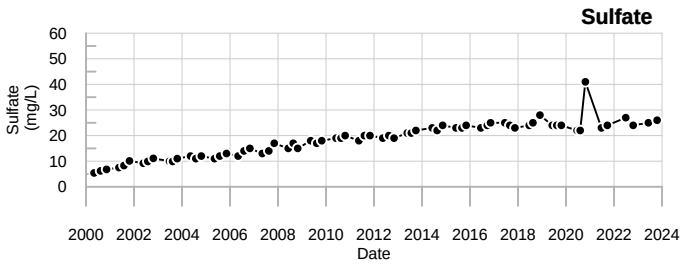


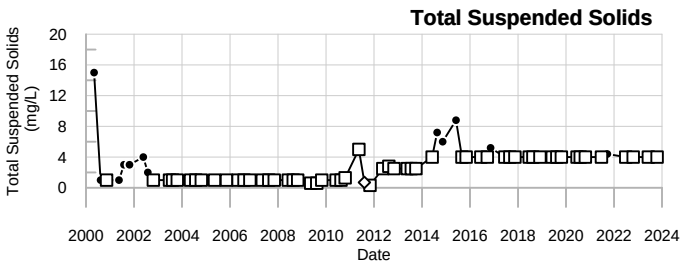


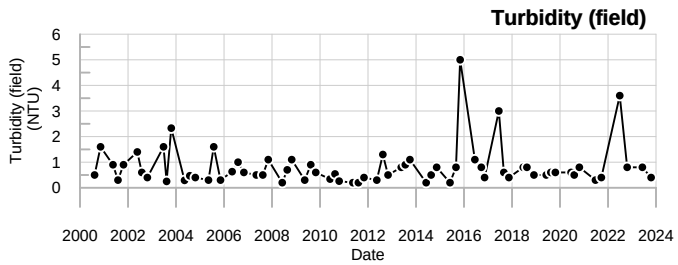












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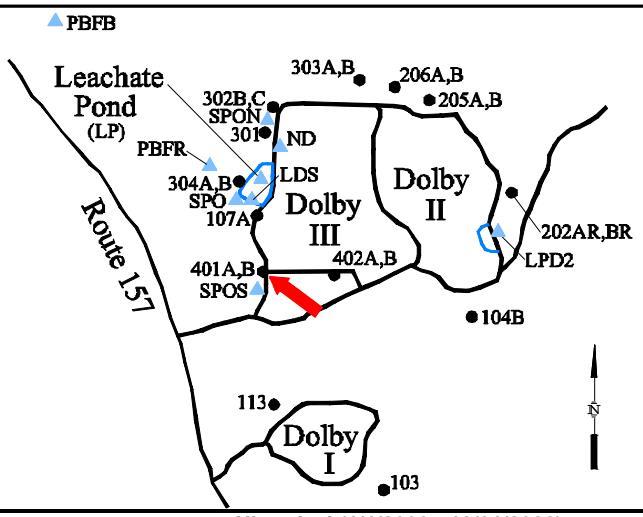
Well Description

Well located downgradient to the southwest of the landfill.

Screen Interval: **12.5 ft. to 22.5 ft.**
Sampled: **2 Times Annually**
Sampled Since: **Jun-90**
Material Screened: **Glacial Till**
Well Condition: **Good**
Sampling Method: **Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		394		402	291	to 450	370	± 3.300	67
Dissolved Oxygen (mg/L)		0.8		1.5	0.1	to 5.6	0.87	± 0.110	66
Total Dissolved Solids (mg/L)		210		220	150	to 352	220	± 3.700	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.015	0.0065	± 0.000	65
Calcium (mg/L)		69.8		62.4	23.6	to 70.4	55	± 1.200	61
Manganese (mg/L)		**0.477**		0.0774	0.01 U	to 1.03	0.32	± 0.022	67
pH (STU)		7.7		7.6	7	to 8.26	7.9	± 0.029	67
Alkalinity (CaCO3) (mg/L)		220		220	92.9	to 300	160	± 5.200	67
Ca-mg Hardness (CaCO3) (mg/L)		216		196	77.8	to 219	170	± 3.900	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		220		220	83	to 240	150	± 5.200	67
Sodium (mg/L)		14.4		13.7	10.8	to 17	14	± 0.160	67
Chloride (mg/L)		3.3		2.9	2.2	to 30.1	12	± 0.960	67
Iron (mg/L)		0.1 U		0.1 U	0.005	to 0.731	0.078	± 0.016	67
Magnesium (mg/L)		10.1		9.82	6.2	to 10.8	8.1	± 0.160	61
Potassium (mg/L)		1.97		1.99	1.34	to 3.8	2	± 0.050	67
Sulfate (mg/L)		12		11	11	to 35	25	± 0.880	67
Total Suspended Solids (mg/L)		4.8		4 U	0.32 U	to 30	3.5	± 0.610	67
Turbidity (field) (NTU)		1.1		0.6	0	to 20.3	1.6	± 0.410	66
Ammonia (N) (mg/L)		0.1 U		0.1 U	0.08 U	to 0.5 U	0.15	± 0.008	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 2 U	0.65	± 0.088	67
Organic Carbon (mg/L)		2		2.5	0.99	to 3.7	1.3	± 0.070	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

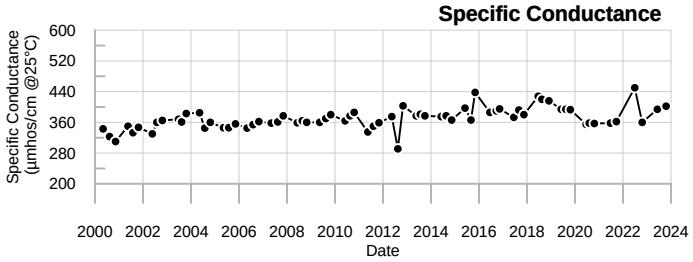
↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

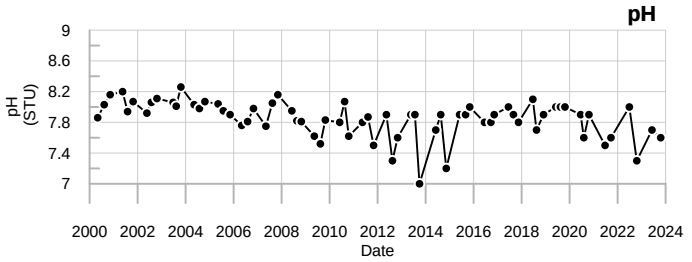
Comments

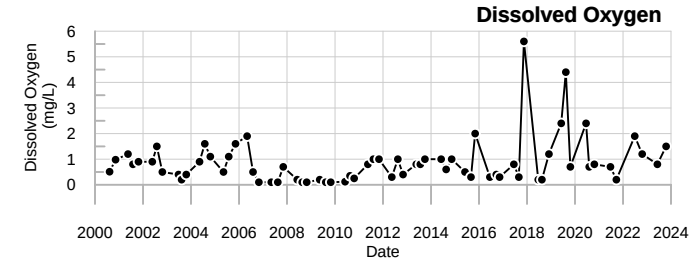
Q2= 6 - 2023
Q4= 10 - 2023

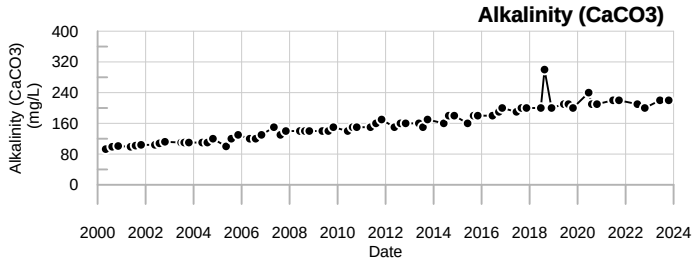
U = Not Detected above the laboratory reporting limit.

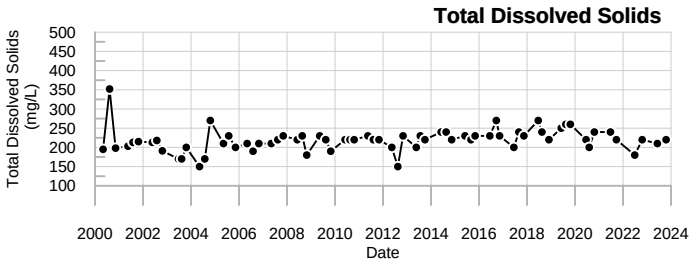
Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

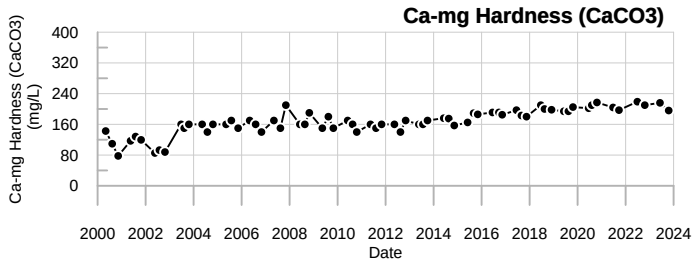


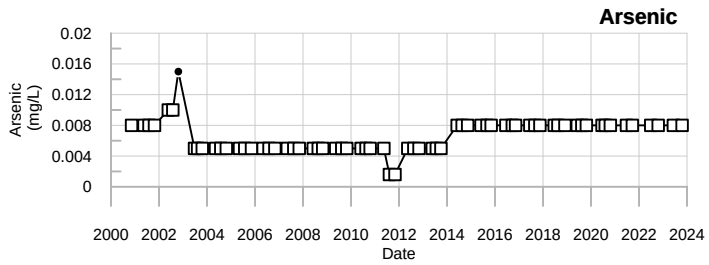


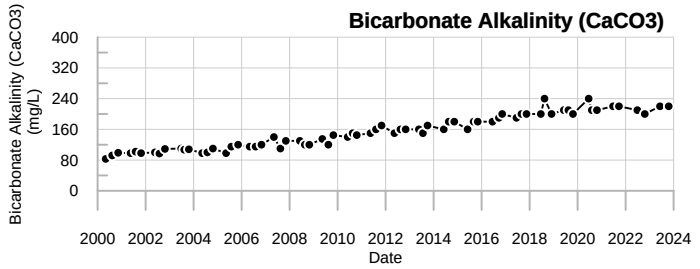


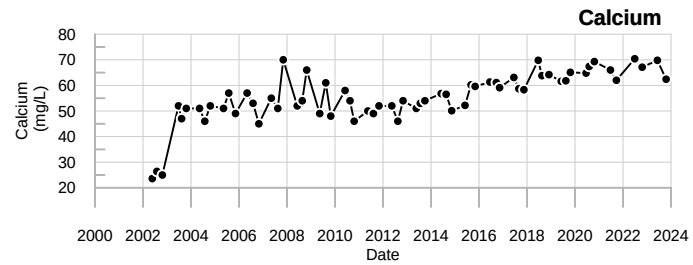


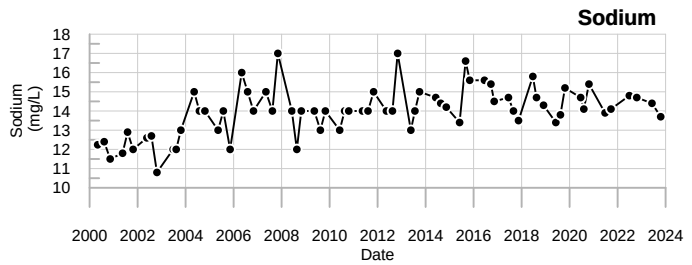


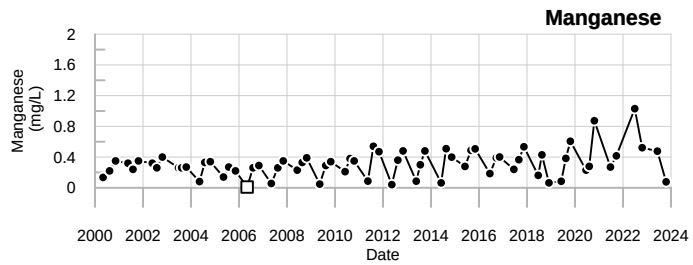


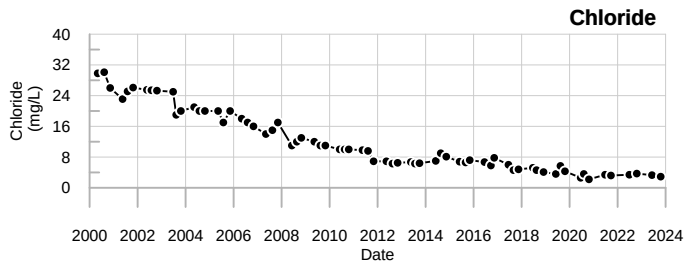












LEGEND

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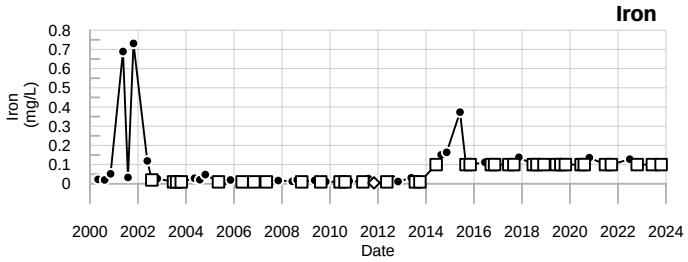

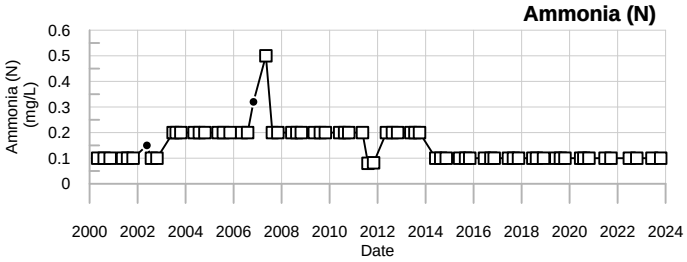

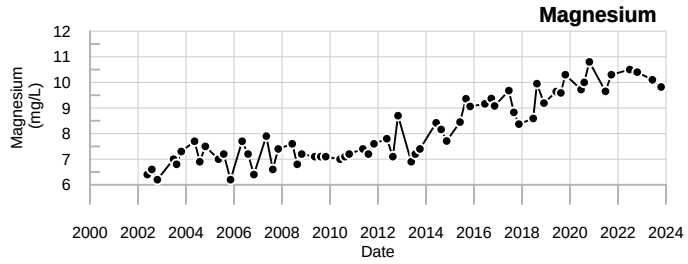

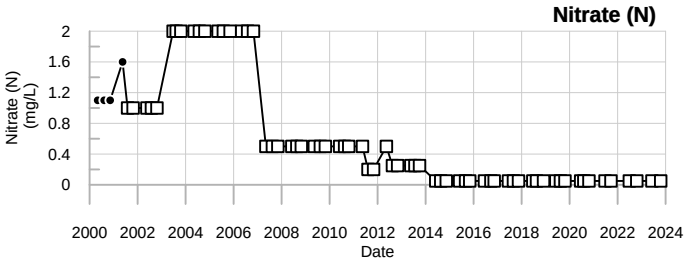

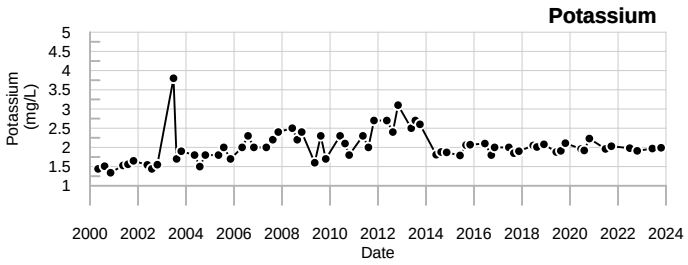

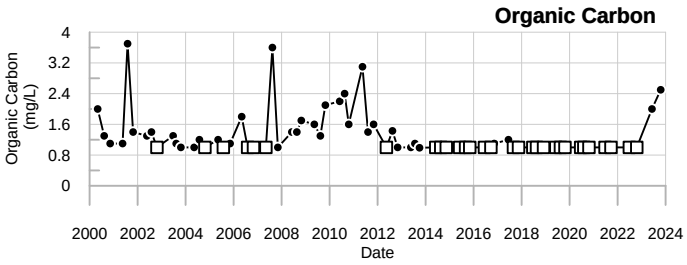

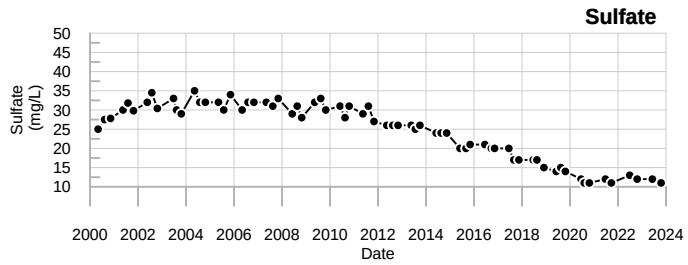

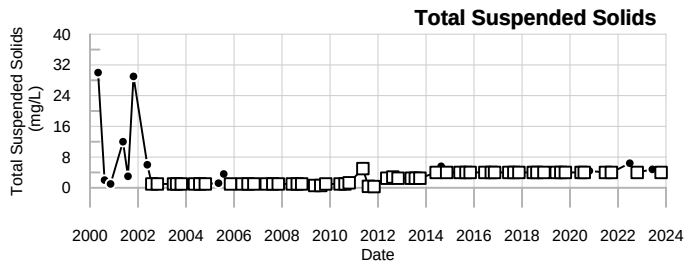

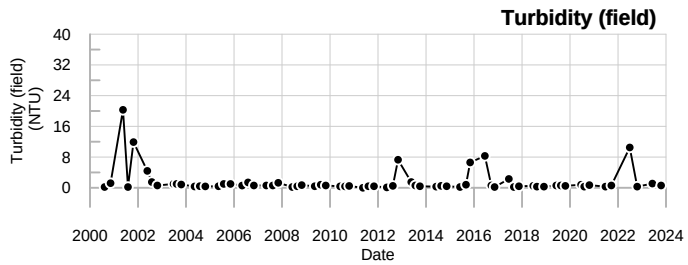

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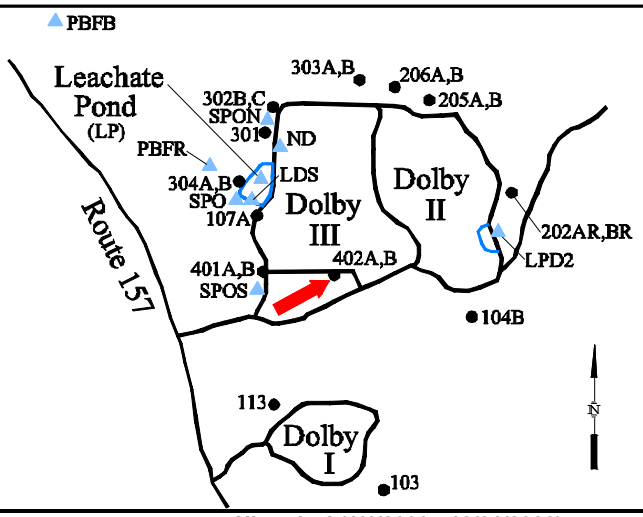
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located cross-gradient to south of the Dolby III Landfill.

Screen Interval:	**50.2 ft. to 60.2 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Jun-90**
Material Screened:	**Bedrock**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Intiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		↑460		↑451	194	to 445	300	± 8.400	67
Dissolved Oxygen (mg/L)		2.1		2.7	0.1	to 6.8	1.6	± 0.160	66
Total Dissolved Solids (mg/L)		220		260	81	to 650	180	± 8.800	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0035	to 0.019	0.0068	± 0.000	65
Calcium (mg/L)		↑69.3		56.7	14.3	to 62.1	39	± 1.400	61
Manganese (mg/L)		0.212		0.188	0.04	to 0.32	0.14	± 0.006	67
pH (STU)		7.6		7.4	7.1	to 8.3	7.8	± 0.030	67
Alkalinity (CaCO3) (mg/L)		180		170	81	to 650	110	± 8.500	67
Ca-mg Hardness (CaCO3) (mg/L)		↑244		209	57.4	to 225	130	± 5.100	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		180		170	76	to 650	110	± 8.600	67
Sodium (mg/L)		↑11.3		10.3	5.6	to 10.7	7.8	± 0.160	67
Chloride (mg/L)		37		34	4.4	to 40	24	± 1.400	67
Iron (mg/L)		0.191		0.166	0.02 U	to 0.322	0.11	± 0.006	67
Magnesium (mg/L)		↑17.3		16.5	5.6	to 16.9	10	± 0.370	61
Potassium (mg/L)		1 U		1 U	0.53	to 1	0.93	± 0.018	67
Sulfate (mg/L)		8.3		7.1	4.5	to 13	8.1	± 0.170	67
Total Suspended Solids (mg/L)		4 U		4 U	0.32 U	to 5 U	2.4	± 0.180	67
Turbidity (field) (NTU)		0.6		0.4	0	to 3.6	0.59	± 0.078	66
Ammonia (N) (mg/L)		0.1 U		0.1 U	0.08 U	to 0.5 U	0.16	± 0.009	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 2 U	0.66	± 0.086	67
Organic Carbon (mg/L)		2.7		↑3.4	1 U	to 3.2	1.4	± 0.052	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:50

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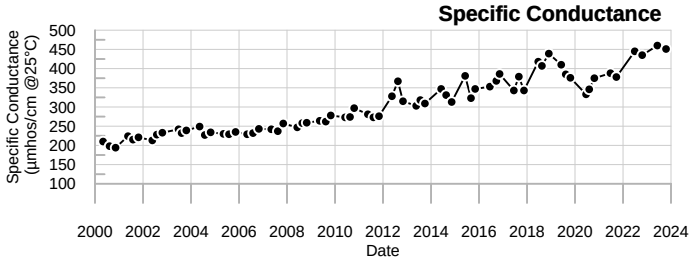

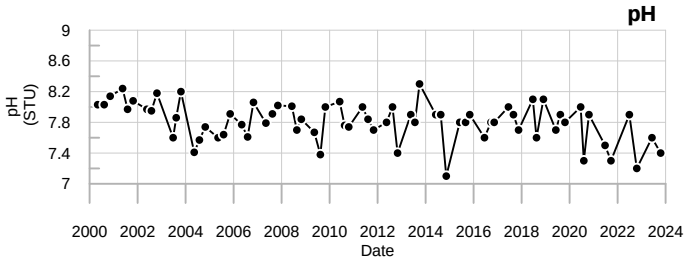

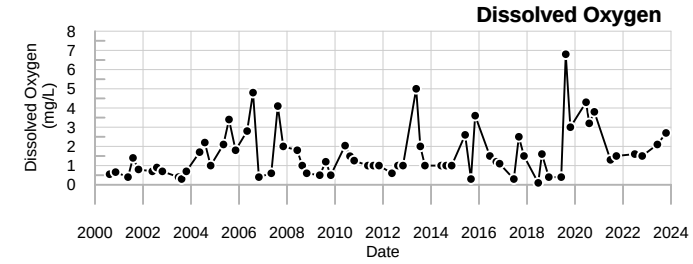

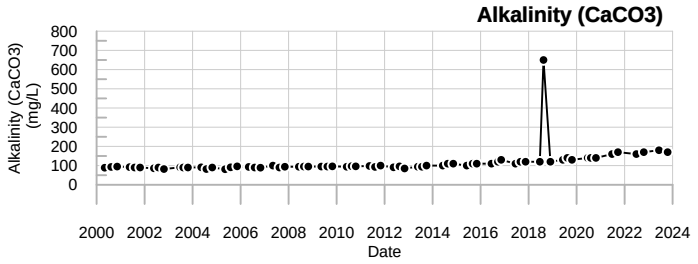

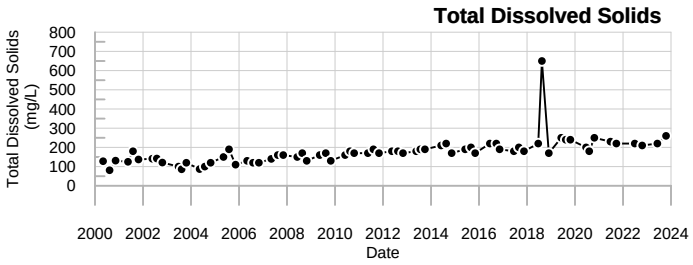

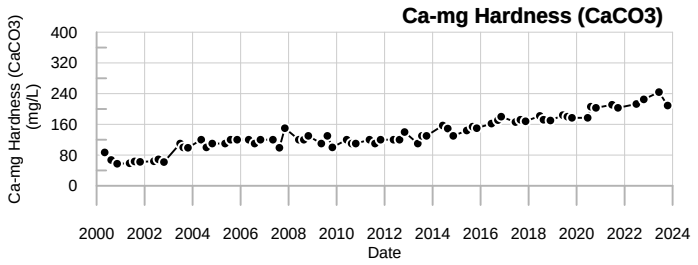

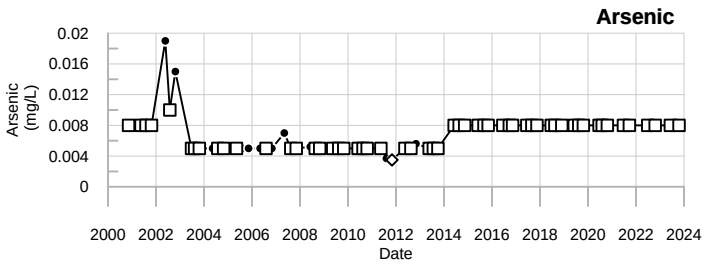

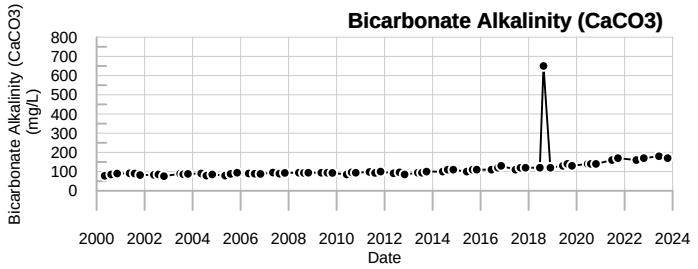

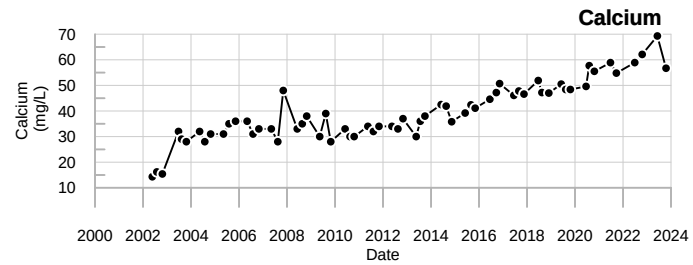

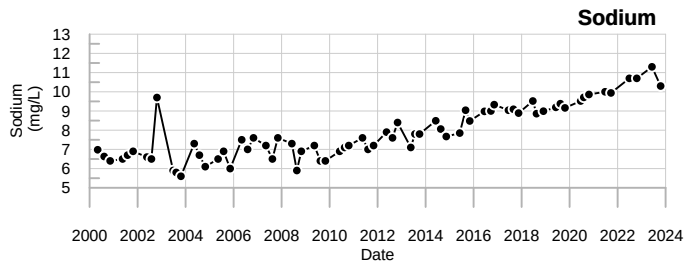

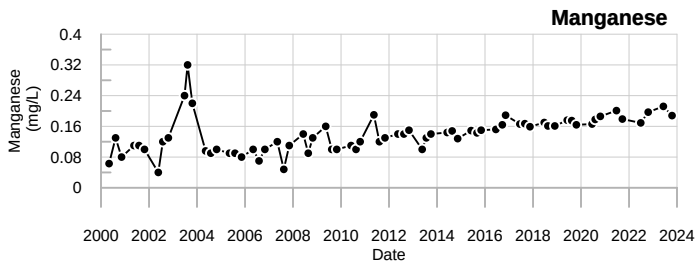

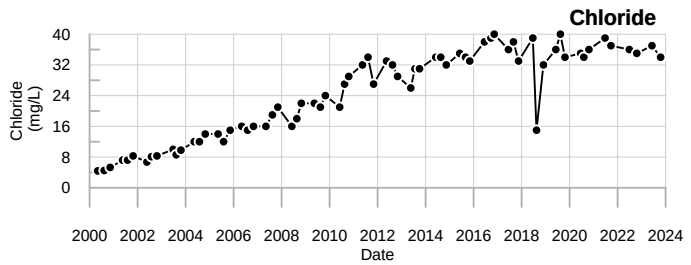

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

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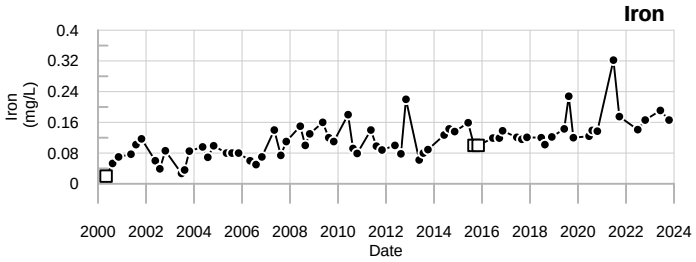
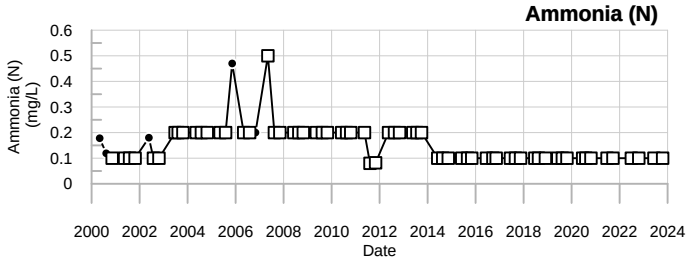
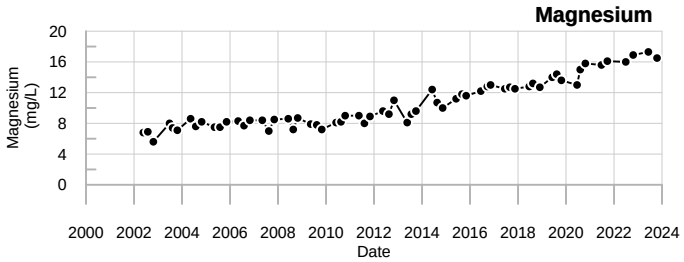
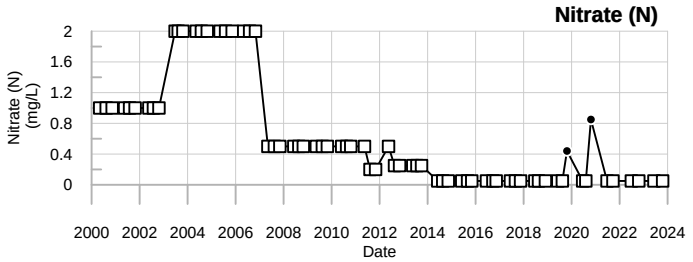
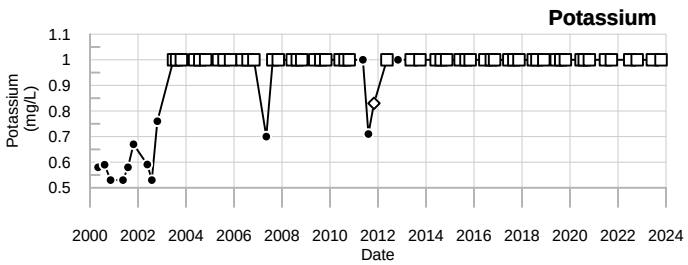
Dolby Landfill

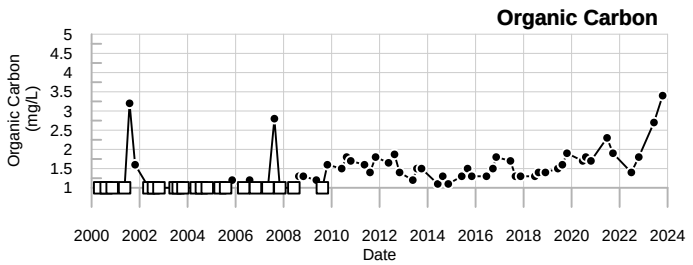


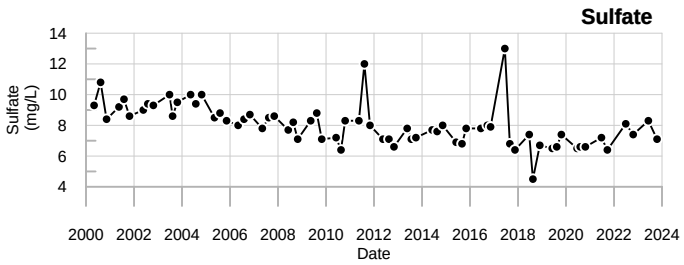


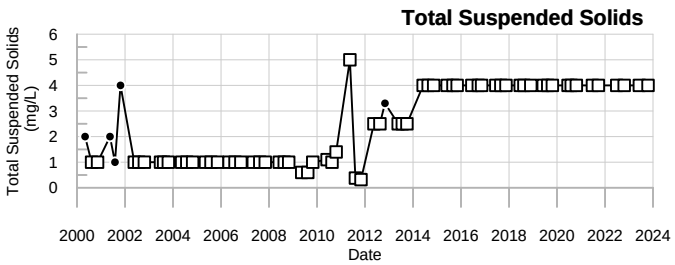


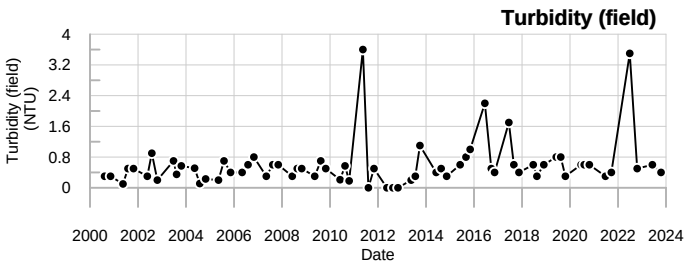












LEGEND

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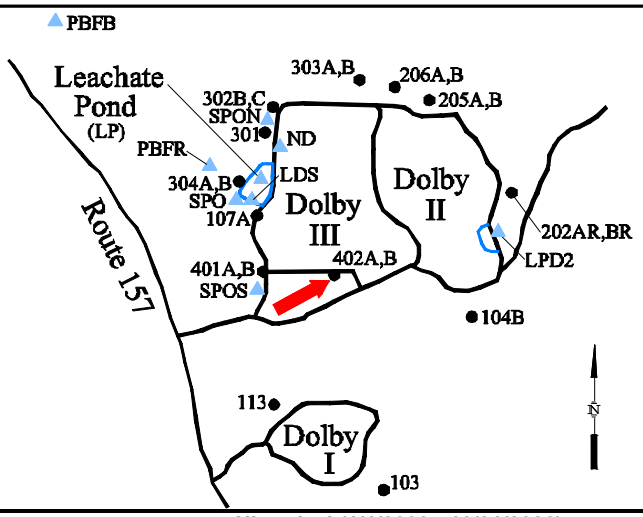
Dolby Landfill

Sevee & Maher Engineers, Inc.

Well Description

Well located cross-gradient of Cells 3A and 3B to south of the Dolby III Landfill.

Screen Interval:	**10 ft. to 20 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Jun-90**
Material Screened:	**Glacial Till**
Well Condition:	**Good**
Sampling Method:	**Low Flow (Initiated Aug. 2000)**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		939		954	878	to 2180	1300	± 44.000	67
Dissolved Oxygen (mg/L)		1.5		5.1	0.1	to 6.1	0.73	± 0.100	66
Total Dissolved Solids (mg/L)		530		520	170	to 1308	730	± 26.000	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.044	0.007	± 0.001	65
Calcium (mg/L)		126		119	110	to 266.8	150	± 4.600	61
Manganese (mg/L)		**4.27**		**3.02**	0.07	to 5.04	1	± 0.110	67
pH (STU)		6.7		6.6	6.5	to 7.3	6.9	± 0.017	67
Alkalinity (CaCO3) (mg/L)		580		570	140	to 1148	690	± 22.000	67
Ca-mg Hardness (CaCO3) (mg/L)		571		561	460	to 1137.5	700	± 19.000	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		580		570	140	to 1100	670	± 20.000	67
Sodium (mg/L)		↓23.3		24.4	23.8	to 84.14	39	± 1.800	67
Chloride (mg/L)		11		9.4	4.6	to 122	31	± 2.800	67
Iron (mg/L)		0.212		↑0.282	0.01 U	to 0.274	0.066	± 0.007	67
Magnesium (mg/L)		62.4		64.2	38	to 100	71	± 1.400	61
Potassium (mg/L)		13.6		14.7	3.43	to 35	11	± 0.790	67
Sulfate (mg/L)		6.9		5.4	1.5	to 30.9	7.7	± 0.440	67
Total Suspended Solids (mg/L)		8.4		4 U	0.32 U	to 91	4.1	± 1.300	67
Turbidity (field) (NTU)		1.8		0.3	0	to 5.9	0.5	± 0.096	66
Ammonia (N) (mg/L)		0.1 U		0.13	0.08 U	to 4.6	0.23	± 0.067	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	to 3.8	0.78	± 0.110	67
Organic Carbon (mg/L)		9.8		10	3.9	to 211.2	13	± 3.100	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Nitrate (N) RAG(GwR)=32 mg/L, Manganese RAG(GwR)=0.43 mg/L, Iron RAG(GwR)=14 mg/L, Arsenic RAG(GwR)=0.00052 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
RAG(GwR)	GW	Maine 2023 Remedial Action Guidelines Groundwater Residential

Data Group: 6
Printed: 3/4/2024 07:50

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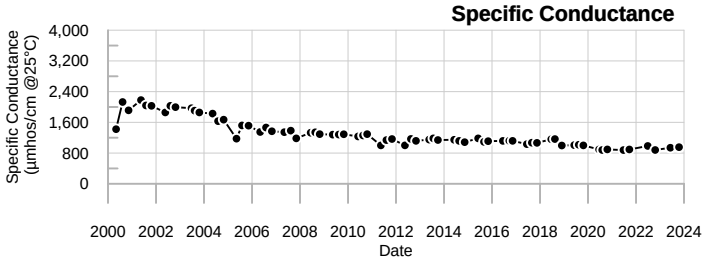

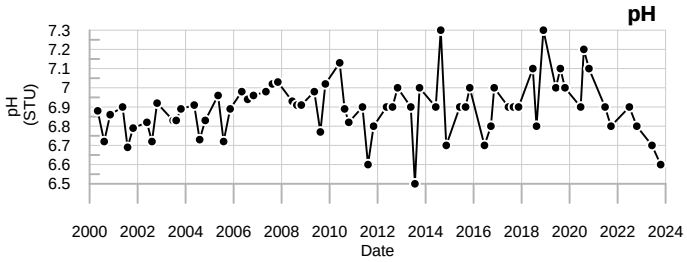

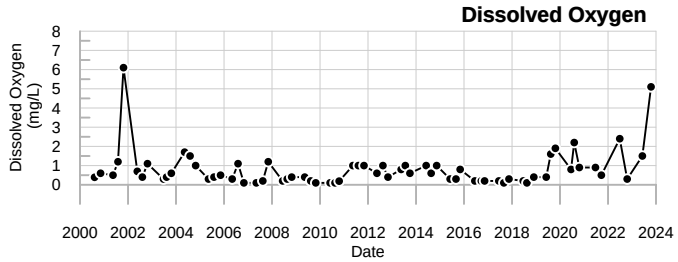

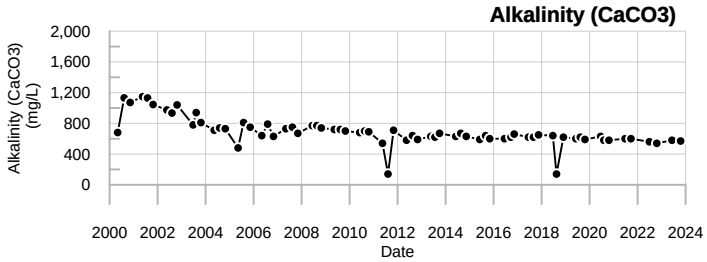

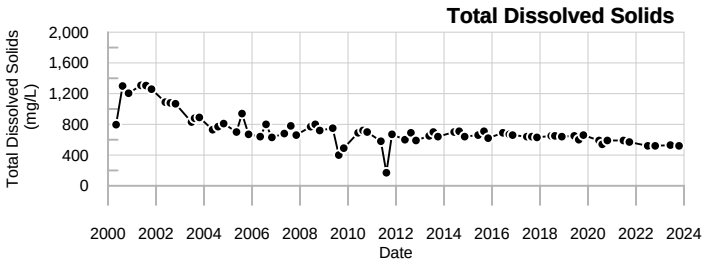

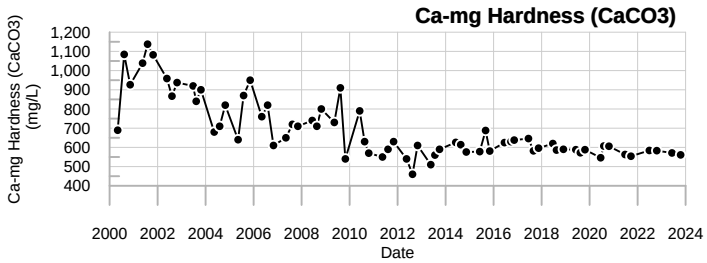

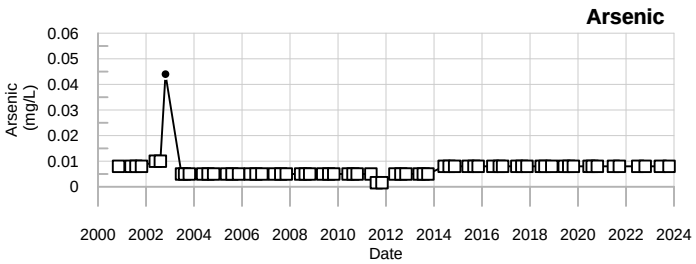

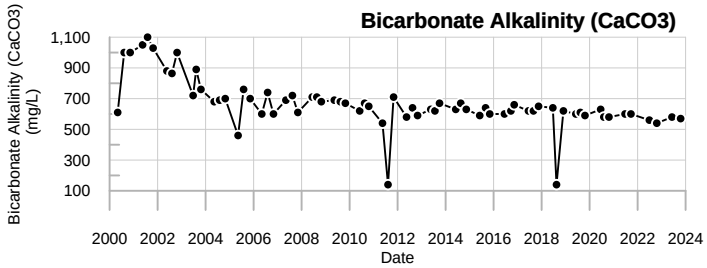

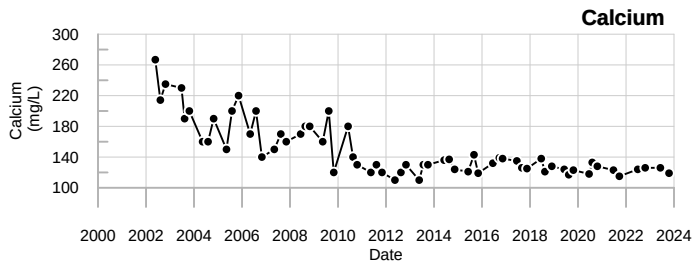

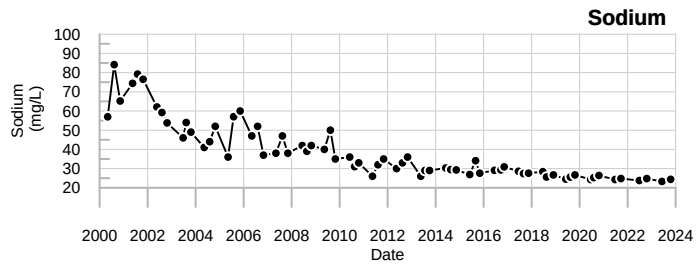

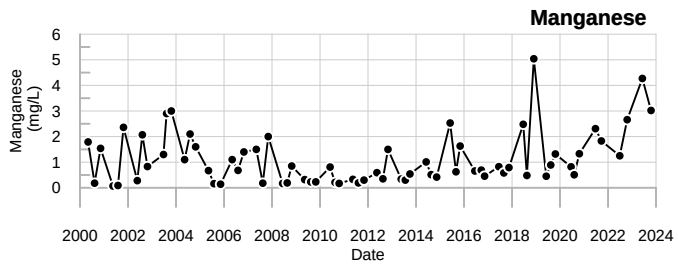

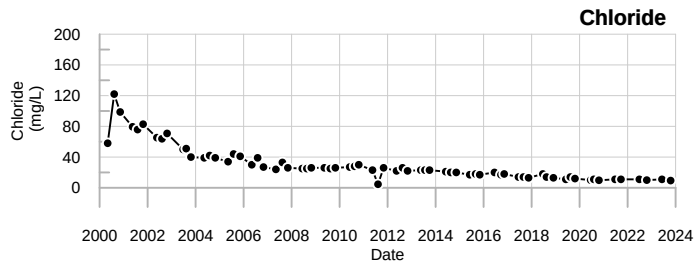

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
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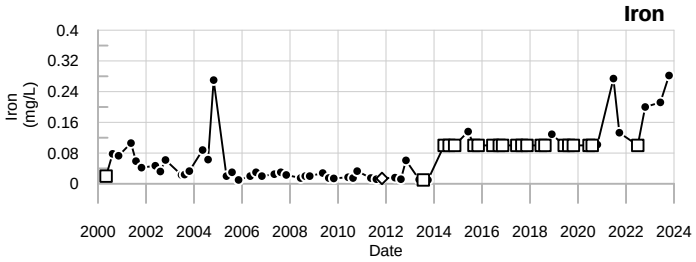
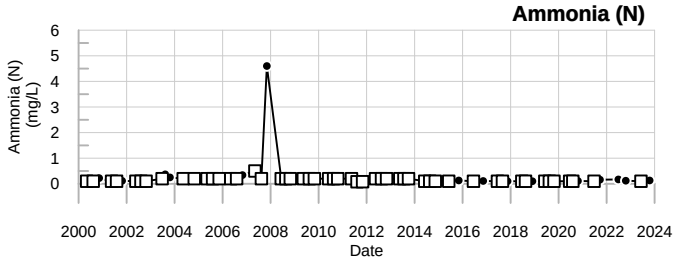
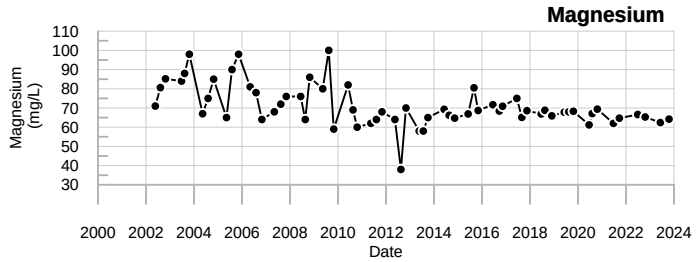
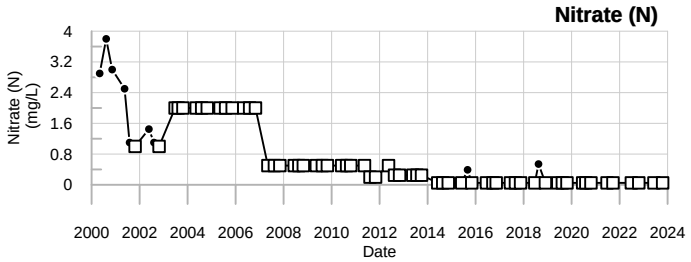
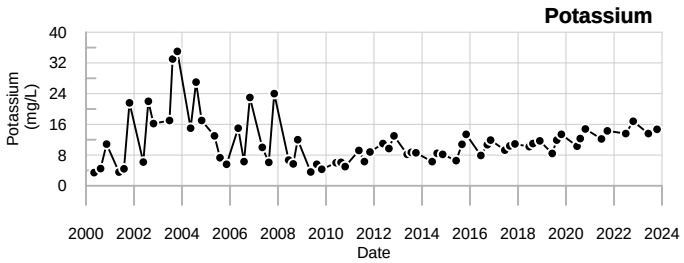
Dolby Landfill

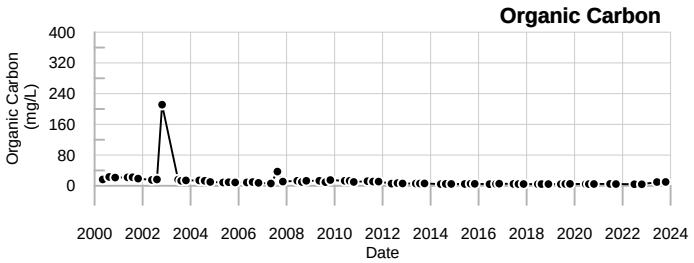


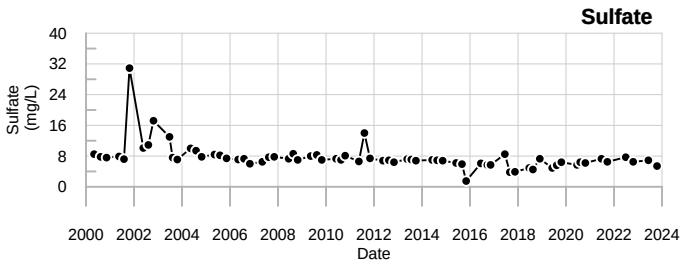


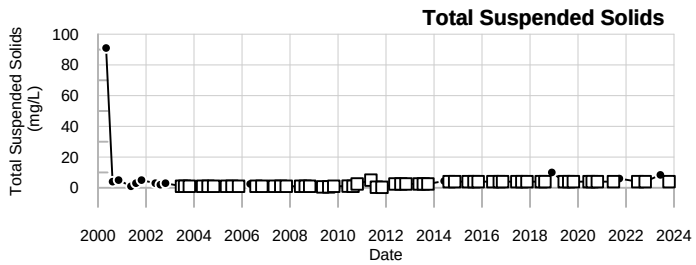


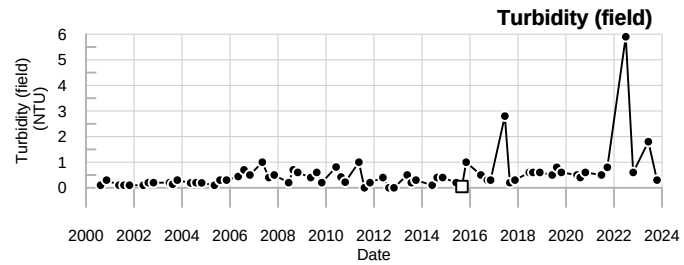












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Dolby Landfill

Sevee & Maher Engineers, Inc.

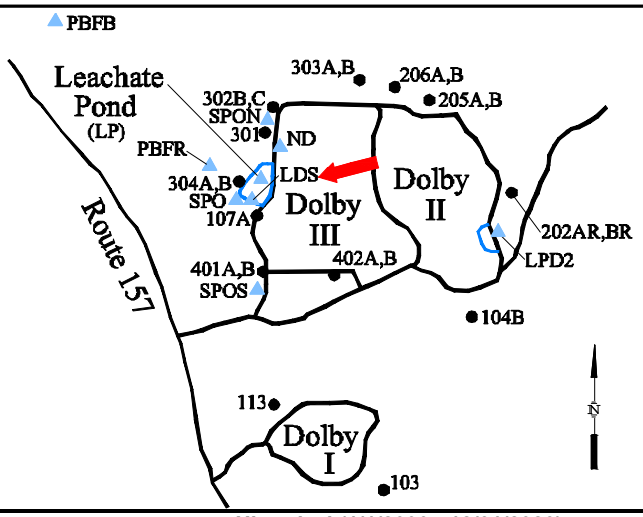
Well Description

Sample from the leak detection system at the Dolby III leachate pond west of landfill.

Sampled: **2 Times Annually**

Sampled Since: **May-08**

Sampling Method: **Grab**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2023) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		D		D	887	to 1773	1200	± 41.000	42
Dissolved Oxygen (mg/L)		D		D	0.3	to 6	1.6	± 0.190	33
Total Dissolved Solids (mg/L)		D			370	to 1000	720	± 23.000	42
Arsenic (mg/L)		D		D	0.006	to 0.034	0.014	± 0.001	42
Calcium (mg/L)		D		D	29	to 210	140	± 4.400	42
Manganese (mg/L)		D		D	1.5	to 14	5.2	± 0.380	42
pH (STU)		D		D	6.57	to 7.8	7	± 0.040	42
Alkalinity (CaCO3) (mg/L)		D		D	320	to 950	610	± 22.000	42
Ca-mg Hardness (CaCO3) (mg/L)		D		D	180	to 870	550	± 21.000	42
Bicarbonate Alkalinity (CaCO3) (mg/L)		D		D	320	to 880	600	± 21.000	42
Sodium (mg/L)		D		D	5.1	to 125	37	± 3.200	42
Chloride (mg/L)		D		D	4	to 150	44	± 3.900	42
Iron (mg/L)		D		D	2.87	to 24	7.3	± 0.730	42
Magnesium (mg/L)		D		D	26	to 87.9	52	± 2.700	42
Potassium (mg/L)		D		D	1 U	to 110	44	± 3.800	42
Sulfate (mg/L)		D		D	1 U	to 110	20	± 2.900	42
Total Suspended Solids (mg/L)		D		D	4 U	to 72	16	± 2.100	42
Turbidity (field) (NTU)		D		D	0	to 8.5	1.9	± 0.300	34
Ammonia (N) (mg/L)		D		D	0.19	to 7.9	3	± 0.340	42
Nitrate (N) (mg/L)		D		D	0.05 U	to 0.5 U	0.21	± 0.030	42
Organic Carbon (mg/L)		D		D	6.2	to 85	18	± 2.200	42

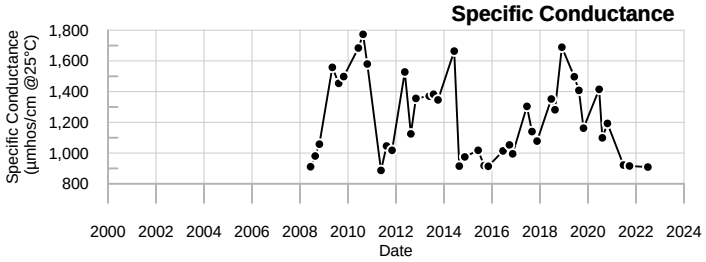
underlined/bold - values exceed a regulatory standard listed below.

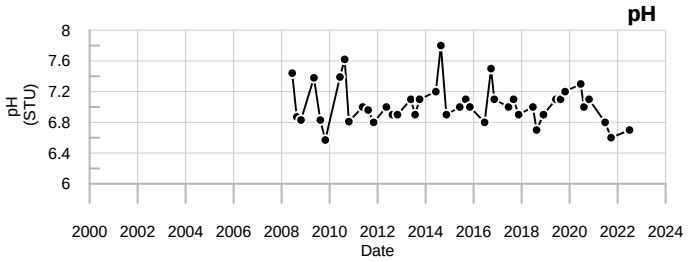
Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

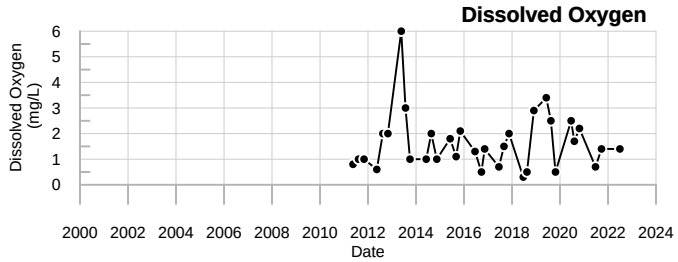
↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

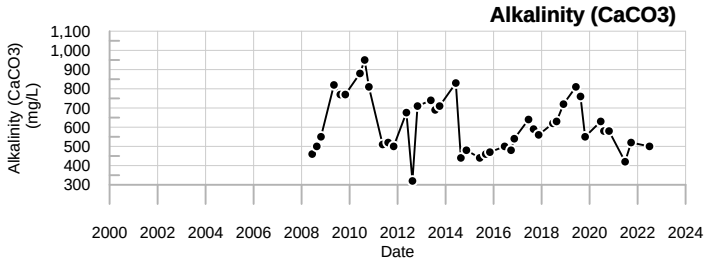
Comments

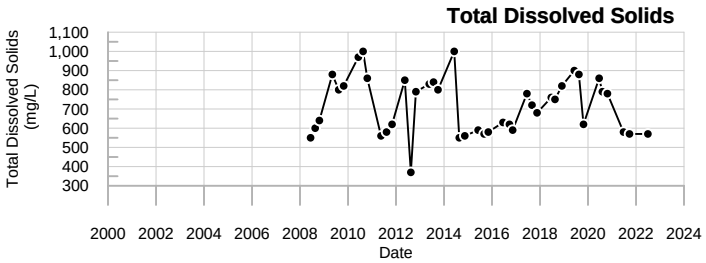
Q2= 6 - 2023 D = The sampling location was dry.
Q4= 10 - 2023

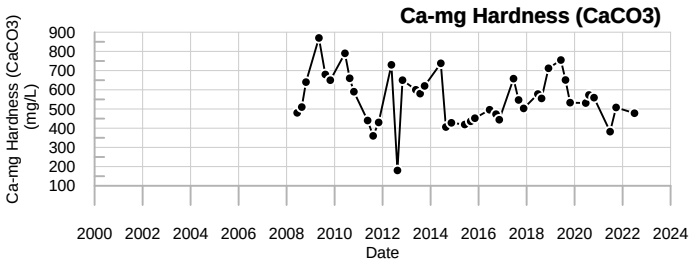


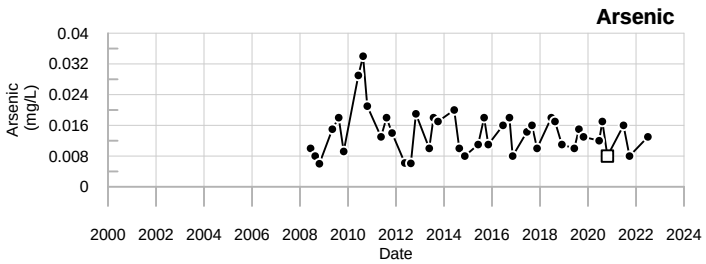


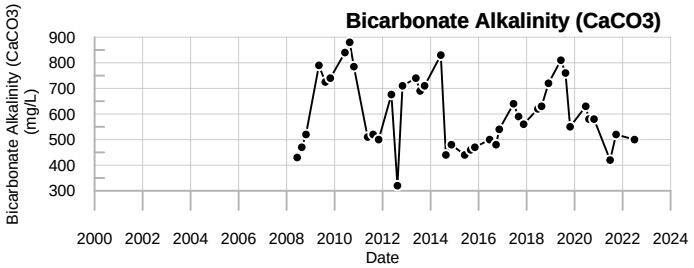


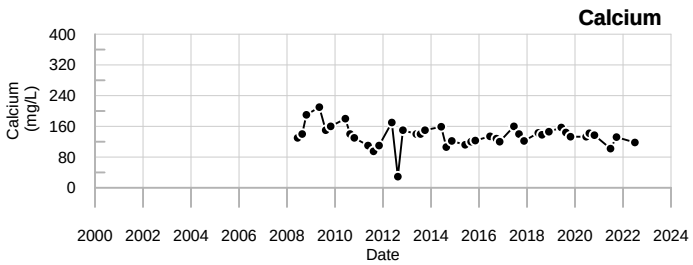


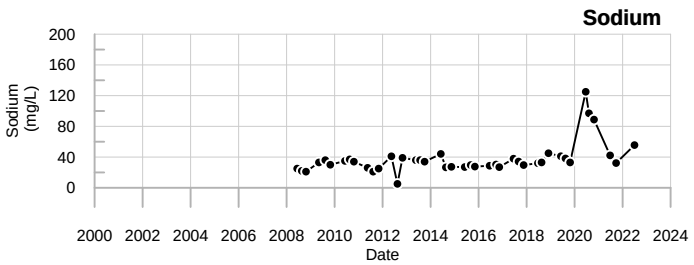


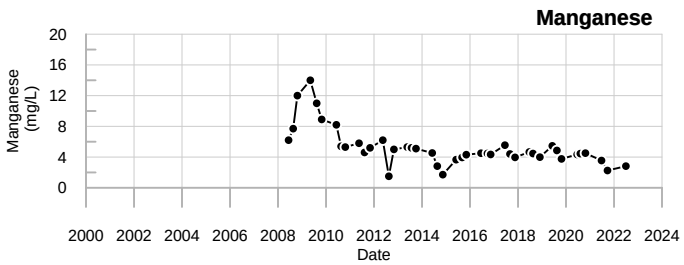


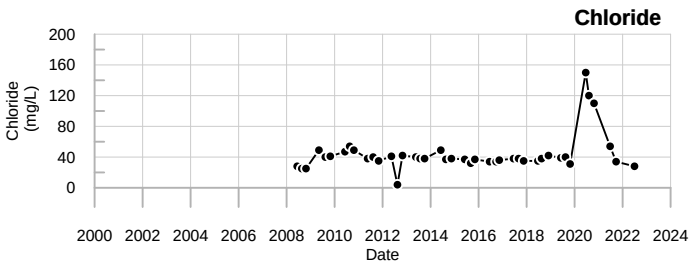












LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

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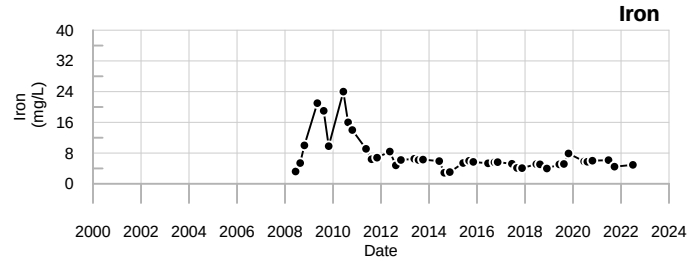

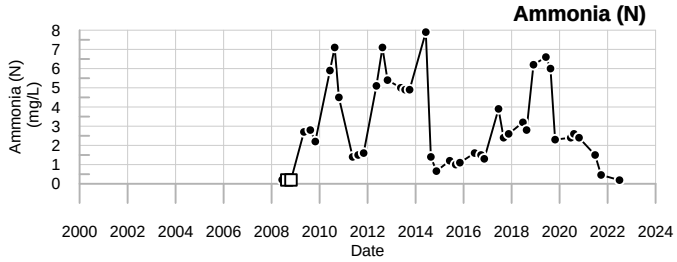

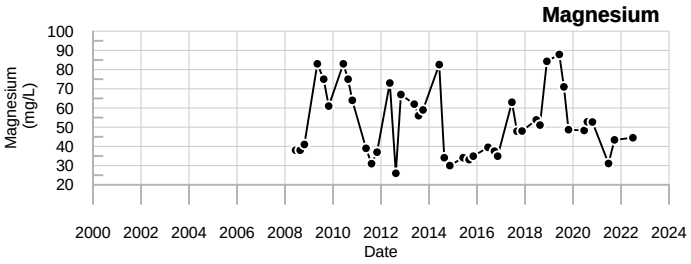



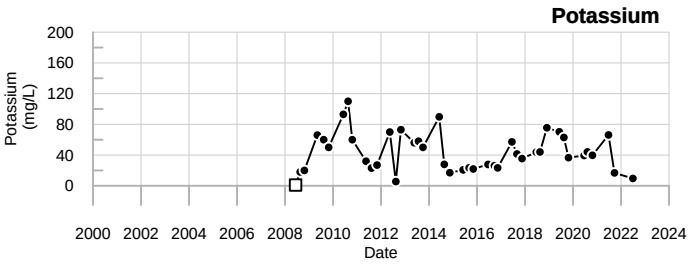

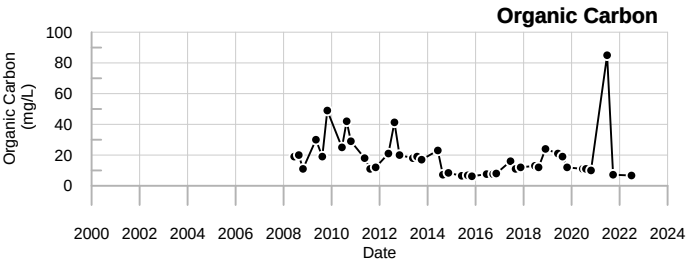

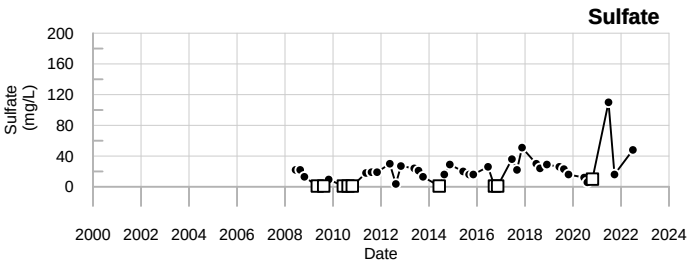

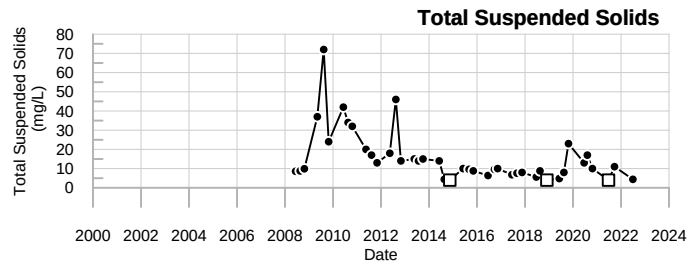

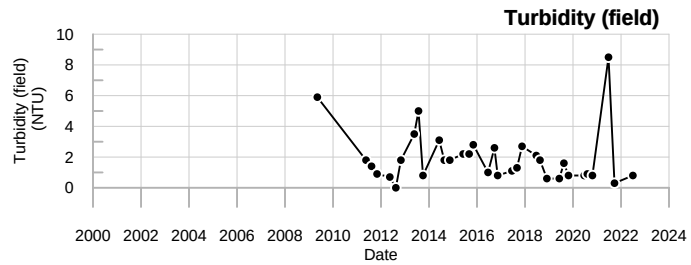

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LP

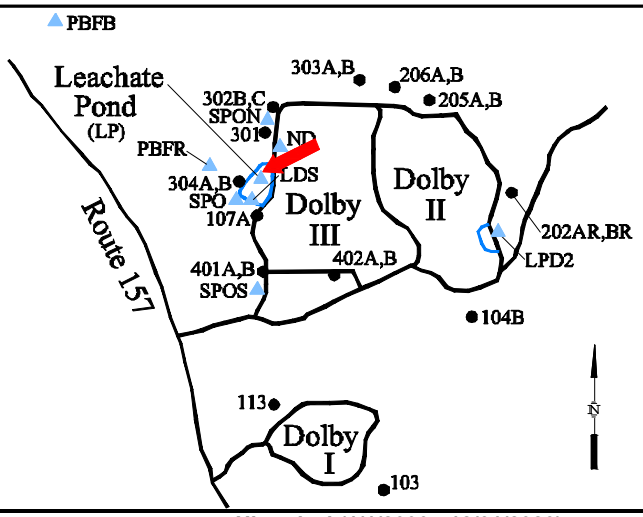
Well Description

Sample from the leachate pond to the west of landfill.

Sampled: **2 Times Annually**

Sampled Since: **Apr-86**

Sampling Method: **Grab**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2023) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		1394		1388	559	4760	2000	100.000	66
pH (STU)		7.4		7.1	6.46	8.46	7.4	0.050	66
Temperature (Deg C)		16.3		13	1.7	28.7	16	0.810	66
Dissolved Oxygen (mg/L)		8.7		5.8	1.8	13.9	6.7	0.460	34
Benzene (ug/L)		3 U		↓1 U	3 U	30 U	4.4	0.670	40
Toluene (ug/L)		5 U		↓2 U	2.8	50 U	6	1.100	40
Ethylbenzene (ug/L)		5 U		↓2 U	3.7 U	50 U	6.1	1.100	40
o-Xylene (ug/L)		5 U		↓2 U	4.4 U	50 U	6.1	1.100	40
m,p-Xylene (ug/L)		10 U		2 U	0.96	100 U	11	2.300	40
C11-C22 AROMATICS (ADJUSTED) (ug/L		93 UH		100 U	93 U	280	100	5.600	33
C19-C36 ALIPHATICS (ADJUSTED) (ug/L)		93 UH		100 U	93 U	360	100	8.000	33
C5-C8 ALIPHATICS (ADJUSTED) (ug/L)		100 U		100 U	75 U	1000 U	130	30.000	30
C9-C10 AROMATICS (ADJUSTED) (ug/L)		100 U		100 U	25 U	1000 U	120	31.000	30
C9-C12 ALIPHATICS (ADJUSTED) (ug/L)		100 U		100 U	25 U	1000 U	120	31.000	30
C9-C18 ALIPHATICS (ADJUSTED) (ug/L)		93 UH		100 U	93 U	104 U	95	0.490	33
Methyltertiarybutylether (MTBE) (ug/L)		5 U		2 U	2 U	50 U	6.2	1.300	35
Naphthalene (ug/L)		5 U		5 U	1.7 U	50 U	6	1.300	36
Naphthalene (EPH) (ug/L)		1.9 UH		↓1 U	1.9 U	2 U	1.9	0.004	25
2-Methylnaphthalene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Acenaphthylene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Acenaphthene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Fluorene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Phenanthrene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Anthracene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Fluoranthene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Pyrene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Benzo(a)Anthracene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Chrysene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Benzo(b)Fluoranthene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Benzo(k)Fluoranthene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Benzo(a)Pyrene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Indeno(1,2,3-c,d)Pyrene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Dibenz(a,h)Anthracene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Benzo(g,h,i)perylene (ug/L)		1.9 UH		↓1 U	1.9 U	10 U	2.8	0.360	35
Aluminum (mg/L)				0.3 U	0.02 U	0.3 U	0.18	0.024	24
Antimony (mg/L)				0.008 U	0.00035 U	0.011	0.0059	0.001	19
Arsenic (mg/L)		0.008 U		0.008	0.0036	0.068	0.019	0.002	64

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Dolby Landfill 2023 Leachate Stats

Barium (mg/L)		0.0941	0.0439 to 0.25	0.14 ± 0.010	24
Beryllium (mg/L)		0.005 U	0.00002 U to 0.005 U	0.0033 ± 0.000	19
Cadmium (mg/L)		0.005 U	0.00015 to 0.005 U	0.0028 ± 0.001	19
Calcium (mg/L)	123	121	30 to 340	150 ± 8.500	60
Chromium (mg/L)		0.01 U	0.0036 to 0.01 U	0.0074 ± 0.000	24
Cobalt (mg/L)		0.01 U	0.0064 to 0.05 U	0.033 ± 0.004	24
Copper (mg/L)		0.025 U	0.00028 U to 0.025 U	0.012 ± 0.002	24
Iron (mg/L)	2.6	4.76	0.33 to 76.7	11 ± 1.600	66
Lead (mg/L)		0.005 U	0.00077 U to 0.005	0.0037 ± 0.000	24
Magnesium (mg/L)	93.1	80.9	24 to 350	110 ± 7.700	60
Manganese (mg/L)	2.9	4.73	0.452 to 20.95	5.8 ± 0.600	66
Nickel (mg/L)		0.01 U	0.005 to 0.022	0.012 ± 0.001	24
Potassium (mg/L)	90.8	72.6	24.9 to 410	150 ± 10.000	66
Selenium (mg/L)		0.01 U	0.005 U to 0.016	0.0096 ± 0.001	24
Silver (mg/L)		0.01 U	0.001 U to 0.01 U	0.0073 ± 0.001	19
Sodium (mg/L)	34.7	28.7	8.84 to 140	51 ± 3.300	65
Thallium (mg/L)		0.015 U	0.00125 U to 0.02	0.0091 ± 0.002	19
Zinc (mg/L)		0.02 U	0.005 U to 0.0217	0.015 ± 0.001	24
Ammonia (N) (mg/L)	7.8	11	1.1 to 27	11 ± 0.820	66
Nitrate (N) (mg/L)	0.9	0.12	0.05 U to 15.5	1.6 ± 0.340	66
Total Phosphorus Mixed Forms (PO4 and	0.15	0.1 U	0.022 to 1.364	0.26 ± 0.034	65
Total Dissolved Solids (mg/L)	800	670	270 to 3903	1300 ± 81.000	66
Total Suspended Solids (mg/L)	4 U	9.6	4 U to 133	45 ± 4.400	66
Sulfate (mg/L)	33	46	1 U to 320	46 ± 6.300	66
Ca-mg Hardness (CaCO3) (mg/L)	691	636	259 to 2300	880 ± 44.000	66
Bicarbonate Alkalinity (CaCO3) (mg/L)	770	760	260 to 2550	1000 ± 54.000	66
Alkalinity (CaCO3) (mg/L)	770	760	260 to 2700	1100 ± 58.000	66
Organic Carbon (mg/L)	27	32	9.9 to 383.4	80 ± 9.600	66
Chloride (mg/L)	31	27	9.2 to 248	65 ± 5.700	66
Turbidity (field) (NTU)	4.6	3.9	0.8 to 74.3	17 ± 3.400	34

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

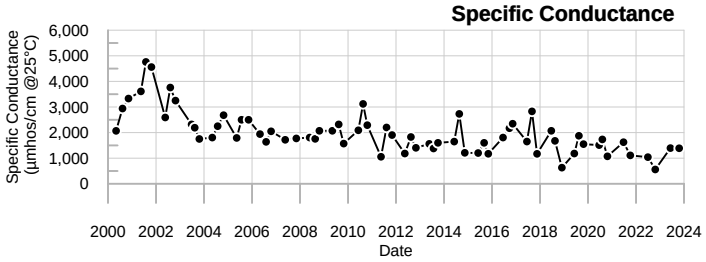
↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

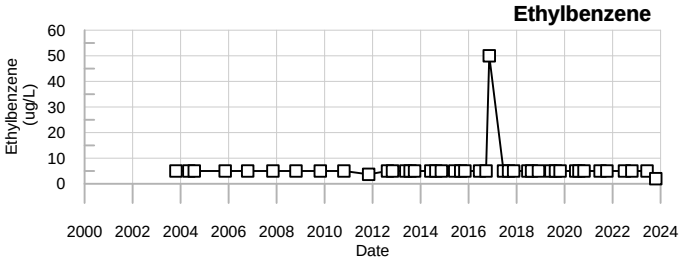
Comments

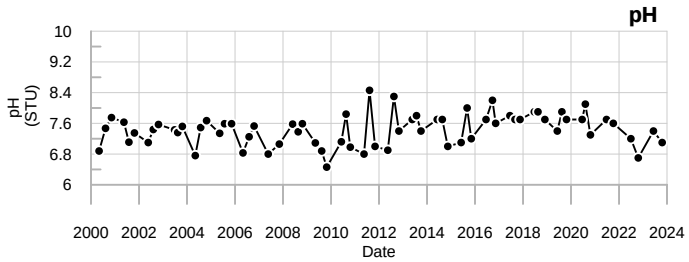
Q2= 6 - 2023
Q4= 10 - 2023

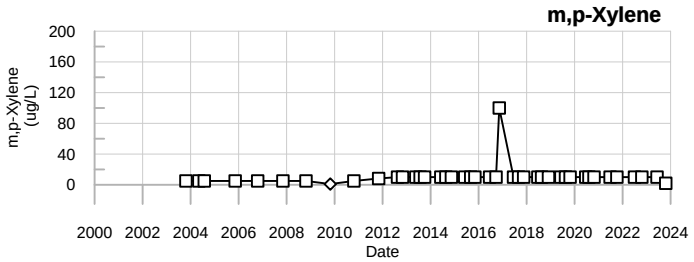
UH = Not Detected above the laboratory reporting limit.
Analyzed outside U.S.EPA's recommended hold time

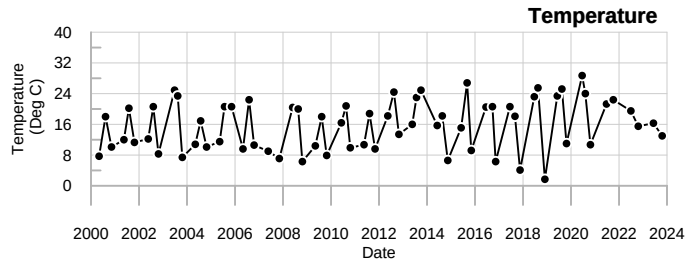
U = Not Detected above the laboratory reporting limit.

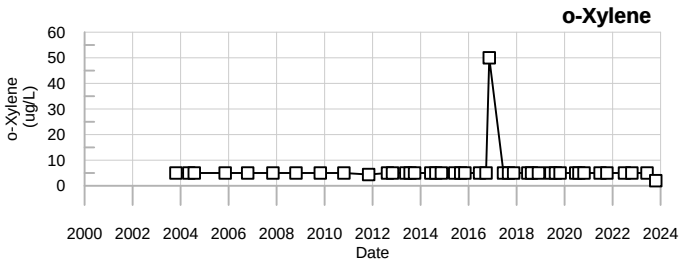


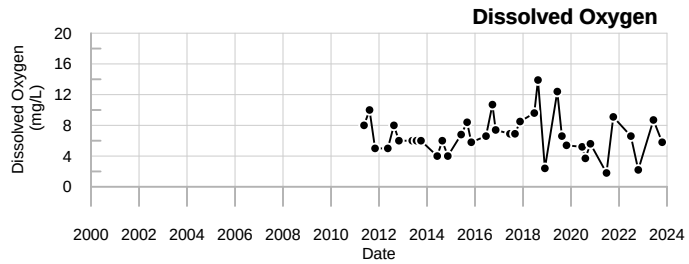


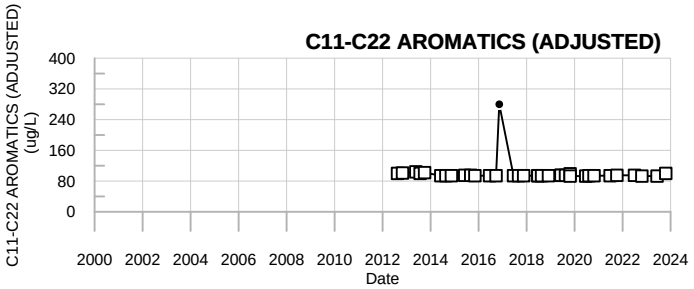


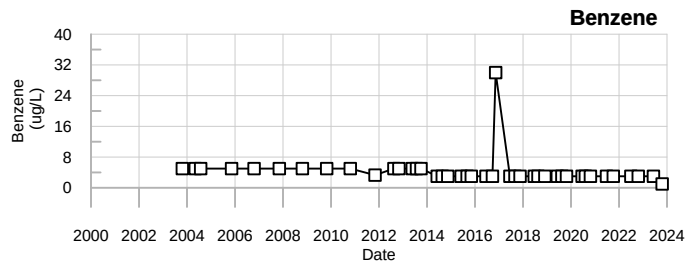


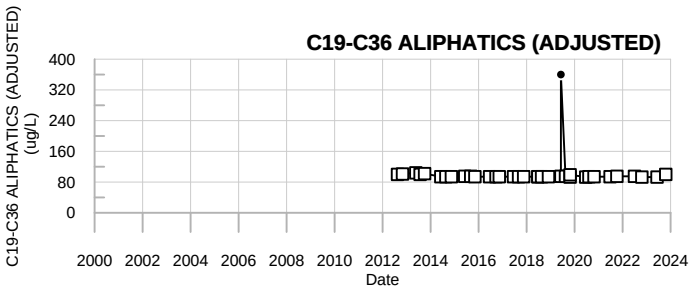


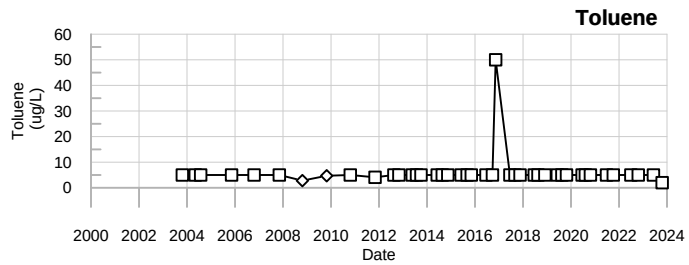


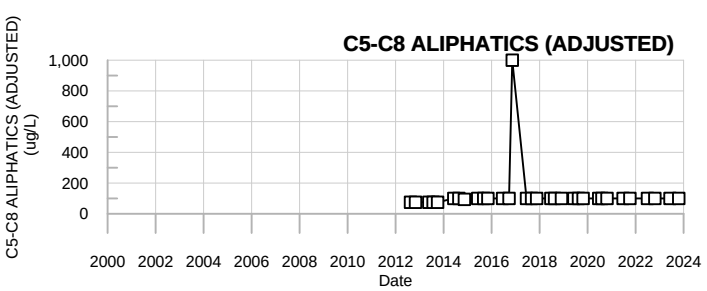












LEGEND

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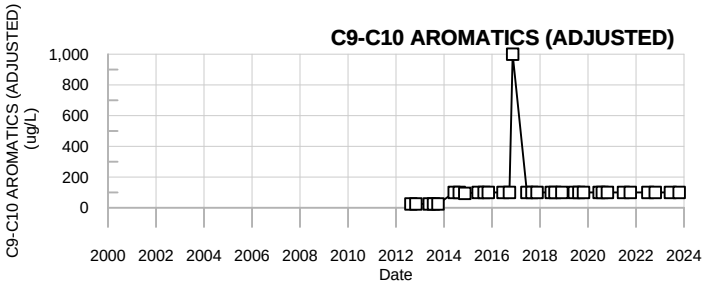

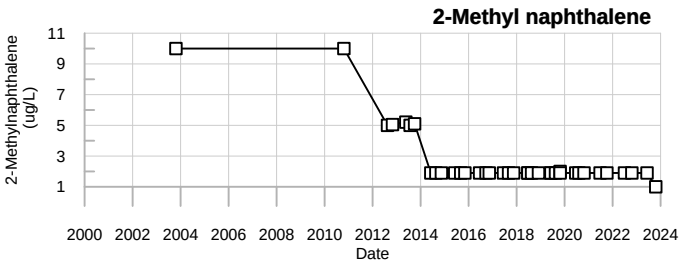

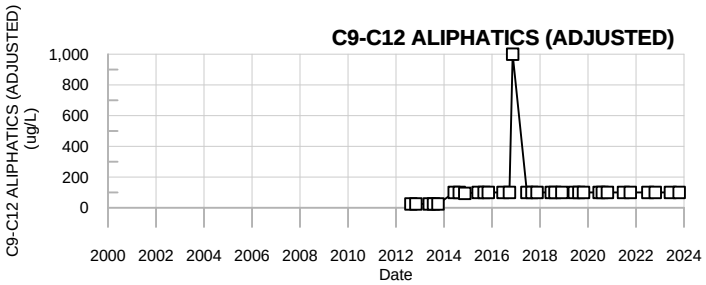

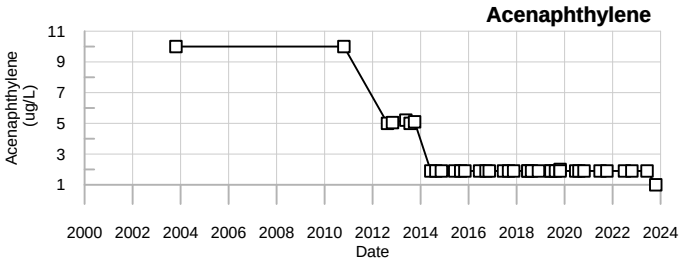

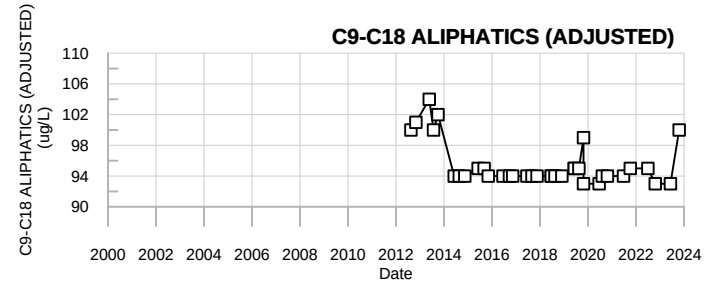



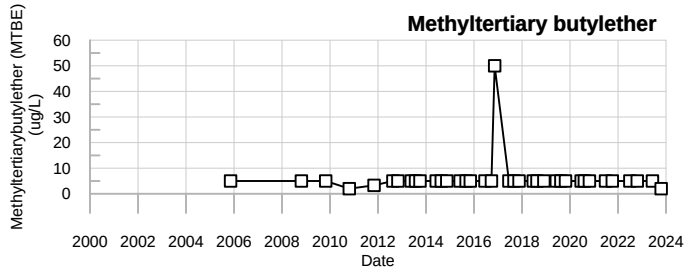

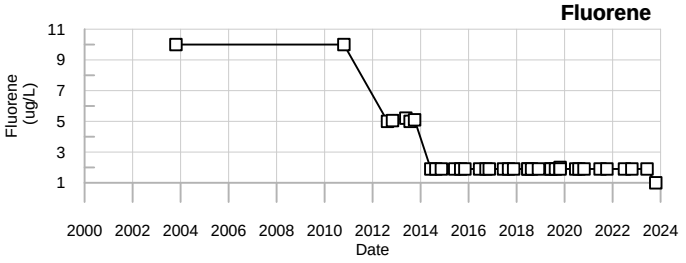

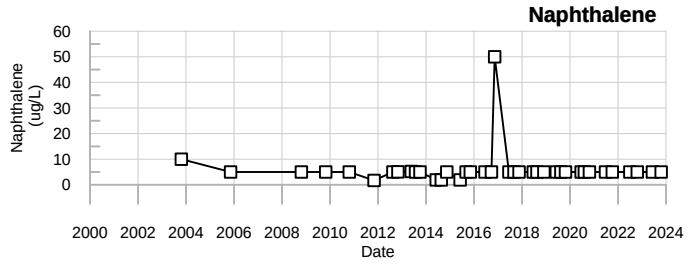

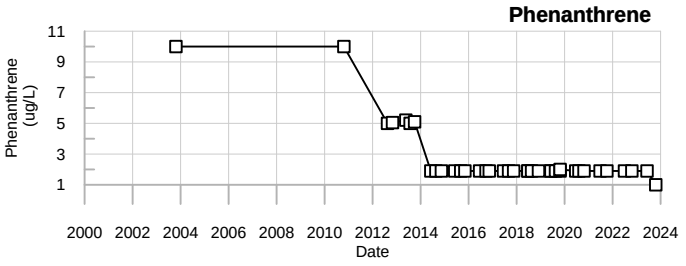

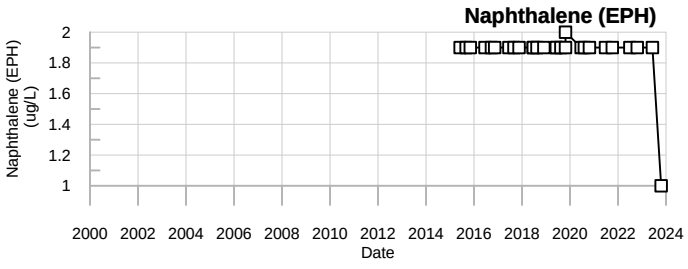

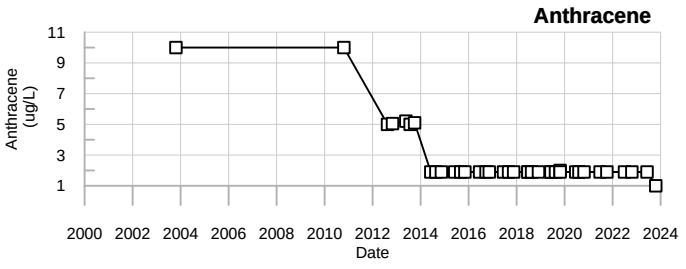

LEGEND

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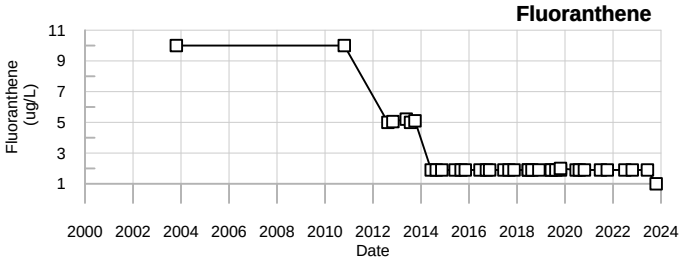

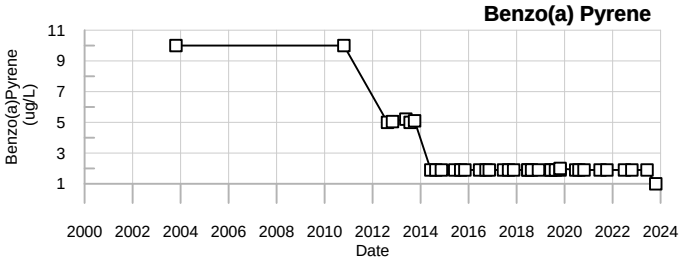

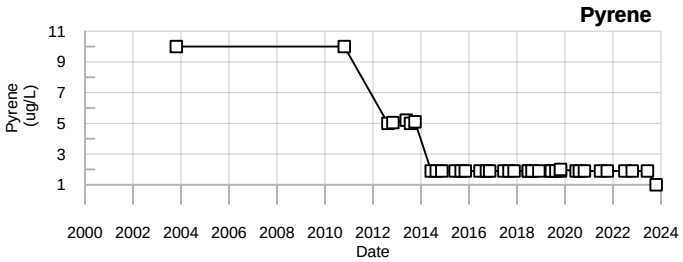

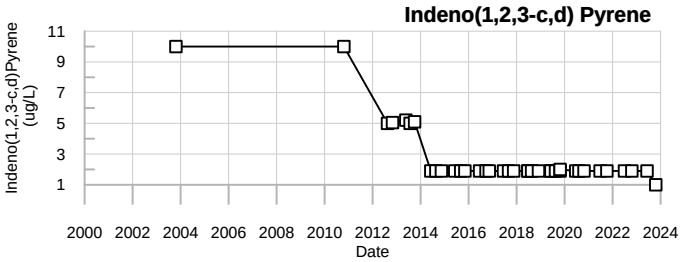

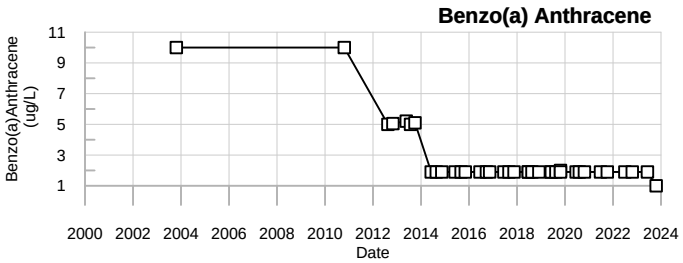

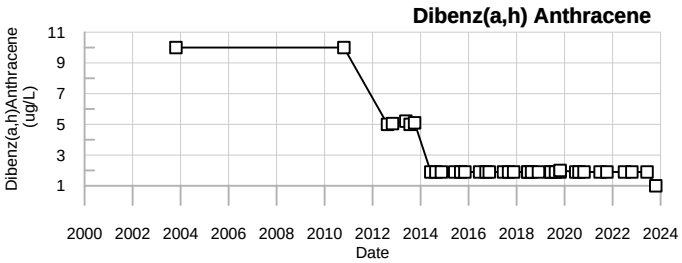

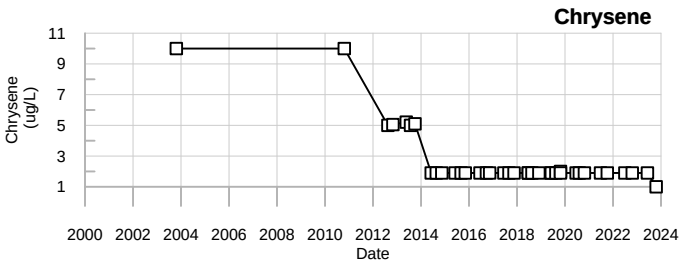

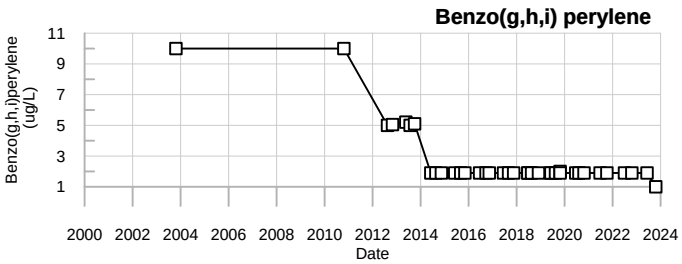

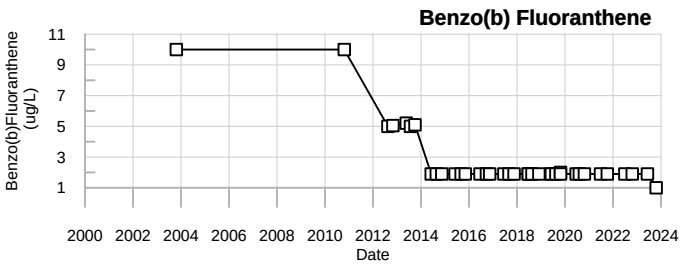

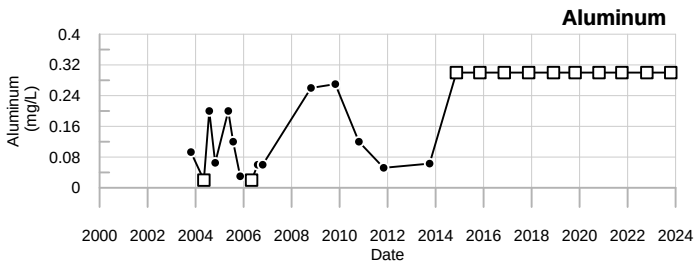

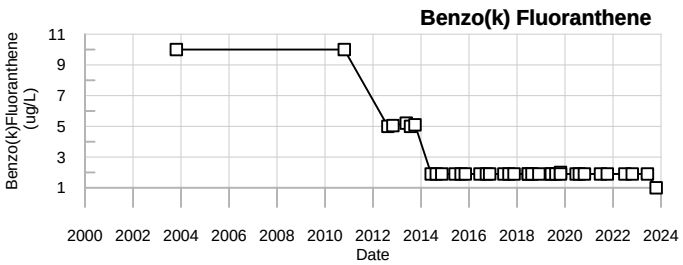

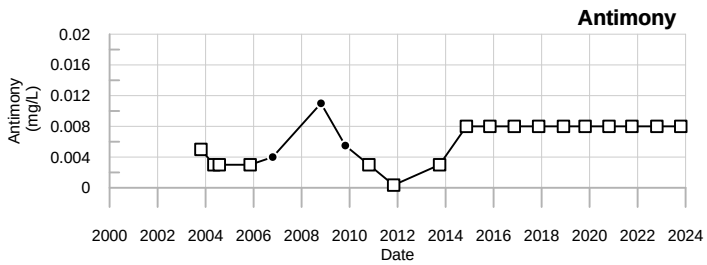

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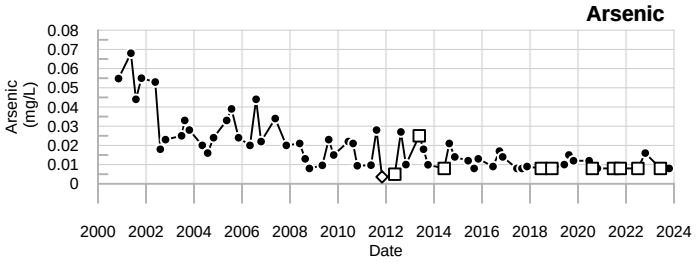

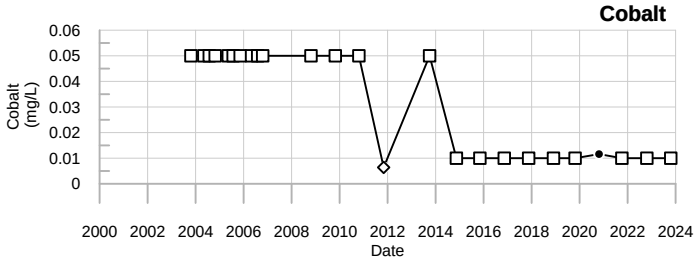

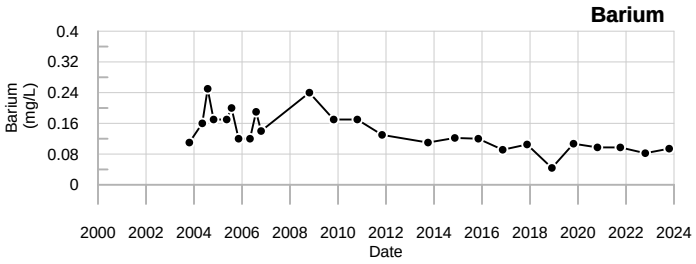

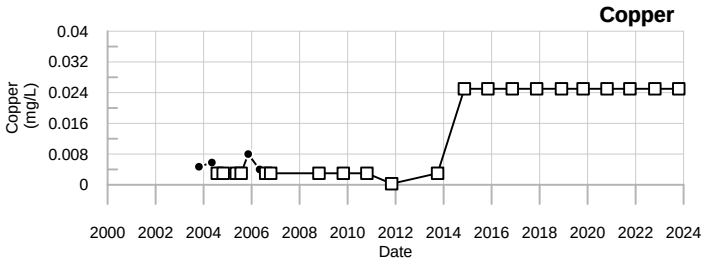

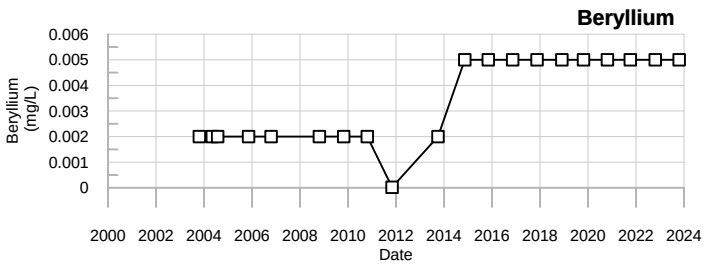

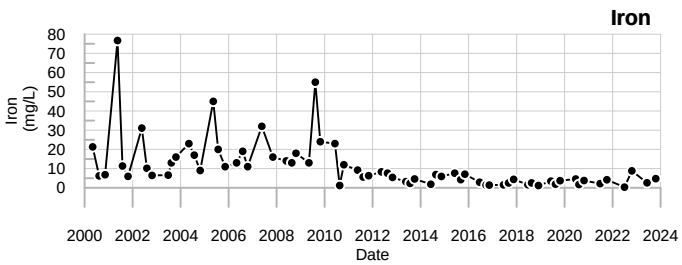

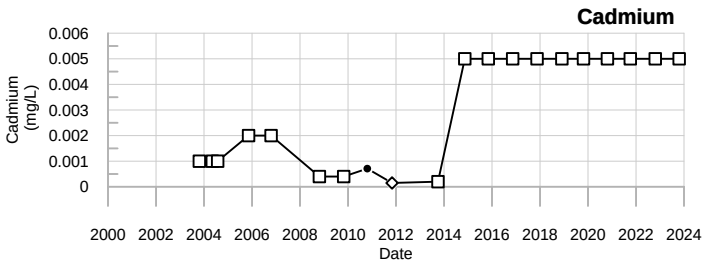

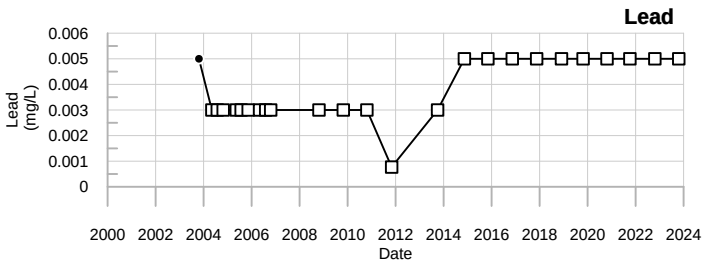

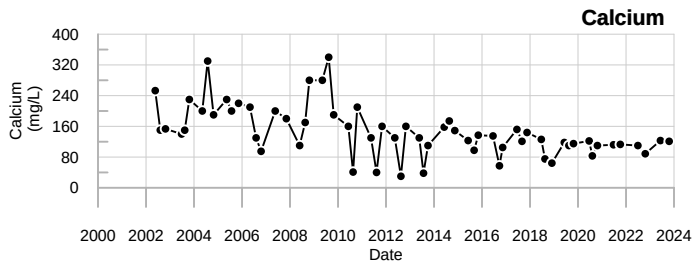

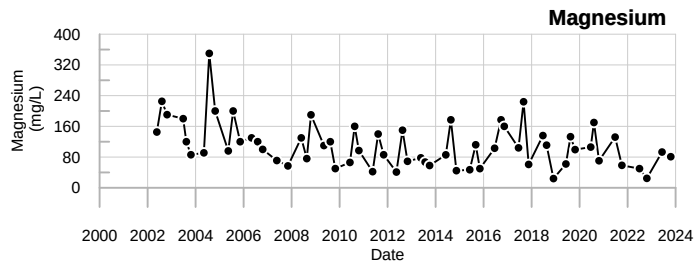

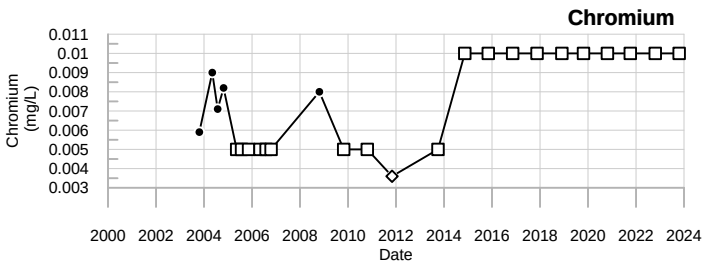

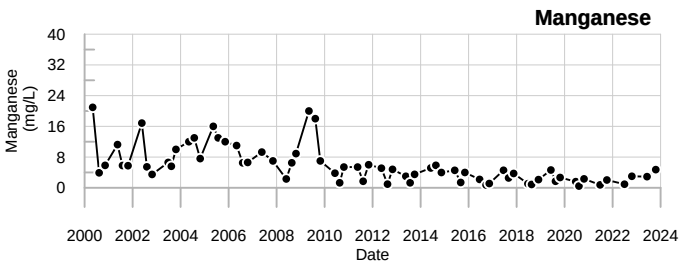

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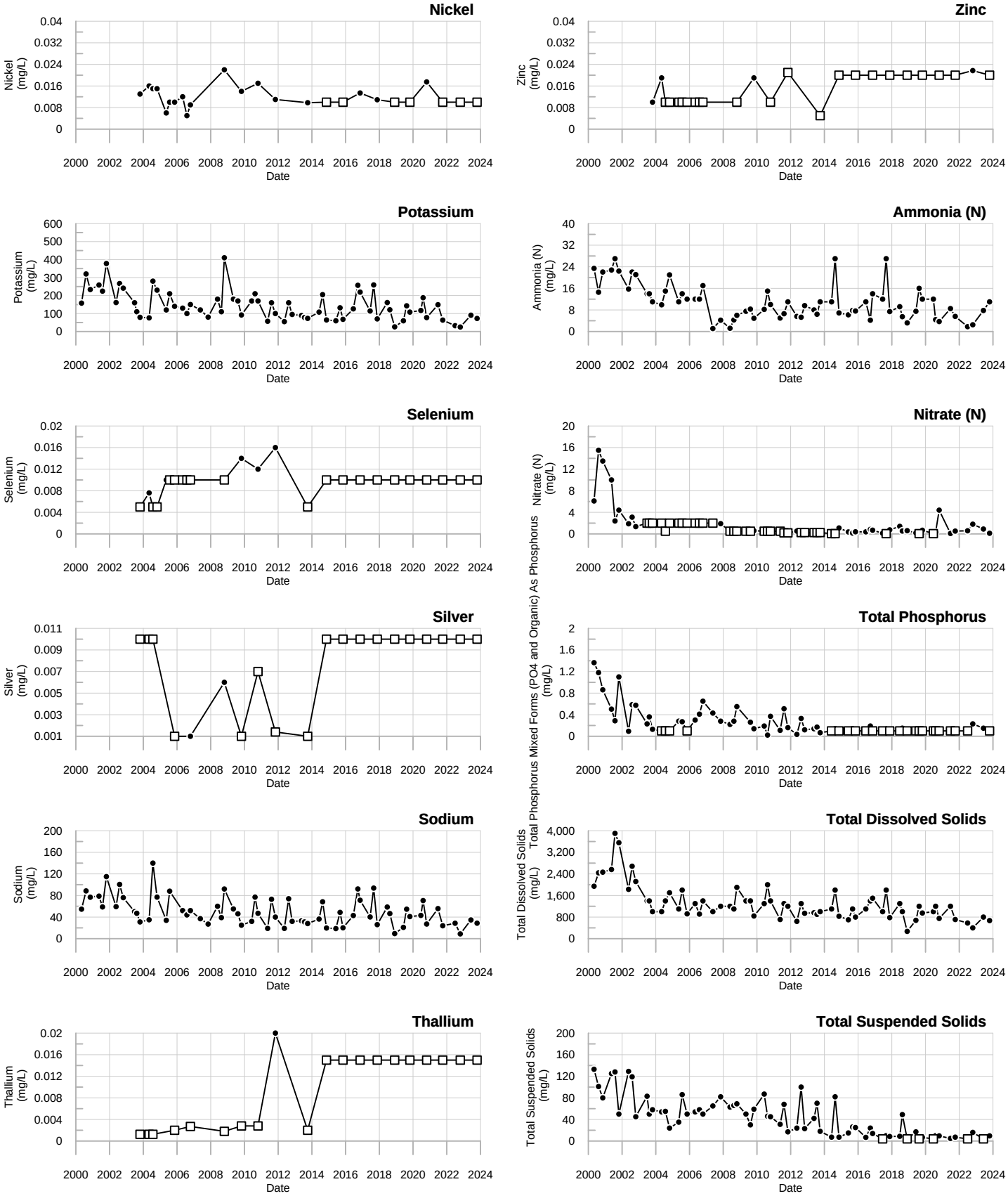

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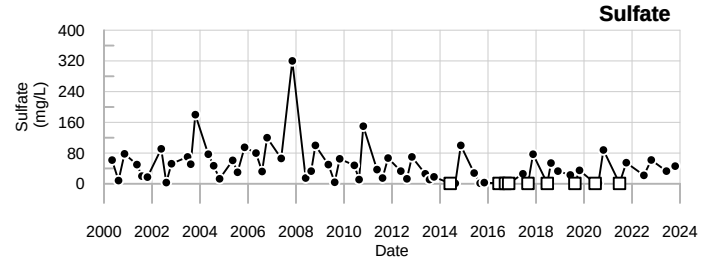

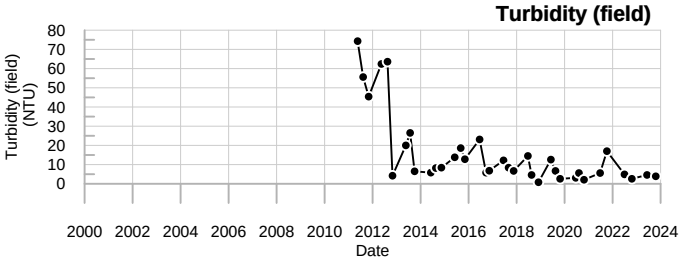

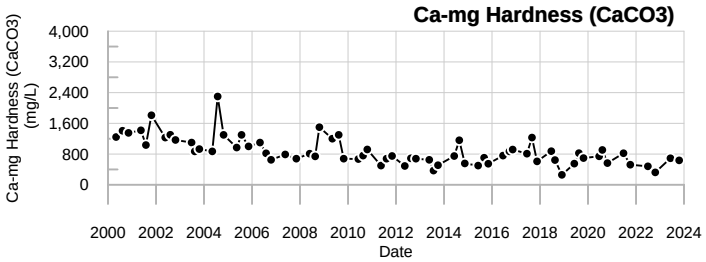

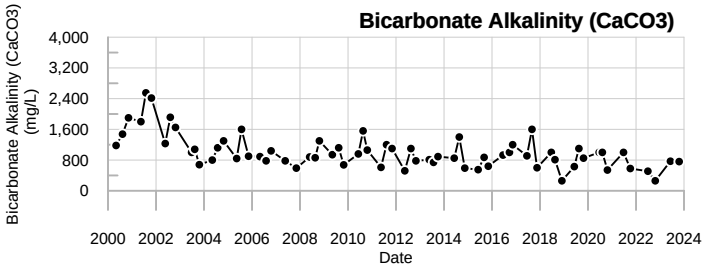

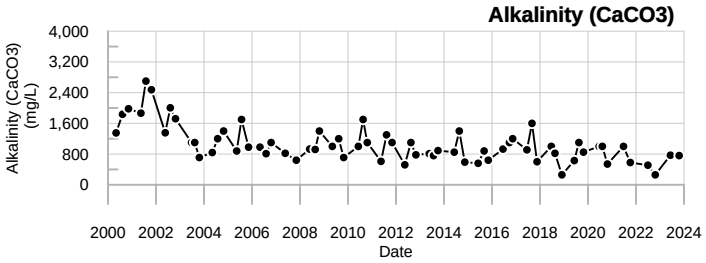

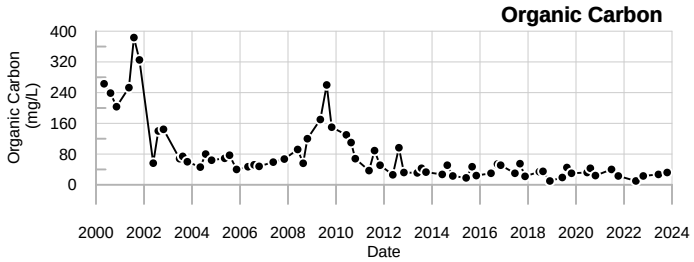

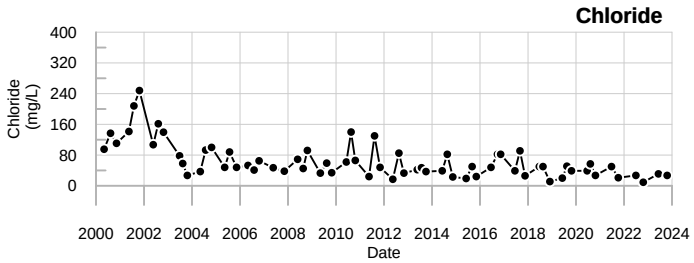

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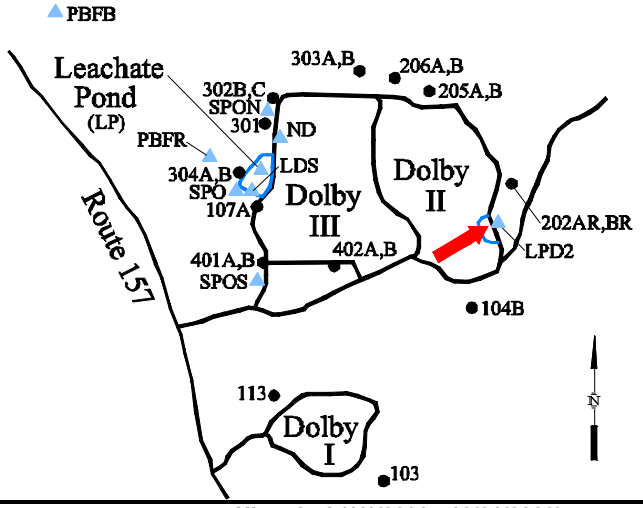
Well Description

Leachate Pond East of Dolby II

Sampled: **2 Times Annually**

Sampled Since: **May-05**

Sampling Method: **Grab**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2023) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		307		281	94	to 729	310	± 22.000	50
Dissolved Oxygen (mg/L)		3.9		3.5	0.5	to 12.3	5.1	± 0.370	49
Total Dissolved Solids (mg/L)		140		140 H	26	to 810	190	± 18.000	50
Arsenic (mg/L)		0.008 U		0.008 U	0.0025	to 0.024	0.0074	± 0.001	50
Calcium (mg/L)		37.3		28	12	to 130	33	± 2.600	50
Manganese (mg/L)		0.294		1.54	0.023	to 5.1	0.89	± 0.150	50
pH (STU)		6.8		6.8	6.3	to 8.29	7.2	± 0.065	50
Alkalinity (CaCO3) (mg/L)		160		96	21	to 710	150	± 17.000	50
Ca-mg Hardness (CaCO3) (mg/L)		173		103	44	to 550	150	± 14.000	50
Bicarbonate Alkalinity (CaCO3) (mg/L)		160		96	21	to 710	150	± 17.000	50
Sodium (mg/L)		3.46		1.79	1 U	to 36	3.7	± 0.750	50
Chloride (mg/L)		2 U		2 U	0.58	to 41	3.7	± 0.830	50
Iron (mg/L)		1.4		6.44	0.193	to 15.2	3.4	± 0.500	50
Magnesium (mg/L)		19.3		7.94	2.8	to 61	17	± 2.200	50
Potassium (mg/L)		3.92		3.01	1.15	to 52	4.8	± 1.000	50
Sulfate (mg/L)		14		16	1 U	to 53	13	± 1.800	50
Total Suspended Solids (mg/L)		4 U		13	0.6 U	to 34	9.1	± 1.200	50
Turbidity (field) (NTU)		2.2		4.1	0	to 55.3	8.4	± 1.700	50
Ammonia (N) (mg/L)		3.4		1.9	0.1 U	to 6.3	2	± 0.250	50
Nitrate (N) (mg/L)		0.32		0.18	0.05 U	to 6.2	1	± 0.190	50
Organic Carbon (mg/L)		9		14	4	to 43	13	± 1.300	50

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

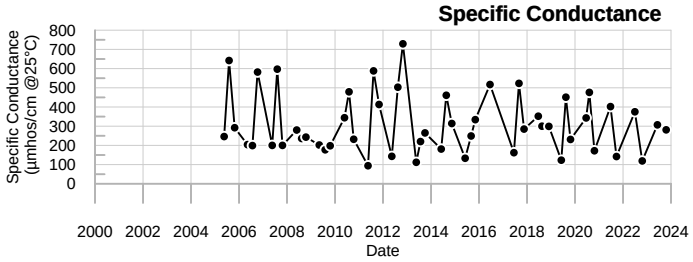
↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

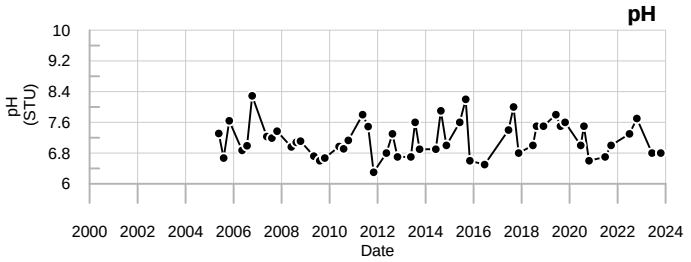
Comments

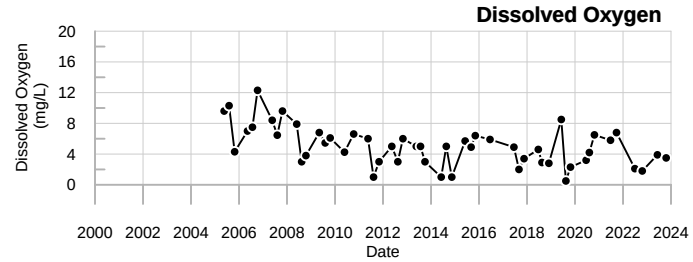
Q2= 6 - 2023
Q4= 10 - 2023

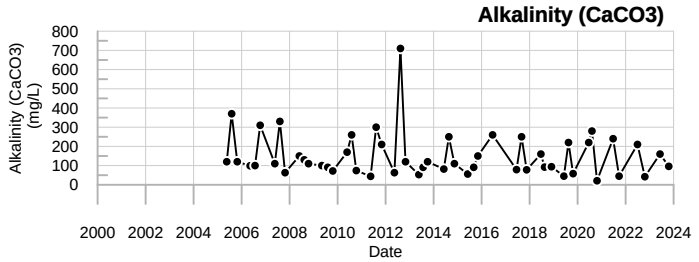
U = Not Detected above the laboratory reporting limit.

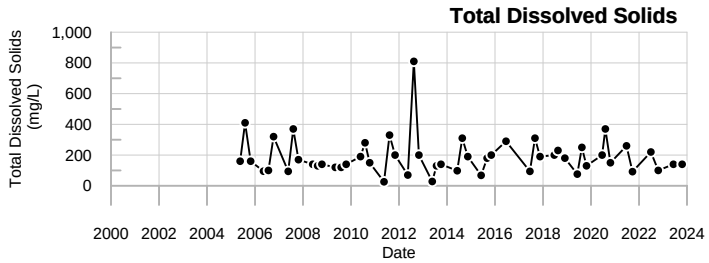
H = Analyzed outside U.S.EPA's recommended hold time.

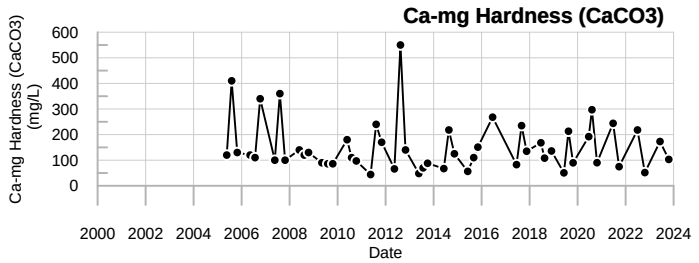


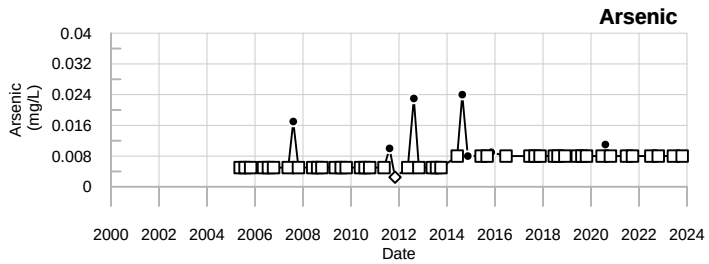


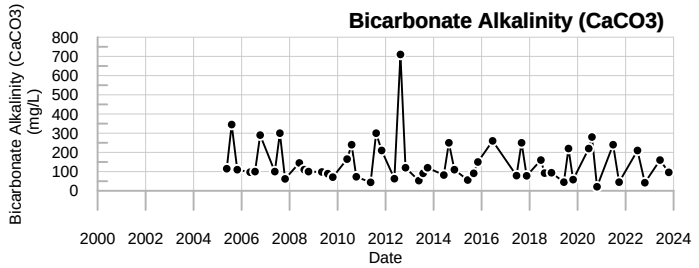


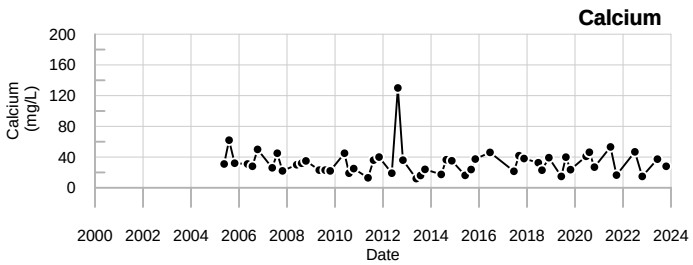


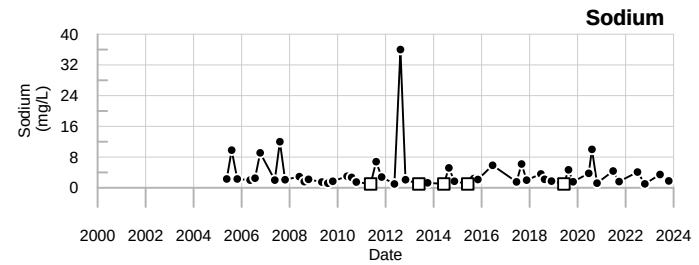


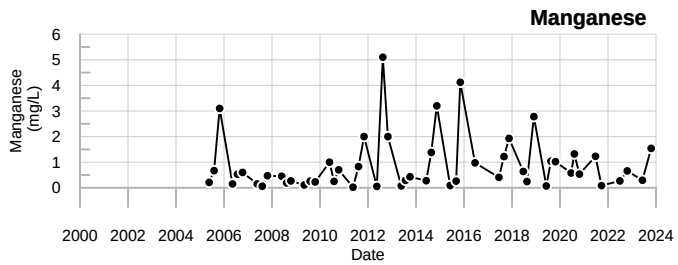


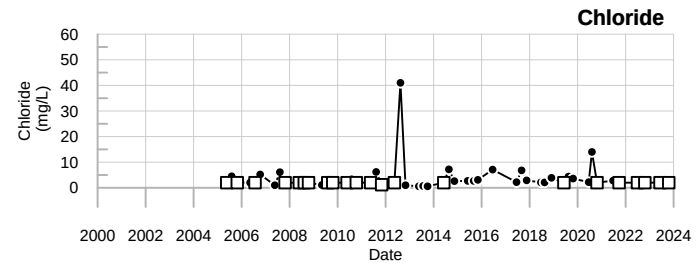










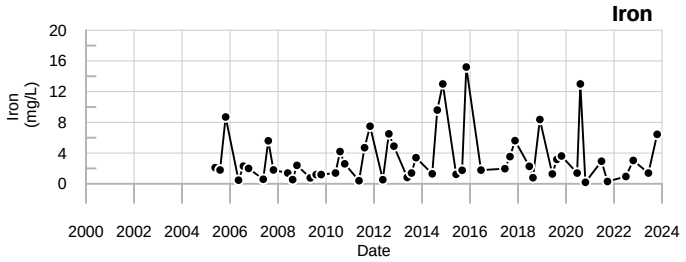


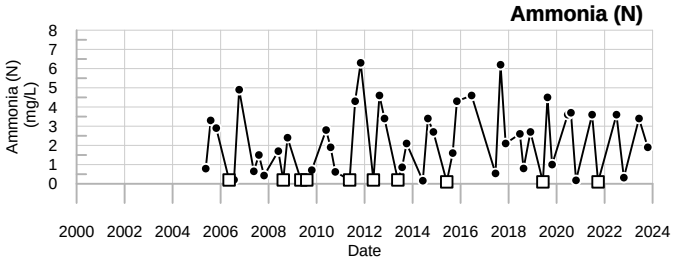
LEGEND

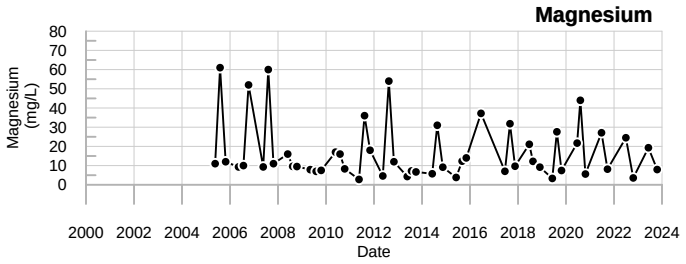
- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

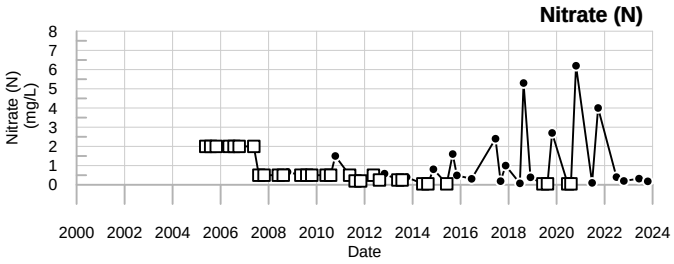
SME
SEVEE & MAHER
ENGINEERS

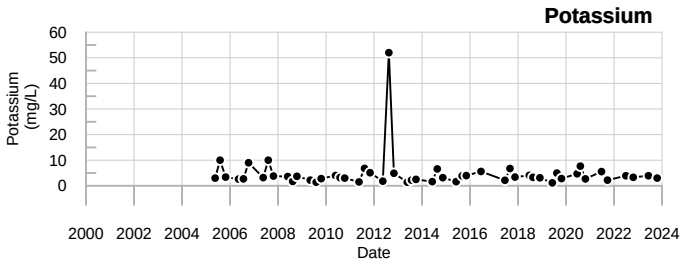
LPD2
Dolby Landfill

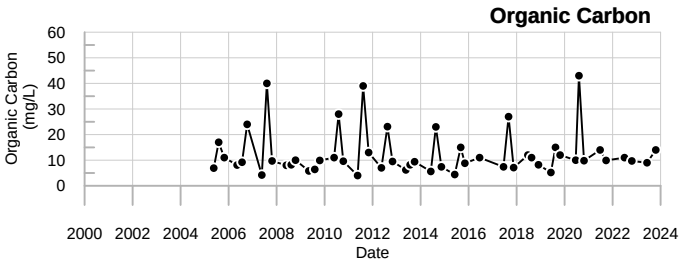


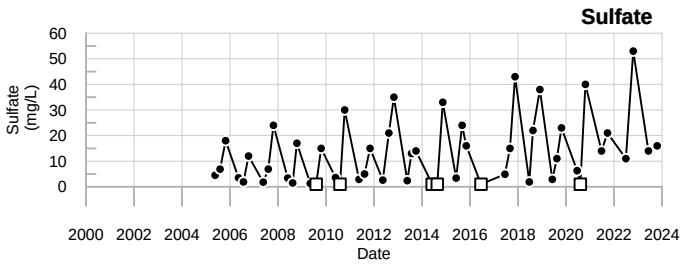


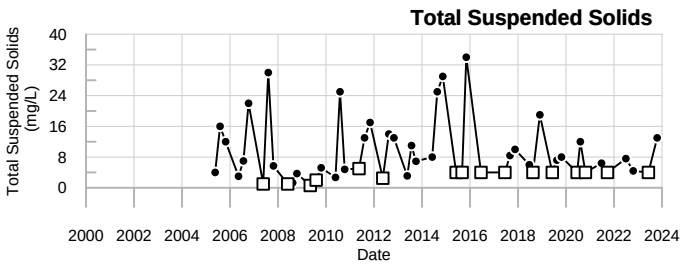


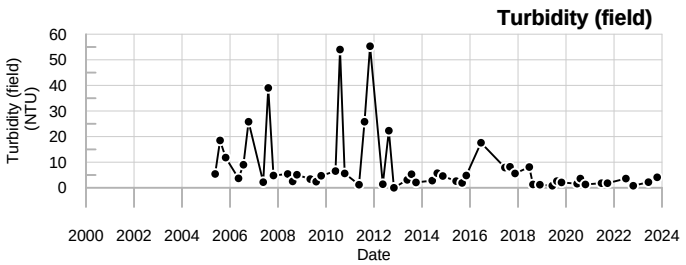












LEGEND

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SME
SEVEE & MAHER
ENGINEERS

LPD2
Dolby Landfill

Sevee & Maher Engineers, Inc.

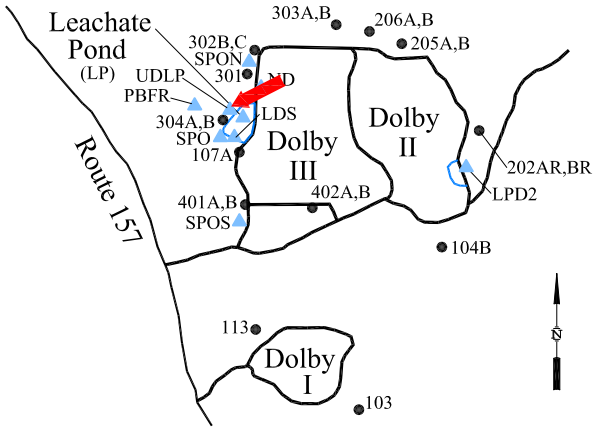
Well Description

Sample collected from manhole on the western side of the leachate pond.

Sampled: **2 Times Annually**

Sampled Since: **June-21**

Sampling Method: **Grab**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2022) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		679		687	538	to 788	660	± 62.000	4
Dissolved Oxygen (mg/L)		↑2.8		2	1.5	to 2.1	1.8	± 0.150	4
Total Dissolved Solids (mg/L)		390		410	310	to 540	430	± 52.000	4
Arsenic (mg/L)		0.008 U		0.008 U	0.008 U	to 0.008 U	0.008	± 0.000	4
Calcium (mg/L)		103		92.2	81.1	to 121	100	± 10.000	4
Manganese (mg/L)		1.83		2.9	1.46	to 3.09	2	± 0.380	4
pH (STU)		↓6.5		↓6.5	6.6	to 7.1	6.7	± 0.130	4
Alkalinity (CaCO3) (mg/L)		360		380	310	to 420	360	± 26.000	4
Ca-mg Hardness (CaCO3) (mg/L)		368		347	282	to 455	380	± 44.000	4
Bicarbonate Alkalinity (CaCO3) (mg/L)		360		380	310	to 420	360	± 26.000	4
Sodium (mg/L)		25.8		23.6	20.3	to 30.2	25	± 2.500	4
Chloride (mg/L)		17		14	13	to 30	21	± 3.800	4
Iron (mg/L)		↓0.516		1.73	0.579	to 5.83	2.3	± 1.200	4
Magnesium (mg/L)		26.6		28.3	19.4	to 37	29	± 4.500	4
Potassium (mg/L)		10.3		10.7	6.99	to 13.6	11	± 1.600	4
Sulfate (mg/L)		17		14	13	to 50	26	± 8.400	4
Total Suspended Solids (mg/L)		4 U		4 U	4 U	to 8.4	5.5	± 1.000	4
Turbidity (field) (NTU)		1.8		↓0.4	0.5	to 5.1	1.9	± 1.100	4
Ammonia (N) (mg/L)		↑0.3		↑0.34	0.12	to 0.28	0.19	± 0.034	4
Nitrate (N) (mg/L)		0.11		↓0.066	0.096	to 2.2	0.69	± 0.510	4
Organic Carbon (mg/L)		5.1		↑8.5	4.2	to 6.9	5.5	± 0.680	4

underlined/bold - values exceed a regulatory standard listed below.

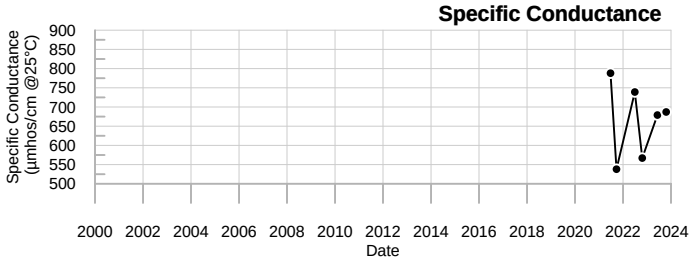
Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

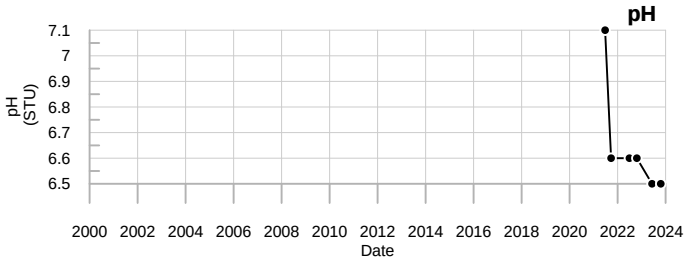
↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

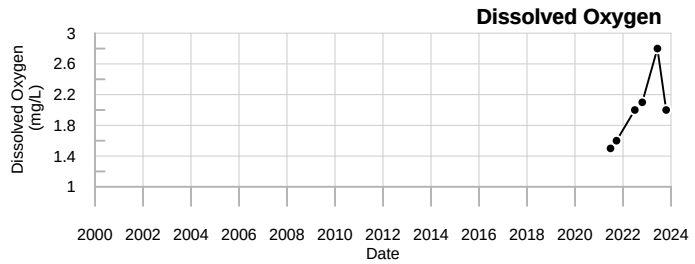
Comments

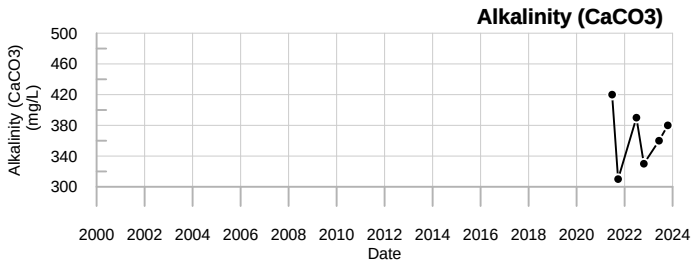
Q2= 6 - 2023
Q4= 10 - 2023

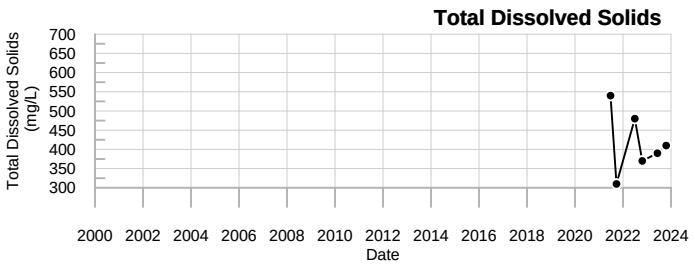
U = Not Detected above the laboratory reporting limit.

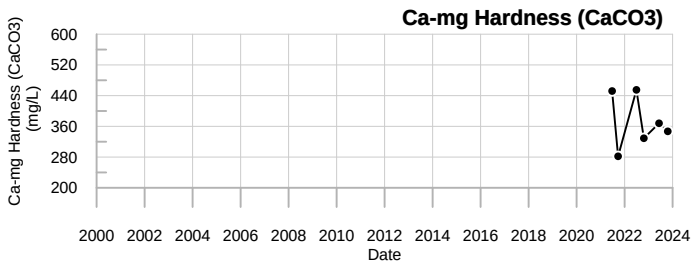


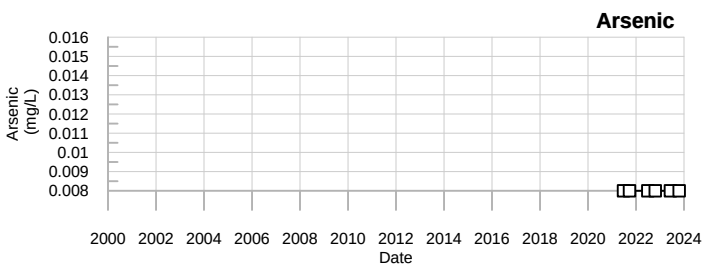


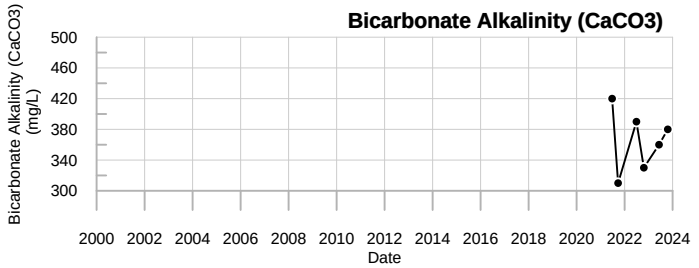


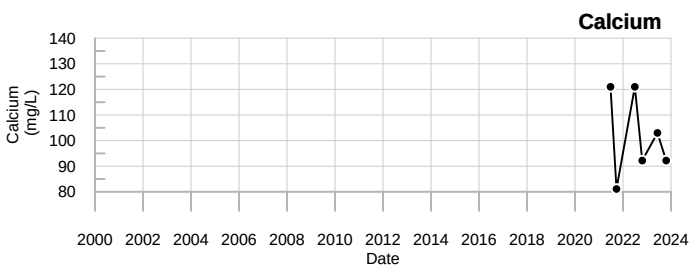


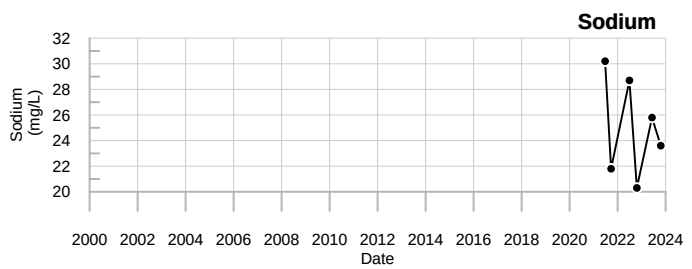


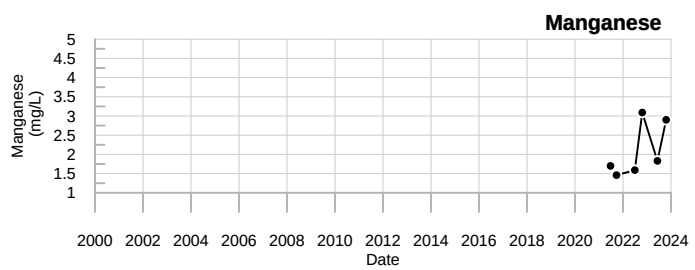


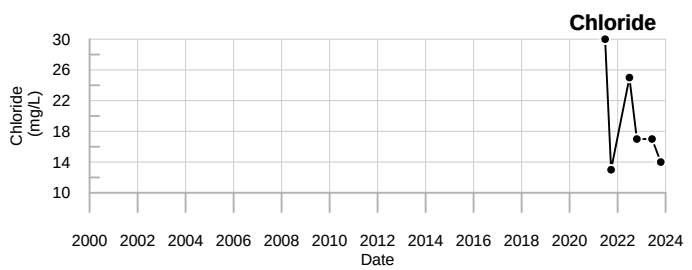










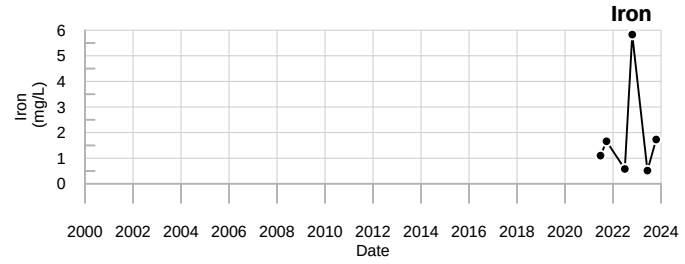


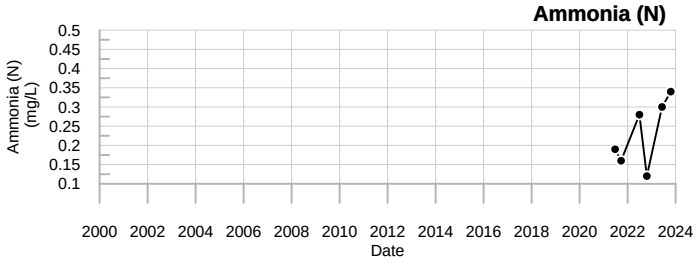
LEGEND

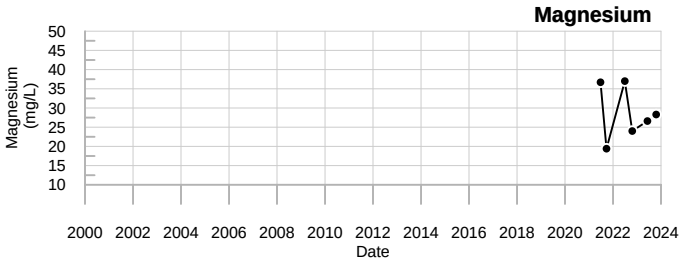
- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

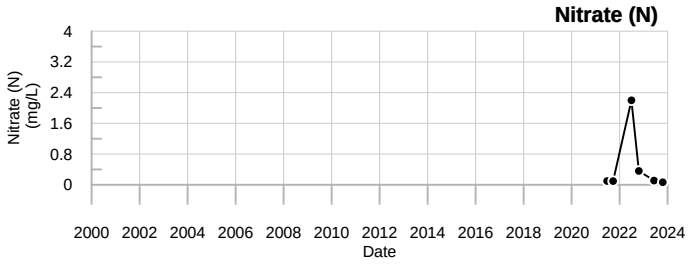
SME
SEVEE & MAHER
ENGINEERS

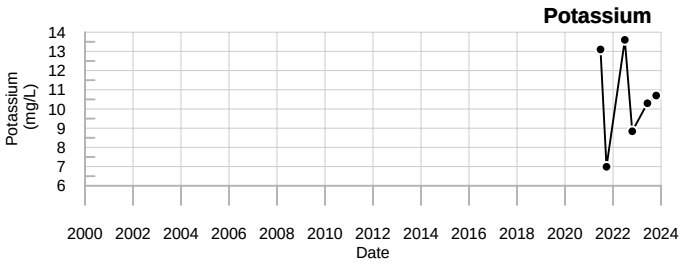
UDLP
Dolby Landfill

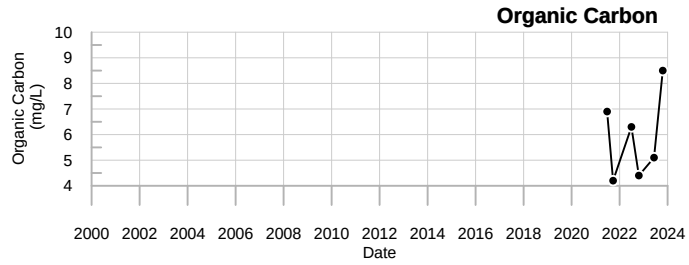


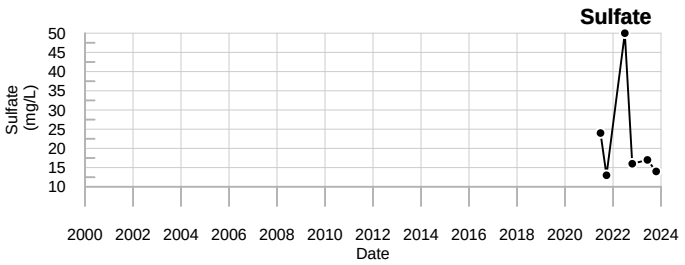


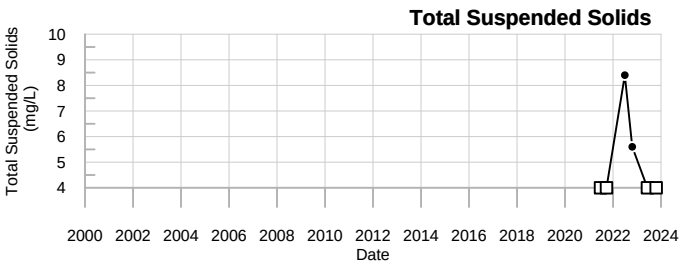


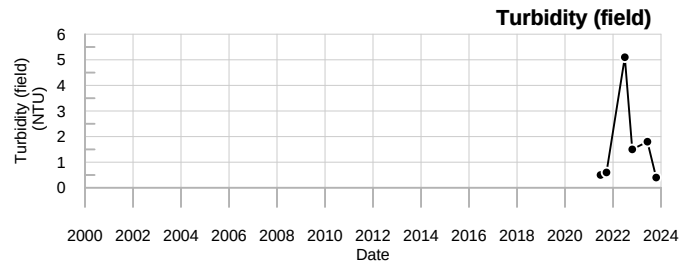












LEGEND

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SME
SEVEE & MAHER ENGINEERS

UDLP
Dolby Landfill

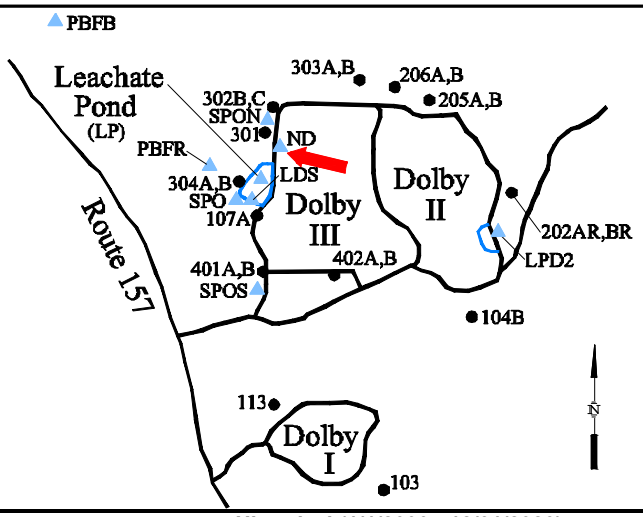
Well Description

Surface water sample from the ditch to the northwest of Dolby III.

Sampled: **2 Times Annually**

Sampled Since: **Jul-04**

Sampling Method: **Grab**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2023) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		↑830		D	138.5	to 264	200	± 25.000	5
Dissolved Oxygen (mg/L)		9.2		D	6	to 14.5	9.6	± 1.700	5
Total Dissolved Solids (mg/L)		↑630		D	73	to 200	120	± 24.000	5
Arsenic (mg/L)		↑0.008 U		D	0.005 U	to 0.005 U	0.005	± 0.000	5
Calcium (mg/L)		↑203		D	26	to 59	39	± 7.000	5
Manganese (mg/L)		↑1.31		D	0.021	to 0.53	0.18	± 0.098	5
pH (STU)		7.7		D	6.86	to 8.58	7.8	± 0.300	5
Alkalinity (CaCO3) (mg/L)		↑320		D	56	to 120	88	± 13.000	5
Ca-mg Hardness (CaCO3) (mg/L)		↑548		D	77	to 160	110	± 18.000	5
Bicarbonate Alkalinity (CaCO3) (mg/L)		↑320		D	53	to 120	86	± 13.000	5
Sodium (mg/L)		2.35		D	1	to 2.4	1.6	± 0.280	5
Chloride (mg/L)		↑3.5		D	2 U	to 2 U	2	± 0.000	5
Iron (mg/L)		**1.39**		D	0.053	to 3.5	0.91	± 0.660	5
Magnesium (mg/L)		↑10.1		D	2.6	to 4.9	3.3	± 0.430	5
Potassium (mg/L)		↑12		D	2.6	to 7.1	4.8	± 0.810	5
Sulfate (mg/L)		↑180		D	4.2	to 21	9.9	± 3.000	5
Total Suspended Solids (mg/L)		4 U		D	1.5	to 160	38	± 31.000	5
Turbidity (field) (NTU)		1.6		D	0.4	to 158	37	± 30.000	5
Ammonia (N) (mg/L)		↑1		D	0.2 U	to 0.21	0.2	± 0.002	5
Nitrate (N) (mg/L)		1.4		D	0.5 U	to 2 U	1.1	± 0.370	5
Organic Carbon (mg/L)		↑28		D	5	to 21	13	± 2.900	5

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Chloride MFCCC=230 mg/L, Ammonia (N) MFCCC=1.4 mg/L, Iron MFCCC=1 mg/L, Arsenic MFCCC=0.15 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

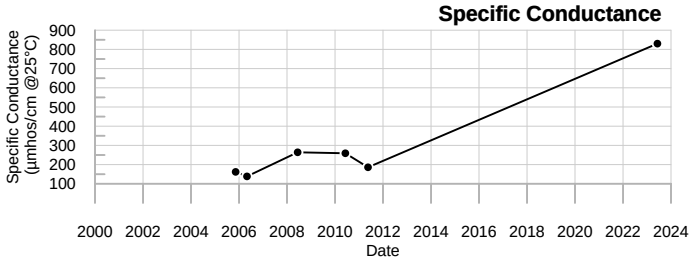
Comments

Q2= 6 - 2023
Q4= 10 - 2023

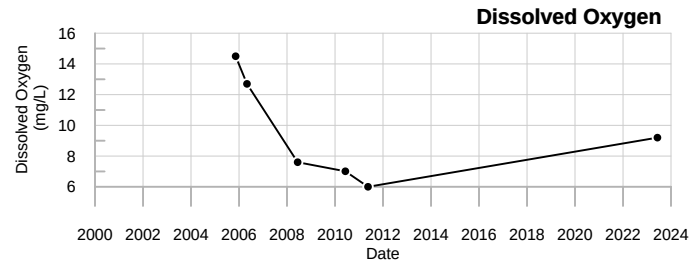
U = Not Detected above the laboratory reporting limit.

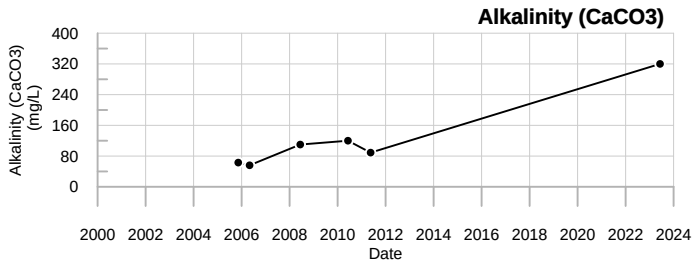
D = The sampling location was dry.

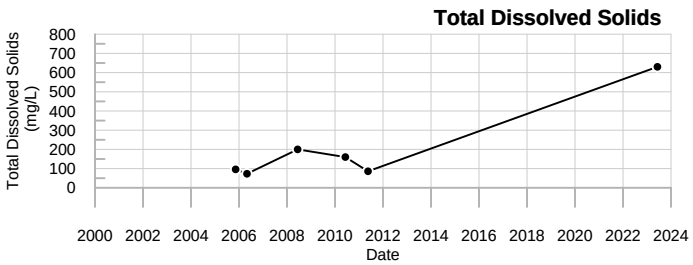
Abbrev.	Type	Standard
MFCCC	SW	MEDEP Freshwater Criterion Continuous Concentration

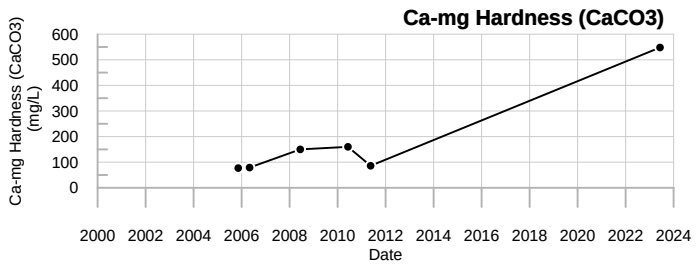


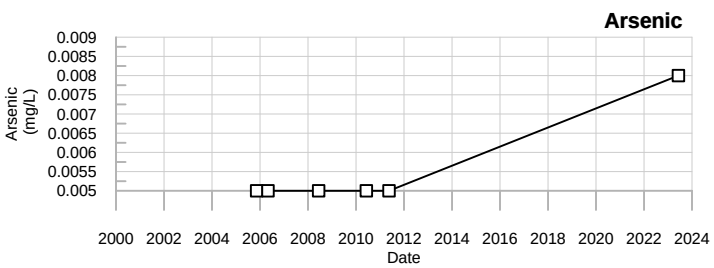


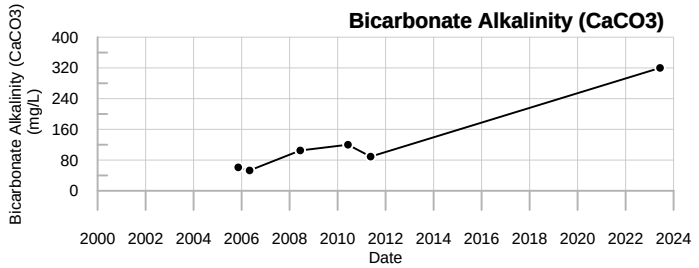


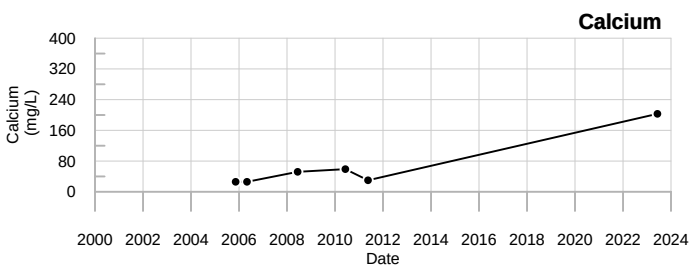


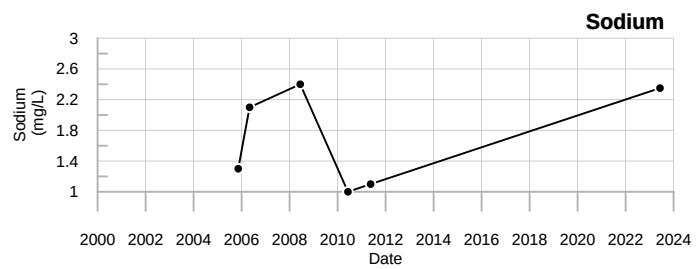


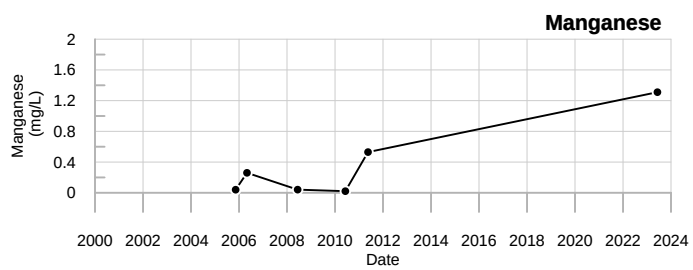


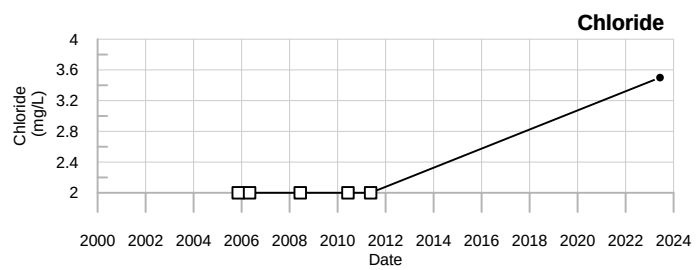












LEGEND

□ - Below reporting Limit, Associate value is the reporting limit.

◇ - Estimated Value (J-flagged).

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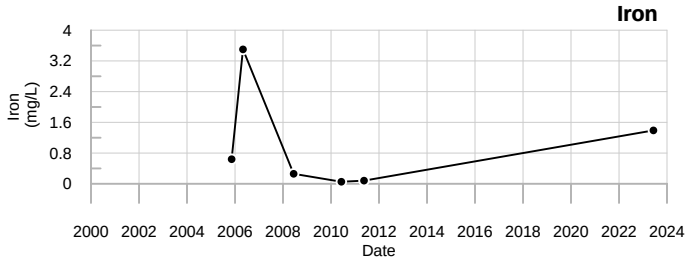

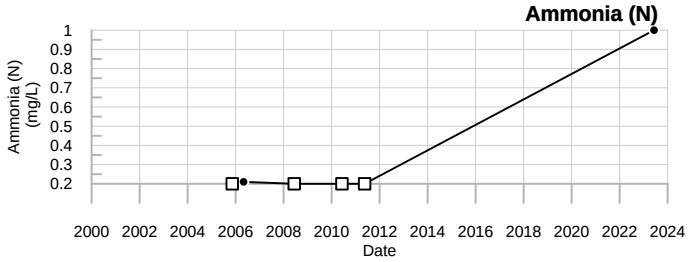

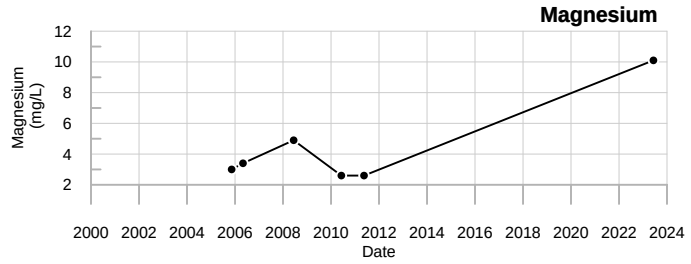

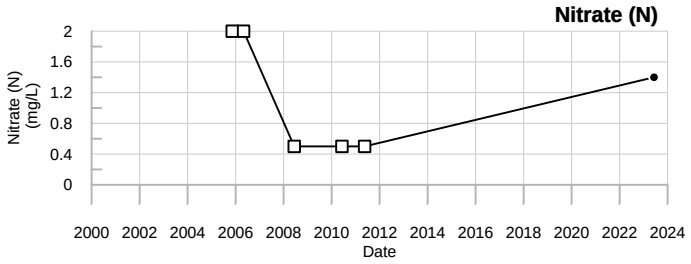

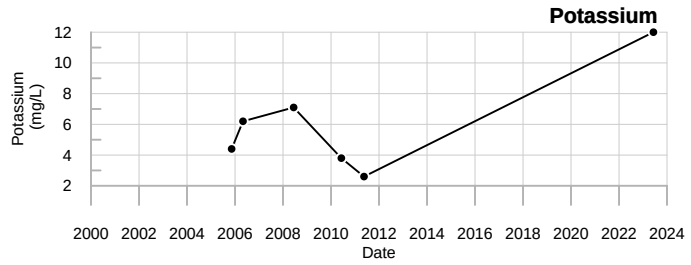

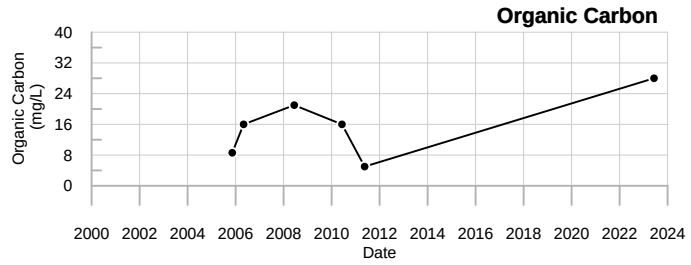

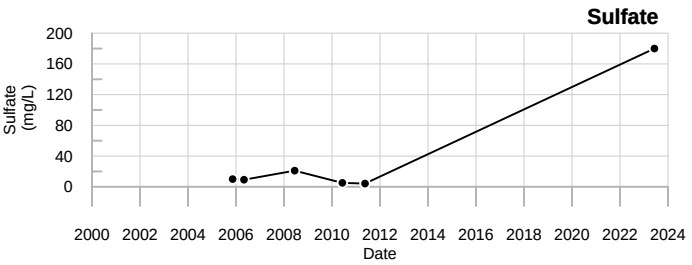

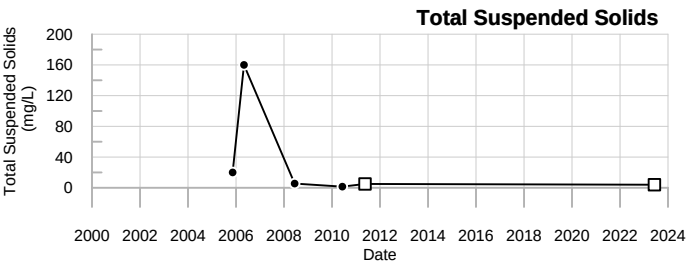

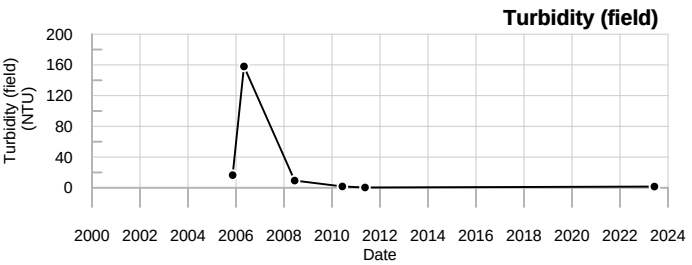

LEGEND

- □ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

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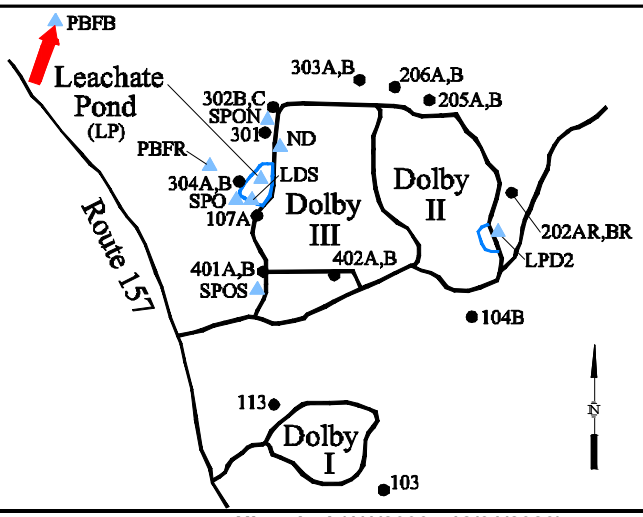
Well Description

Backgound surface water sample from Partridge Brook Flowage.

Sampled: **2 Times Annually**

Sampled Since: **May-00**

Sampling Method: **Grab**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2023) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		54		69	5.7	322	55	4.700	66
Dissolved Oxygen (mg/L)		7.5		7.8	2.3	11.4	6.1	0.250	63
Total Dissolved Solids (mg/L)		17		55	8	114	50	2.400	67
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	0.01 U	0.0065	0.000	65
Calcium (mg/L)		6.33		↑8.19	2.5	8.1	5	0.150	61
Manganese (mg/L)		0.0477		0.57	0.016	1.58	0.23	0.039	67
pH (STU)		7.9		7.1	5.8	9.02	7.4	0.083	67
Alkalinity (CaCO3) (mg/L)		18		23	1 U	200	17	2.900	67
Ca-mg Hardness (CaCO3) (mg/L)		22.9		↑42.9	10 U	30.1	18	0.600	67
Bicarbonate Alkalinity (CaCO3) (mg/L)		18		23	1 U	190	17	2.700	67
Sodium (mg/L)		1.66		↑5.71	1 U	2.2	1.6	0.038	67
Chloride (mg/L)		2 U		2 U	0.86	4.1	2.3	0.091	67
Iron (mg/L)		0.314		↑**13.7**	0.16	4	0.77	0.088	67
Magnesium (mg/L)		1.71		↑5.45	1 U	2.09	1.5	0.043	61
Potassium (mg/L)		1 U		↑2.42	0.146	1.4	0.9	0.034	67
Sulfate (mg/L)		1 U		1 U	0.67	28	3	0.510	67
Total Suspended Solids (mg/L)		4 U		4.8	1 U	140	8.4	2.200	67
Turbidity (field) (NTU)		0.8		0.8	0.4	19.8	2.2	0.330	64
Ammonia (N) (mg/L)		0.1 U		0.1 U	0.08 U	0.98	0.16	0.014	67
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	2 U	0.68	0.088	67
Organic Carbon (mg/L)		9.4		15	6.3	38	12	0.630	67

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Chloride MFCCC=230 mg/L, Ammonia (N) MFCCC=1.4 mg/L, Iron MFCCC=1 mg/L, Arsenic MFCCC=0.15 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
MFCCC	SW	MEDEP Freshwater Criterion Continuous Concentration

Data Group: 11
Printed: 1/10/2024 07:10

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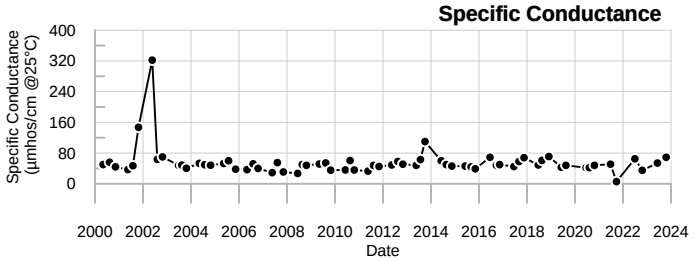

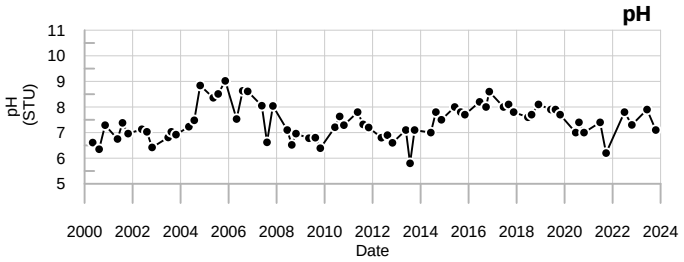

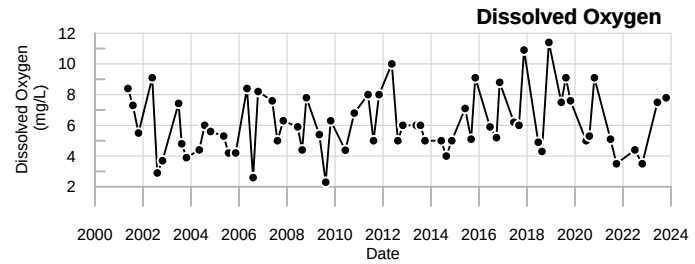

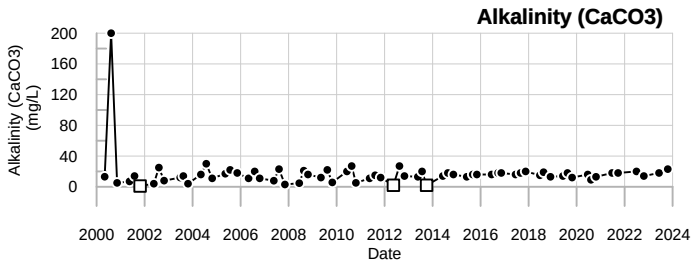

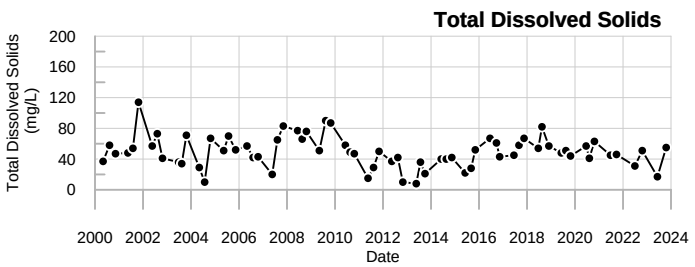

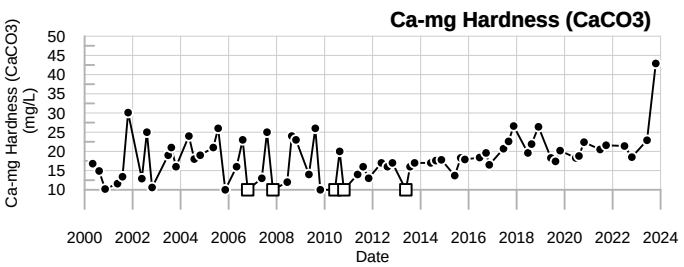

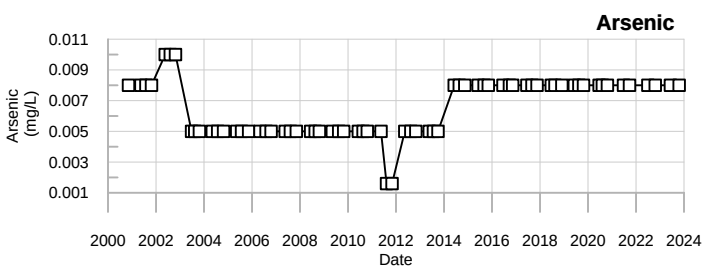

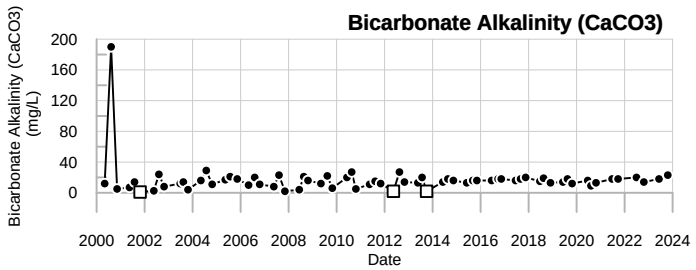

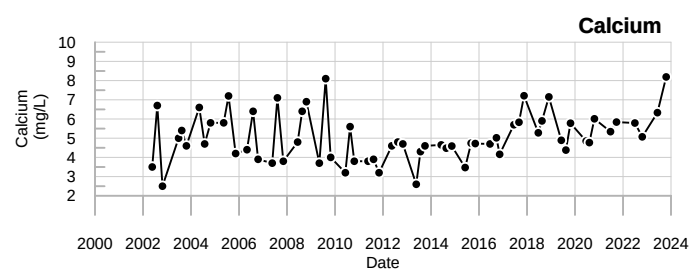

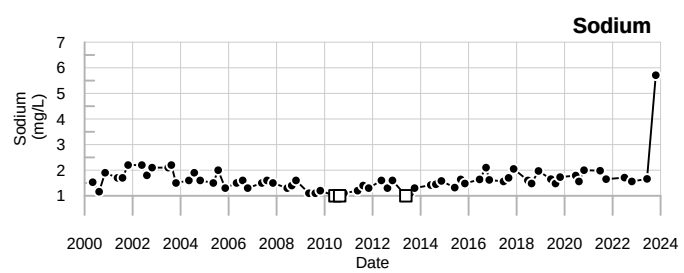

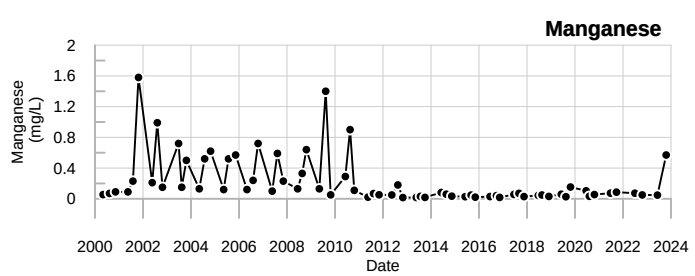

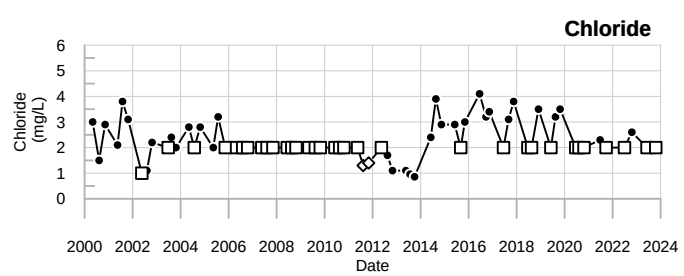

LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
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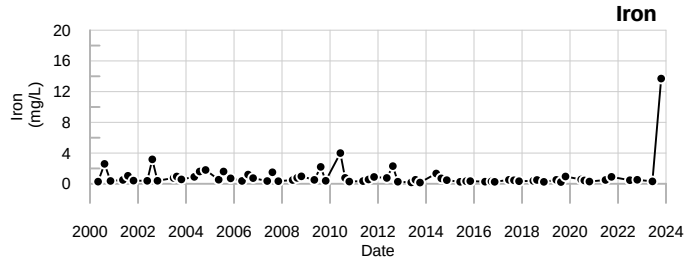
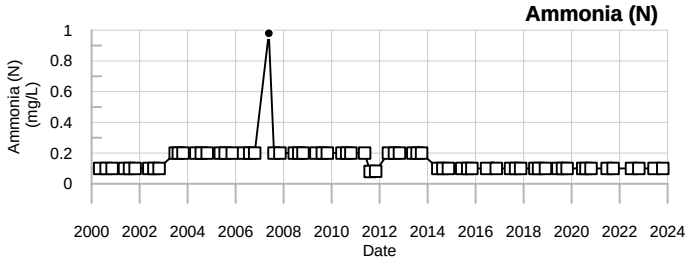
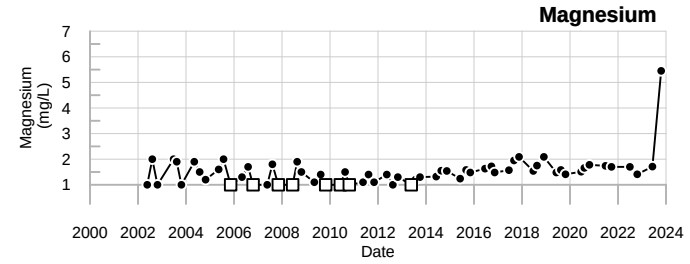
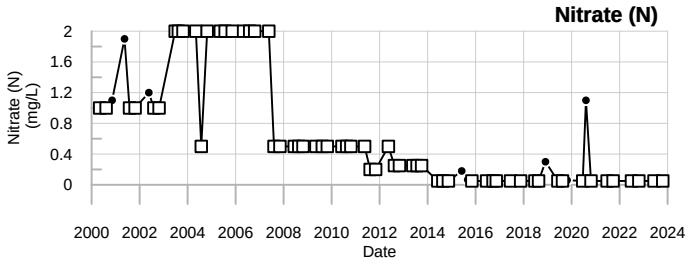
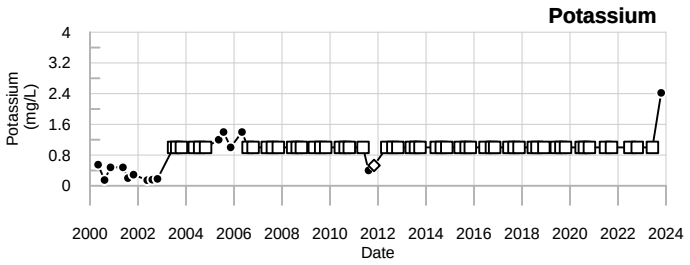
PBFB
Dolby Landfill

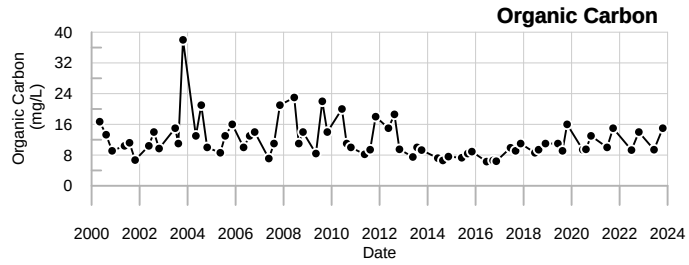


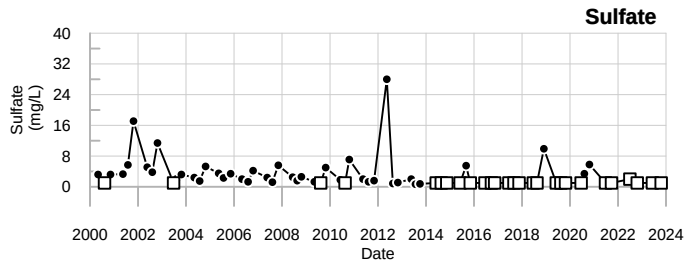


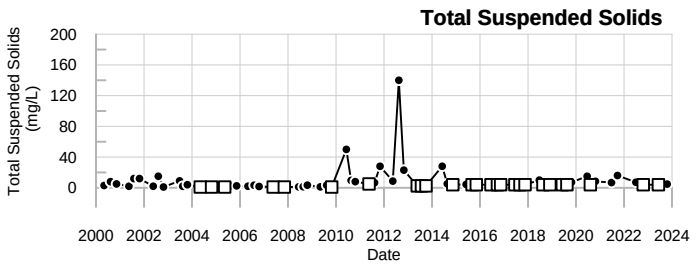


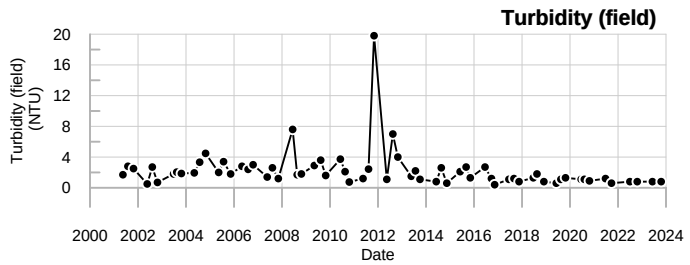












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Dolby Landfill

Sevee & Maher Engineers, Inc.

PBFR

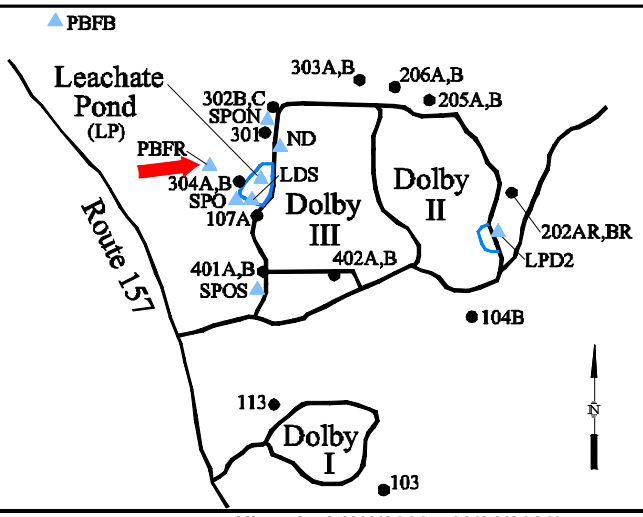
Well Description

Sample from the Partridge Bridge Flowage downgradient of the level spreader and the Dolby II and III Landfills.

Sampled: **2 Times Annually**

Sampled Since: **May 2012**

Sampling Method: **Grab**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2023) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		86		112	45	332	85	9.900	30
Dissolved Oxygen (mg/L)		6.3		7.3	3.5	11.3	6.1	0.360	30
Total Dissolved Solids (mg/L)		33		77	30	200	61	5.900	31
Arsenic (mg/L)		0.008 U		0.008 U	0.005 U	0.008 U	0.0074	0.000	31
Calcium (mg/L)		13.8		13.6	4.4	50.3	9.6	1.500	31
Manganese (mg/L)		0.0298		0.158	0.019	1.62	0.25	0.065	31
pH (STU)		7.3		7.1	6.3	8.6	7.5	0.110	30
Alkalinity (CaCO3) (mg/L)		38		42	5.1	45	23	1.600	31
Ca-mg Hardness (CaCO3) (mg/L)		45.3		45	16	144	32	4.100	31
Bicarbonate Alkalinity (CaCO3) (mg/L)		38		42	5.1	45	23	1.600	31
Sodium (mg/L)		2.33		2.23	1.2	4.83	2.3	0.170	31
Chloride (mg/L)		2 U		2 U	1	6.3	3	0.240	31
Iron (mg/L)		0.187		0.27	0.088	3.15	0.53	0.120	31
Magnesium (mg/L)		2.62		2.67	1.2	4.54	2	0.110	31
Potassium (mg/L)		1 U		1.07	1 U	2	1.2	0.051	31
Sulfate (mg/L)		1 U		7.3	0.82	89	7.4	2.900	31
Total Suspended Solids (mg/L)		4 U		4 U	2.5 U	190	12	6.000	31
Turbidity (field) (NTU)		0.6		0.6	0.1	11.6	1.9	0.400	30
Ammonia (N) (mg/L)		0.1 U		0.1 U	0.1 U	0.2 U	0.12	0.007	31
Nitrate (N) (mg/L)		0.05 U		0.05 U	0.05 U	1.9	0.25	0.066	31
Organic Carbon (mg/L)		8.8		12	3.9	16.9	8.6	0.450	31
Copper (mg/L)		0.025 U		0.025 U	0.003 U	0.025 U	0.021	0.002	31

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Chloride MFCCC=230 mg/L, Ammonia (N) MFCCC=1.4 mg/L, Iron MFCCC=1 mg/L, Copper MFCCC=0.00236 mg/L, Arsenic MFCCC=0.15 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

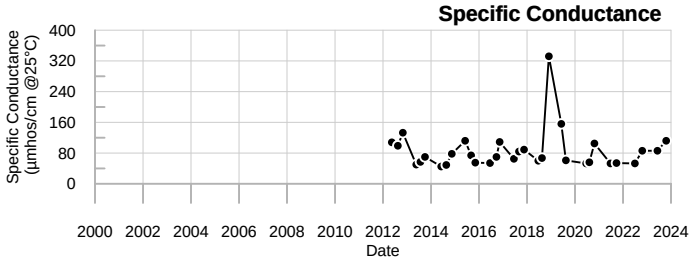
Q2= 6 - 2023
Q4= 10 - 2023

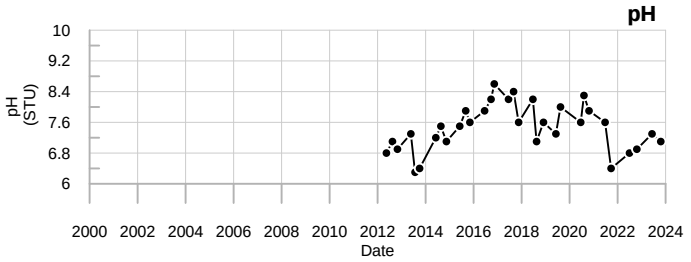
U = Not Detected above the laboratory reporting limit.

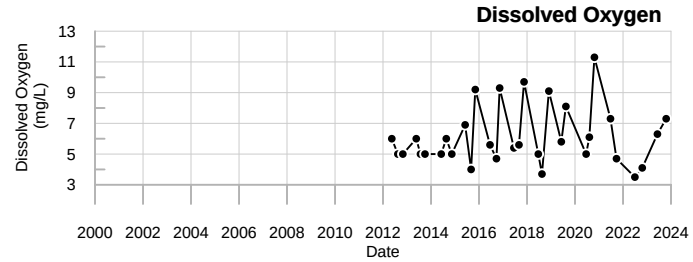
Abbrev.	Type	Standard
MFCCC	SW	MEDEP Freshwater Criterion Continuous Concentration

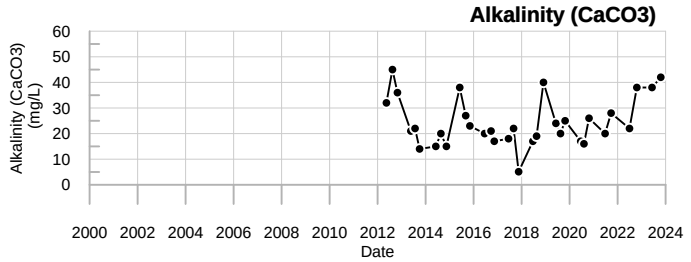
Data Group: 12
Printed: 1/10/2024 07:11

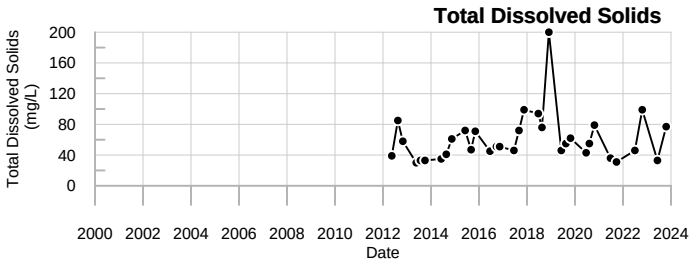
SME SEVEE & MAHER ENGINEERS

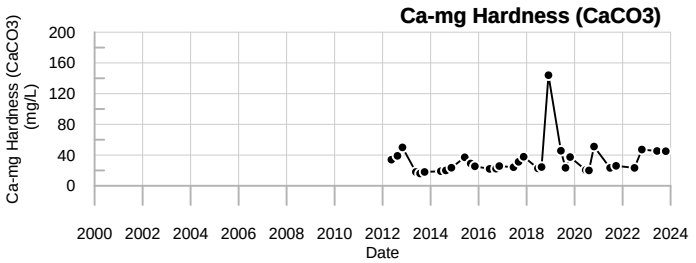


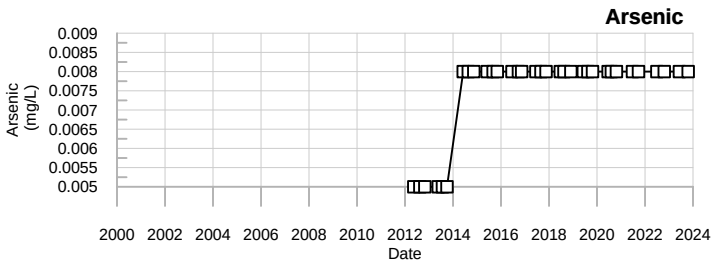


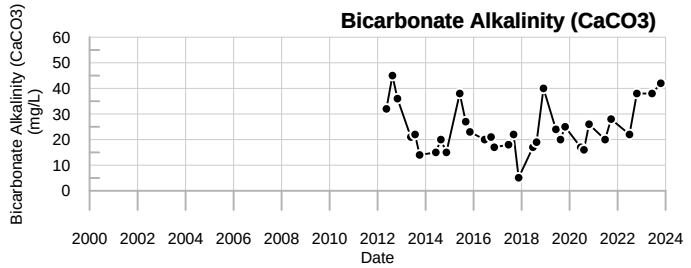


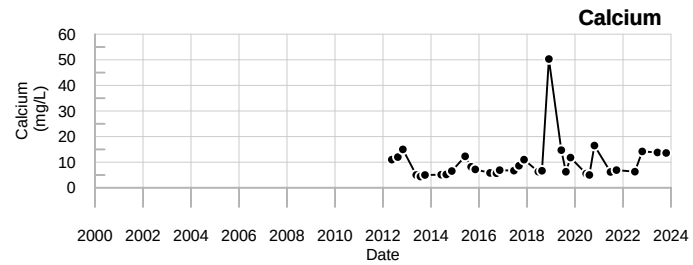


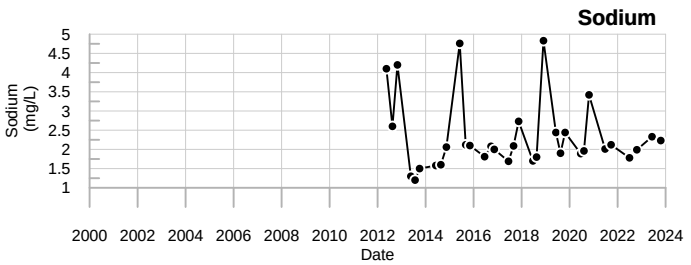


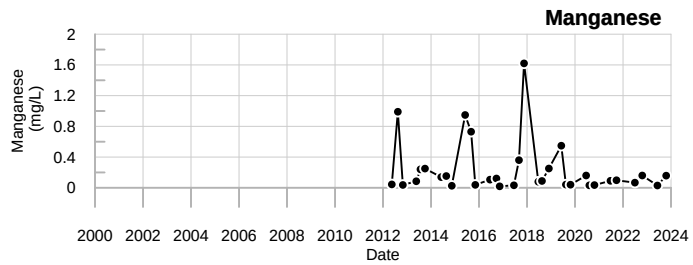


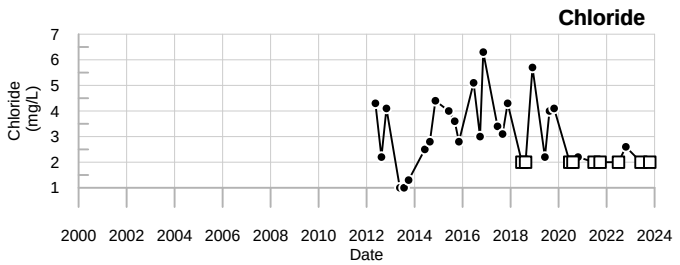












LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

SME
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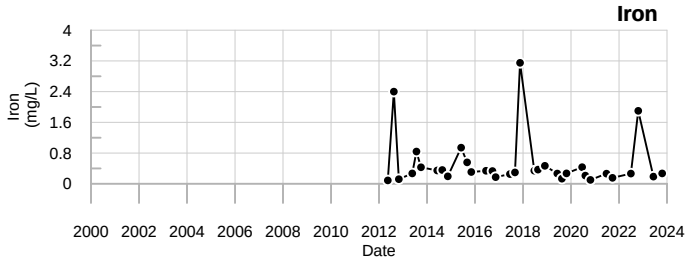
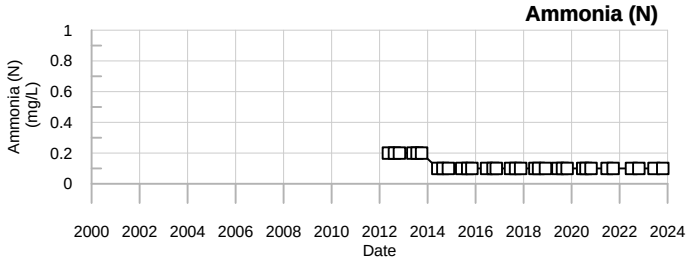
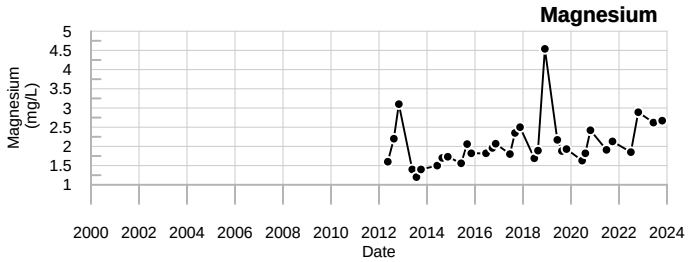
ENGINEERS

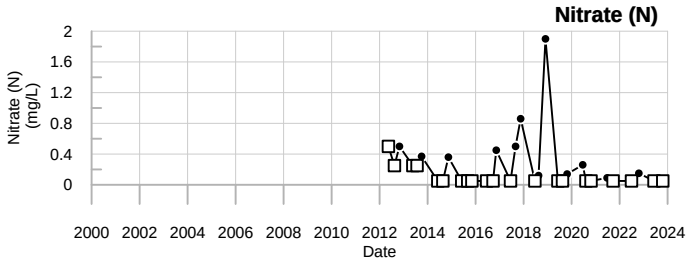
PBFR
Dolby Landfill

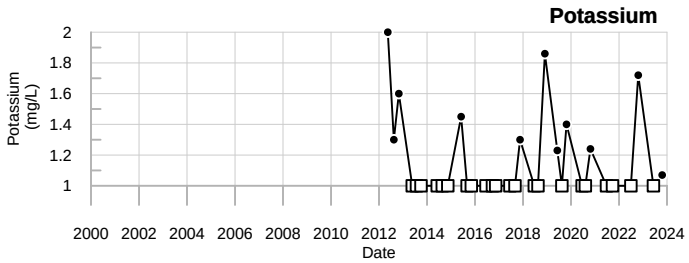
Sevee & Maher Engineers, Inc.

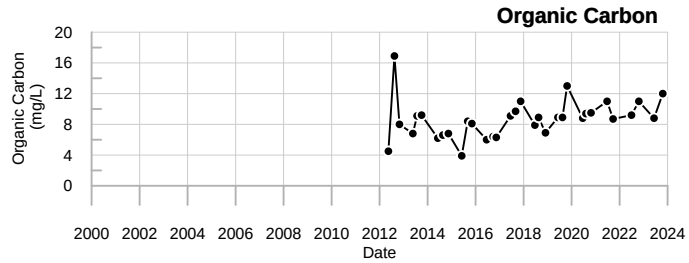


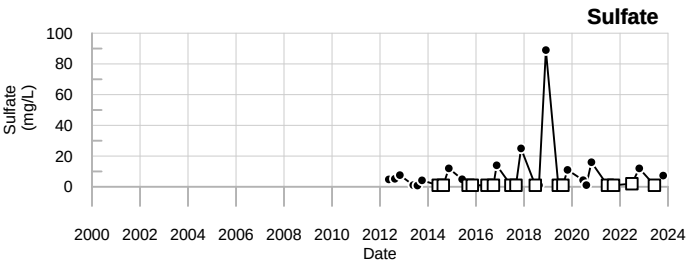


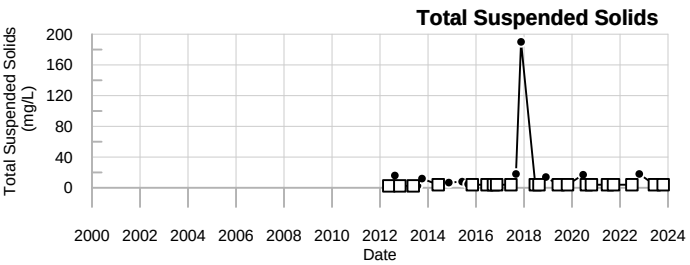


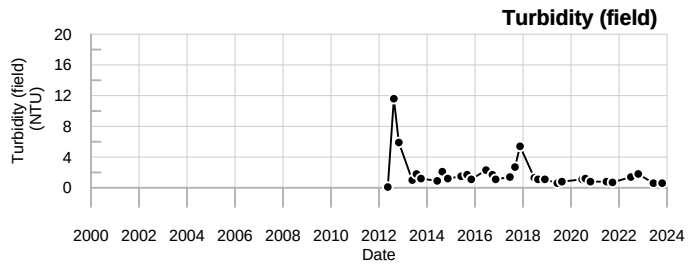












LEGEND

- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

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PBFR
Dolby Landfill

Sevee & Maher Engineers, Inc.

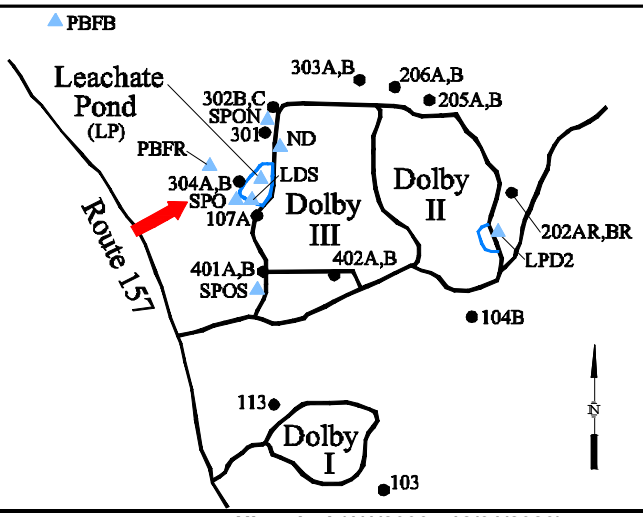
Well Description

Surface water from the detention pond outlet to the west of Dolby III.

Sampled: **2 Times Annually**

Sampled Since: **Mar-91**

Sampling Method: **Grab**



Chemical Summary

Indicator Parameters	2023 Q1	Q2	Q3	Q4	Historical (1/1/2000 - 12/31/2023) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		F6		↑745	65	to 196	120	± 8.200	22
Dissolved Oxygen (mg/L)		F6		↓0.7	1.6	to 10	6	± 0.510	22
Total Dissolved Solids (mg/L)		F6		↑550	43	to 140	84	± 4.800	22
Arsenic (mg/L)		F6		0.008 U	0.005 U	to 0.008 U	0.0058	± 0.000	22
Calcium (mg/L)		F6		↑135	8.4	to 36	16	± 1.600	22
Manganese (mg/L)		F6		↑6.03	0.036	to 3.6	0.42	± 0.160	22
pH (STU)		F6		6.4	5.83	to 8.71	7.3	± 0.150	22
Alkalinity (CaCO3) (mg/L)		F6		↑83	21	to 77	42	± 3.800	22
Ca-mg Hardness (CaCO3) (mg/L)		F6		↑378	21	to 110	48	± 4.800	22
Bicarbonate Alkalinity (CaCO3) (mg/L)		F6		↑83	21	to 75	41	± 3.600	22
Sodium (mg/L)		F6		2.74	1 U	to 8.7	3.6	± 0.430	22
Chloride (mg/L)		F6		9	2 U	to 19	5.7	± 0.850	22
Iron (mg/L)		F6		**3.55**	0.3	to 5.7	1.5	± 0.310	22
Magnesium (mg/L)		F6		↑9.94	1 U	to 4.7	2	± 0.190	22
Potassium (mg/L)		F6		↑14.8	1 U	to 7	2.7	± 0.330	22
Sulfate (mg/L)		F6		↑300	1 U	to 15	5.5	± 0.820	22
Total Suspended Solids (mg/L)		F6		15	0.6 U	to 37	9.5	± 2.300	22
Turbidity (field) (NTU)		F6		2.7	0.6	to 12	3.2	± 0.590	22
Ammonia (N) (mg/L)		F6		↑**2.1**	0.1 U	to 0.21	0.17	± 0.010	22
Nitrate (N) (mg/L)		F6		0.05 U	0.05 U	to 2 U	0.78	± 0.170	22
Organic Carbon (mg/L)		F6		11	7.8	to 18	13	± 0.610	22

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Chloride MFCCC=230 mg/L, Ammonia (N) MFCCC=1.4 mg/L, Iron MFCCC=1 mg/L, Arsenic MFCCC=0.15 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

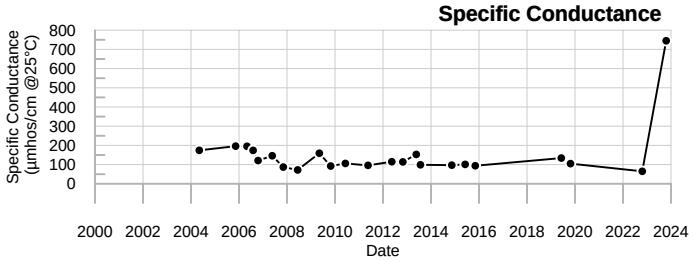
U = Not Detected above the laboratory reporting limit.

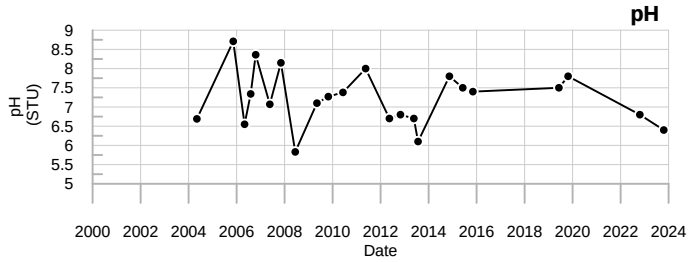
F6 = No flow. Sample not taken.

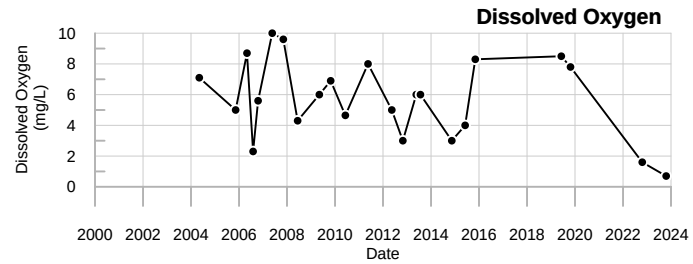
Abbrev.	Type	Standard
MFCCC	SW	MEDEP Freshwater Criterion Continuous Concentration

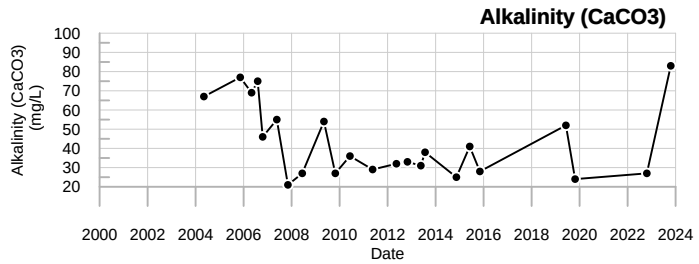
Data Group: 10
Printed: 1/10/2024 07:09

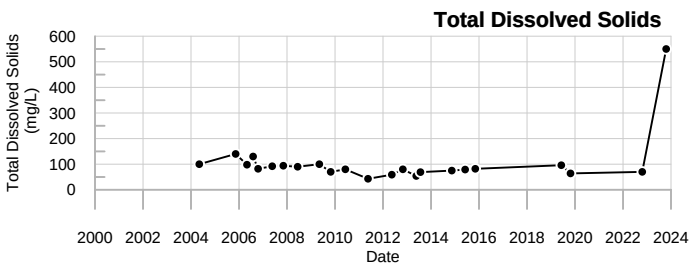
SME SEVEE & MAHER ENGINEERS

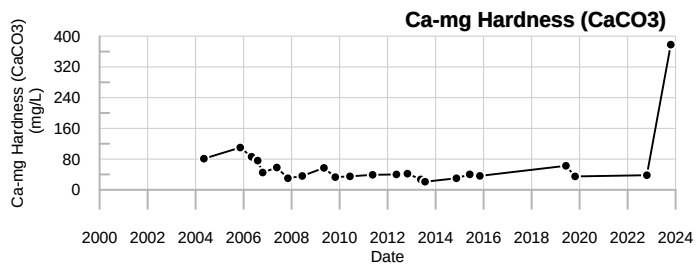


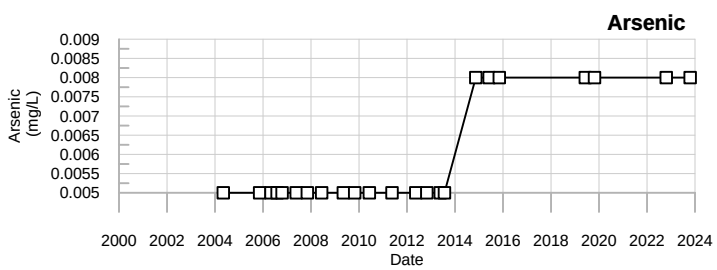


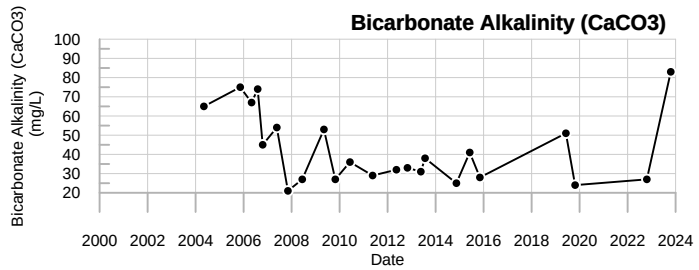


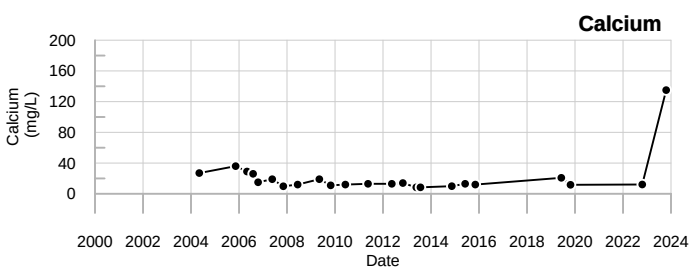


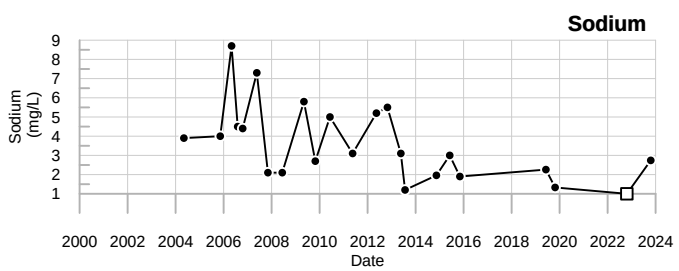


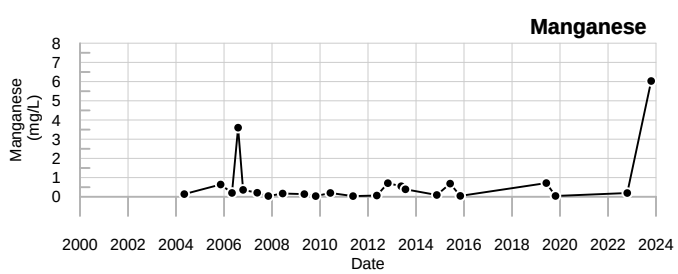


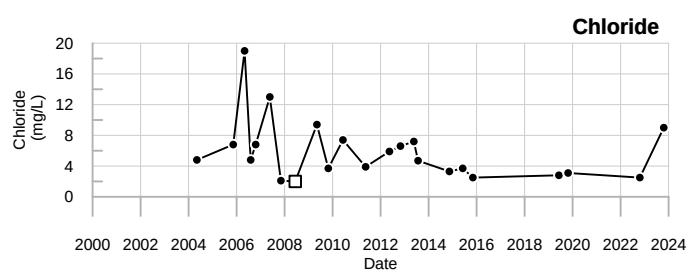












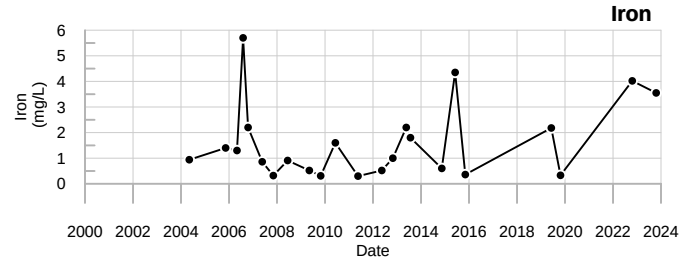
LEGEND

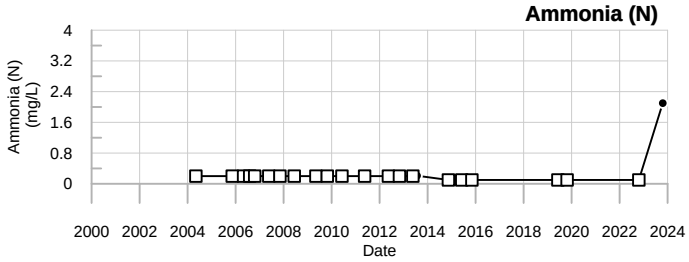
- ☐ - Below reporting Limit, Associate value is the reporting limit.
- ◇ - Estimated Value (J-flagged).

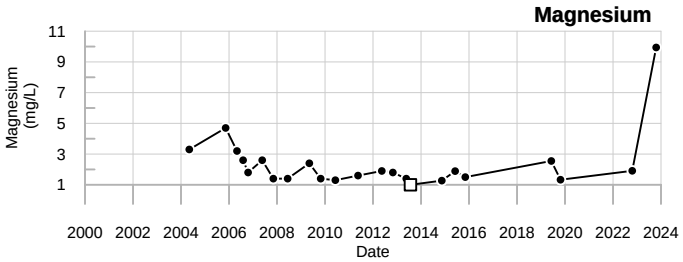
SME
SEVEE & MAHER
ENGINEERS

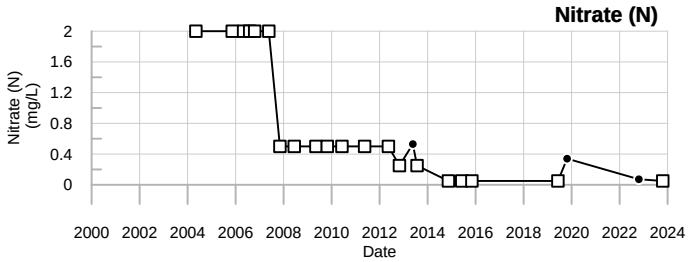
SPO
Dolby Landfill

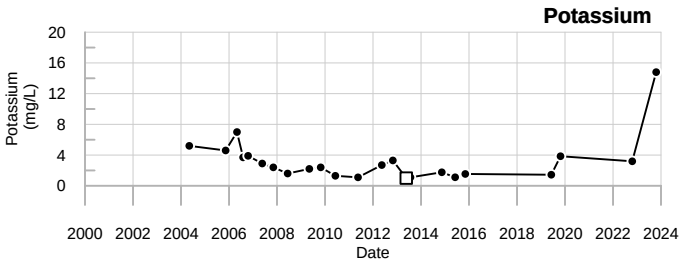
Sevee & Maher Engineers, Inc.

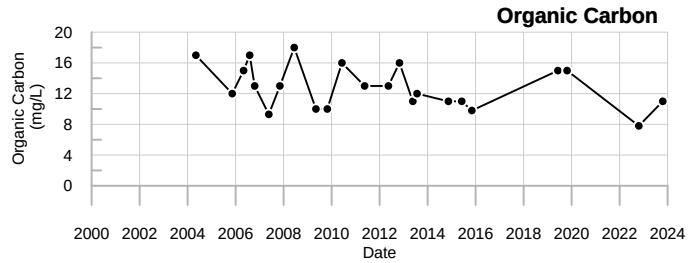


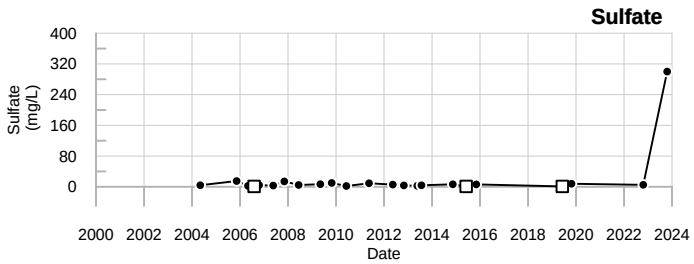


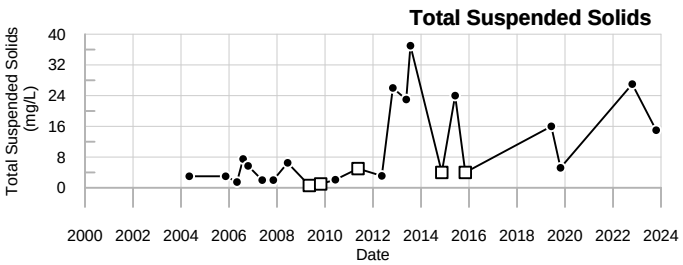


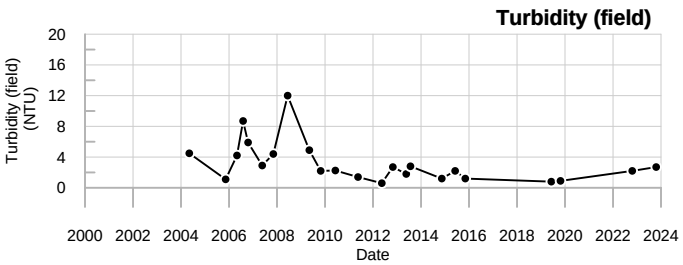












LEGEND

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- ◇ - Estimated Value (J-flagged).

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SPO
Dolby Landfill

Sevee & Maher Engineers, Inc.

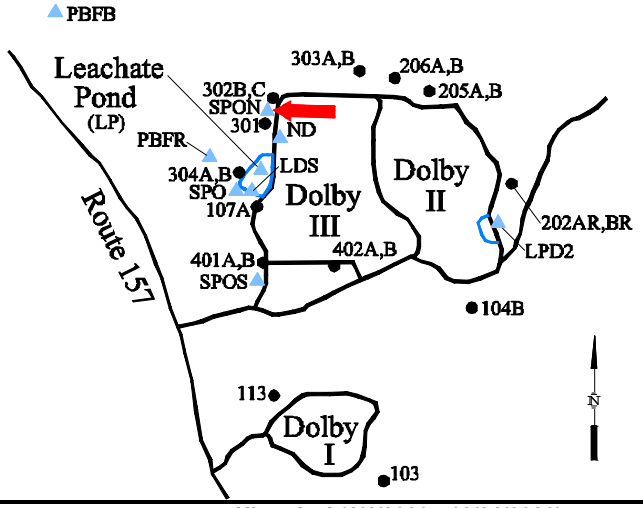
Well Description

Siltation Pond North

Sampled: **2 Times Annually**

Sampled Since: **May-05**

Sampling Method: **Grab**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2023) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		652		592	227	to 1483	610	± 40.000	40
Dissolved Oxygen (mg/L)		3		3.7	2	to 11.5	5.8	± 0.380	39
Total Dissolved Solids (mg/L)		460		390	140	to 960	390	± 27.000	40
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.008 U	0.0063	± 0.000	40
Calcium (mg/L)		152		98	37	to 200	86	± 5.800	40
Manganese (mg/L)		0.737		1.18	0.0753	to 17	4.9	± 0.730	40
pH (STU)		7.1		6.8	6.2	to 8.03	7.2	± 0.064	40
Alkalinity (CaCO3) (mg/L)		260		290	110	to 670	270	± 17.000	40
Ca-mg Hardness (CaCO3) (mg/L)		427		319	130	to 750	300	± 21.000	40
Bicarbonate Alkalinity (CaCO3) (mg/L)		260		290	105	to 640	270	± 17.000	40
Sodium (mg/L)		3.89		9.31	2.7	to 36	13	± 1.200	40
Chloride (mg/L)		2.7		7	2 U	to 49	19	± 2.000	40
Iron (mg/L)		**2.2**		0.969	0.15	to 8.66	1.6	± 0.310	40
Magnesium (mg/L)		11.6		18	5.6	to 61	21	± 1.700	40
Potassium (mg/L)		8.6		7.51	3.73	to 82	14	± 2.000	40
Sulfate (mg/L)		120		40	1 U	to 380	43	± 12.000	40
Total Suspended Solids (mg/L)		7.2		4 U	1 U	to 30	8.6	± 1.200	40
Turbidity (field) (NTU)		0.6		0.6	0.6	to 29.6	4.7	± 0.950	40
Ammonia (N) (mg/L)		0.33		0.17	0.1 U	to 2.3	0.49	± 0.091	40
Nitrate (N) (mg/L)		0.61		0.083	0.05 U	to 18	1	± 0.450	40
Organic Carbon (mg/L)		21		17	9.2	to 30	15	± 0.660	40

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Chloride MFCCC=230 mg/L, Ammonia (N) MFCCC=1.4 mg/L, Iron MFCCC=1 mg/L, Arsenic MFCCC=0.15 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

Q2= 6 - 2023
Q4= 10 - 2023

U = Not Detected above the laboratory reporting limit.

Abbrev.	Type	Standard
MFCCC	SW	MEDEP Freshwater Criterion Continuous Concentration

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Printed: 1/10/2024 07:09

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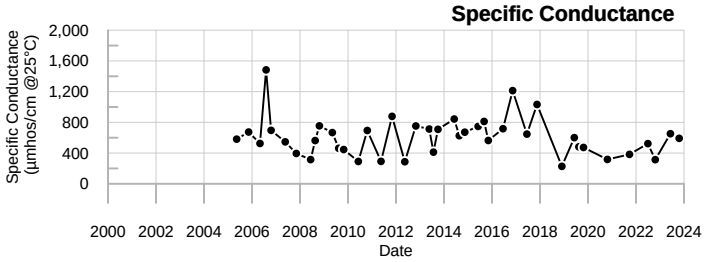

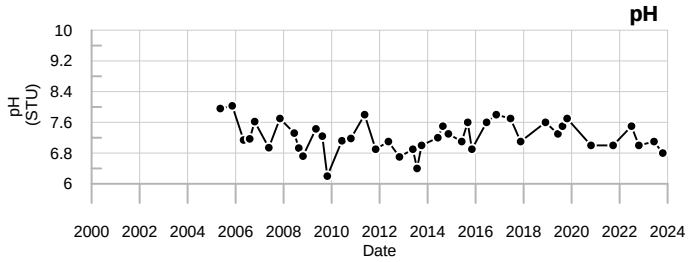

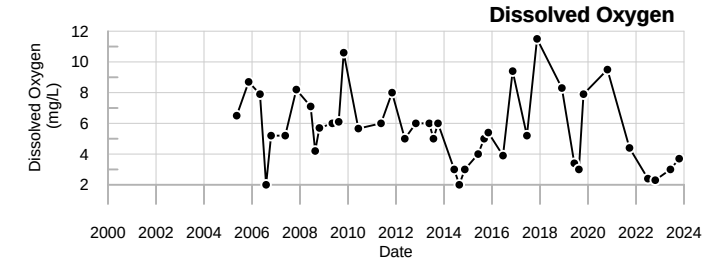

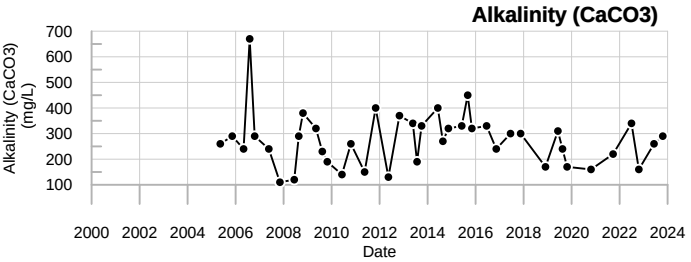

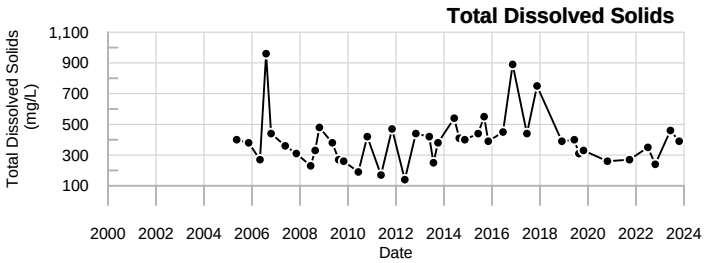

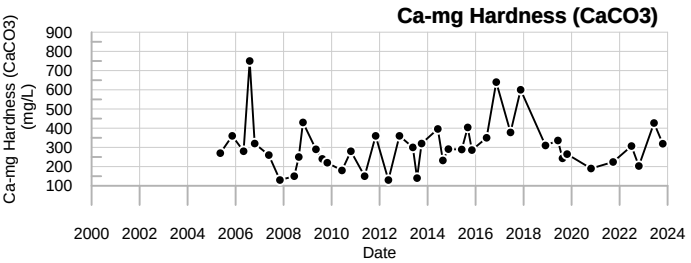

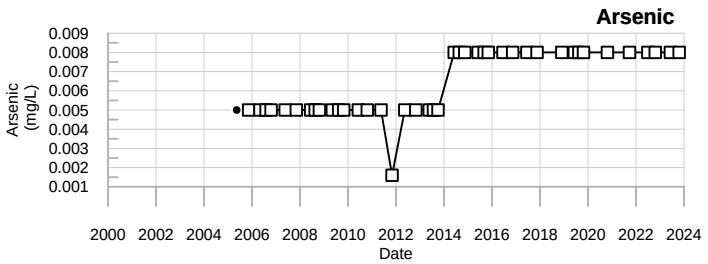

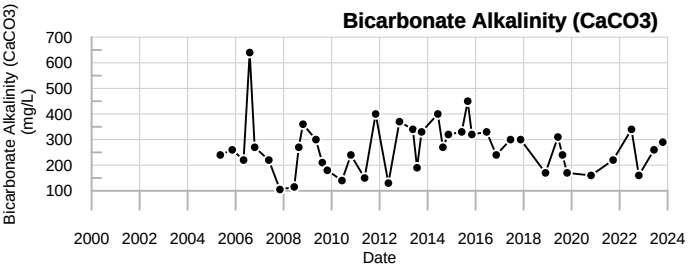

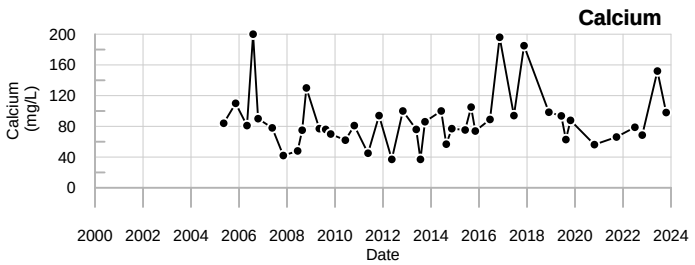

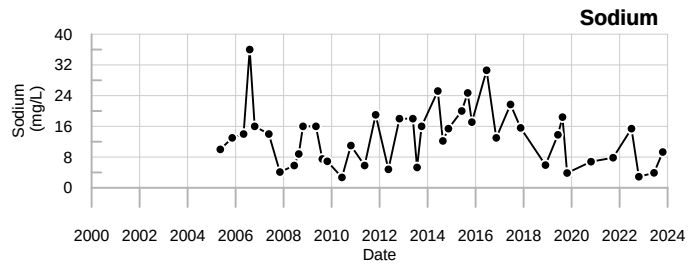

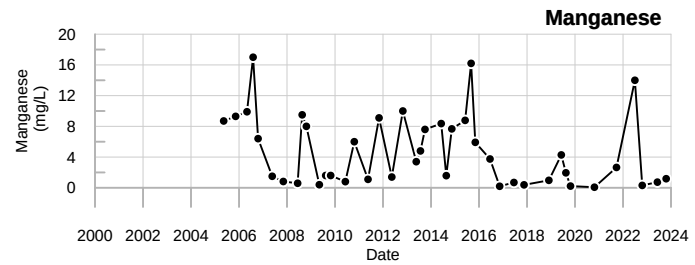

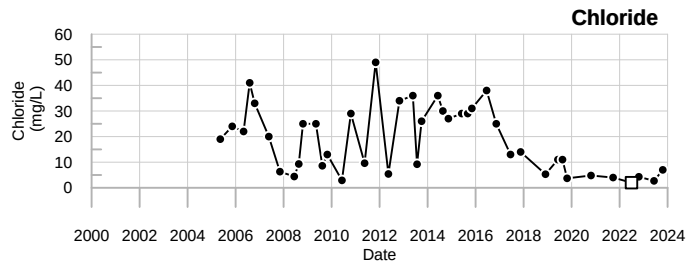

LEGEND

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- ◇ - Estimated Value (J-flagged).

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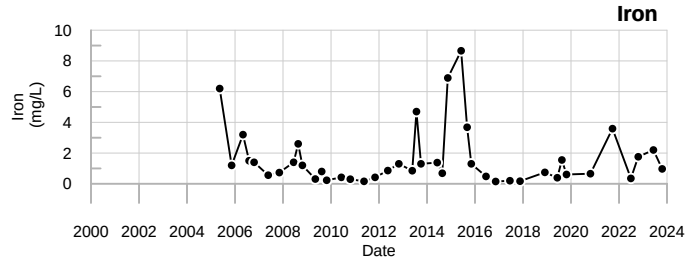

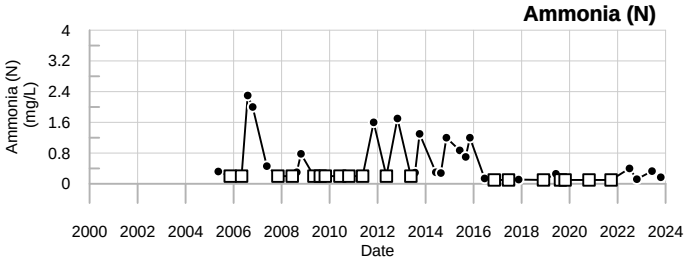

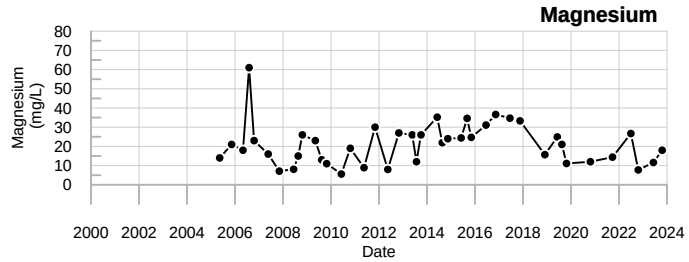

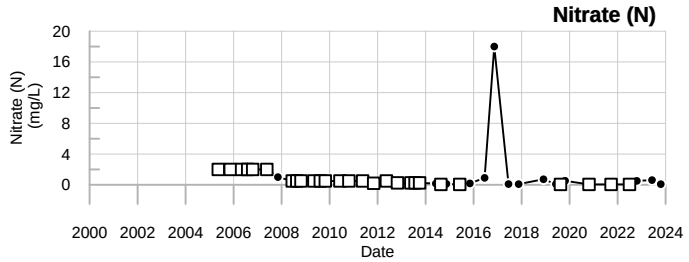

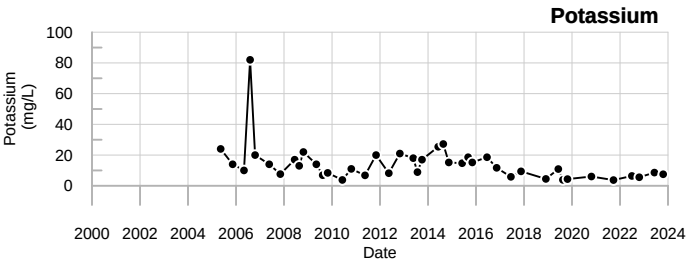

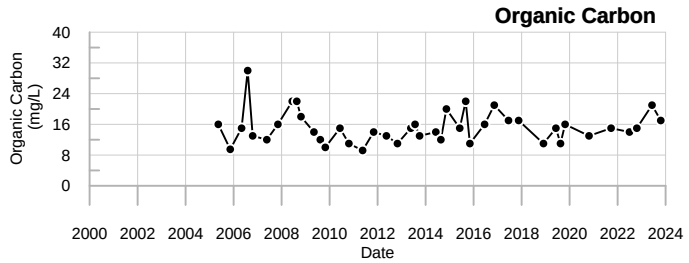

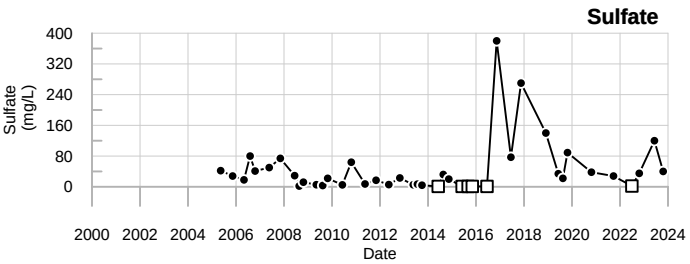

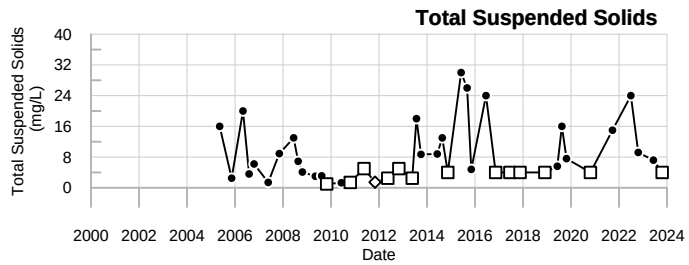

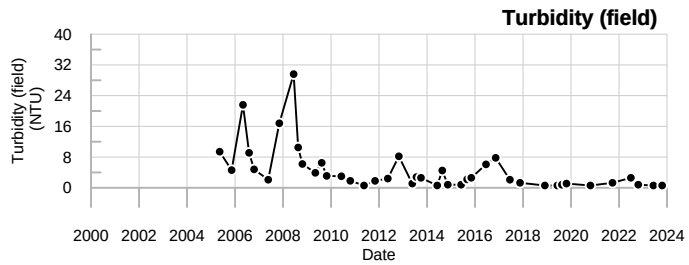

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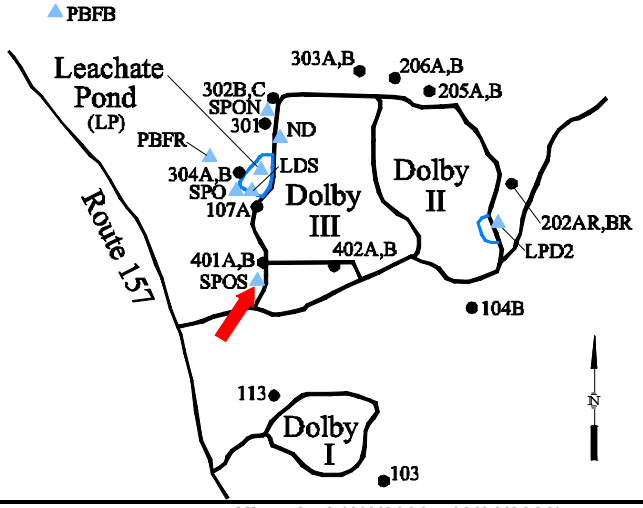
Well Description

Siltation Pond South

Sampled: **2 Times Annually**

Sampled Since: **May-05**

Sampling Method: **Grab**



Chemical Summary

Indicator Parameters	2023 Q1	2023 Q2	2023 Q3	2023 Q4	Historical (1/1/2000 - 12/31/2023) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		143		↑342	79	to 261	140	± 6.000	46
Dissolved Oxygen (mg/L)		7		7.4	2	to 12.1	6.7	± 0.340	46
Total Dissolved Solids (mg/L)		55		↑240	16	to 160	96	± 4.700	46
Arsenic (mg/L)		0.008 U		0.008 U	0.0016 U	to 0.008 U	0.0064	± 0.000	46
Calcium (mg/L)		16		55.4	10	to 58	19	± 1.200	46
Manganese (mg/L)		0.0396		2	0.01 U	to 5.34	0.75	± 0.200	46
pH (STU)		7.9		7.2	6.4	to 8.8	7.5	± 0.081	46
Alkalinity (CaCO3) (mg/L)		53		83	31	to 100	62	± 3.300	46
Ca-mg Hardness (CaCO3) (mg/L)		58.1		176	38	to 190	68	± 3.900	46
Bicarbonate Alkalinity (CaCO3) (mg/L)		53		83	31	to 100	62	± 3.300	46
Sodium (mg/L)		2.58		3.22	1.5	to 36	4	± 0.720	46
Chloride (mg/L)		2 U		3.4	1.1	to 11	3.1	± 0.250	46
Iron (mg/L)		0.163		**6.87**	0.045	to 25	1.4	± 0.580	46
Magnesium (mg/L)		4.38		9.21	3.1	to 12	5.1	± 0.230	46
Potassium (mg/L)		1 U		↑5.31	0.84	to 4.9	1.4	± 0.100	46
Sulfate (mg/L)		1 U		↑86	0.58	to 39	4.3	± 1.000	46
Total Suspended Solids (mg/L)		4 U		↑52	0.32 U	to 8.8	3.4	± 0.330	46
Turbidity (field) (NTU)		0.5		0.9	0.3	to 14.9	1.6	± 0.360	46
Ammonia (N) (mg/L)		0.1 U		0.28	0.082 U	to 0.28	0.15	± 0.008	46
Nitrate (N) (mg/L)		0.05 U		0.14	0.05 U	to 2 U	0.51	± 0.099	46
Organic Carbon (mg/L)		9.1		16	7.2	to 21	10	± 0.430	46

underlined/bold - values exceed a regulatory standard listed below.

Note that a value associated with a "U" qualifier is a detection or reporting limit provided by the laboratory. If a detection limit is greater than a standard, the result cannot be said to exceed the standard.

Applicable Limits:
Chloride MFCCC=230 mg/L, Ammonia (N) MFCCC=1.4 mg/L, Iron MFCCC=1 mg/L, Arsenic MFCCC=0.15 mg/L

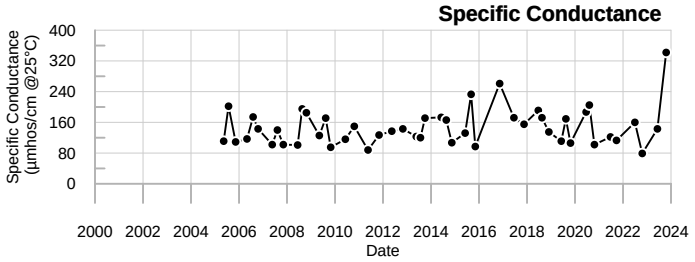
↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

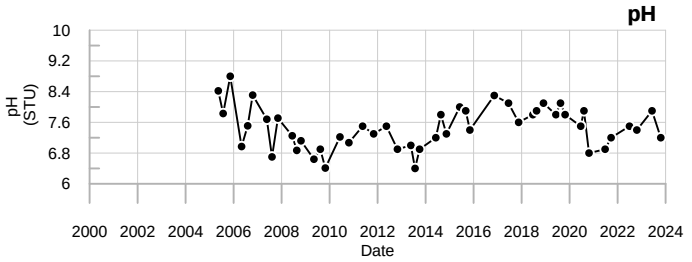
Comments

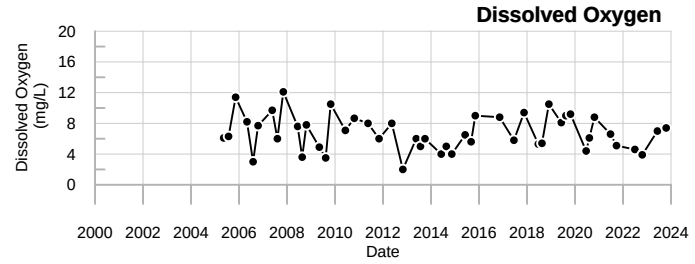
Q2= 6 - 2023
Q4= 10 - 2023

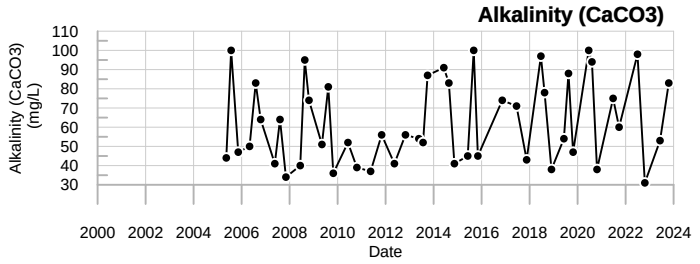
U = Not Detected above the laboratory reporting limit.

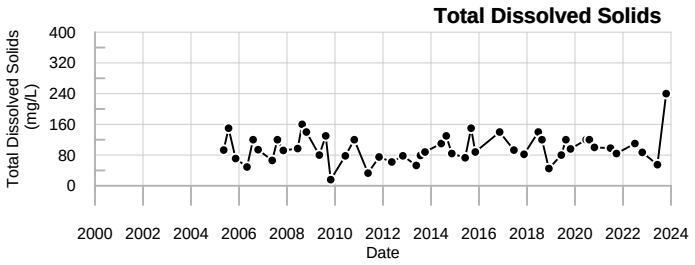
Abbrev.	Type	Standard
MFCCC	SW	MEDEP Freshwater Criterion Continuous Concentration

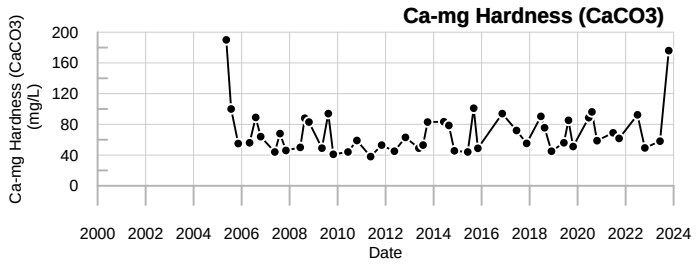


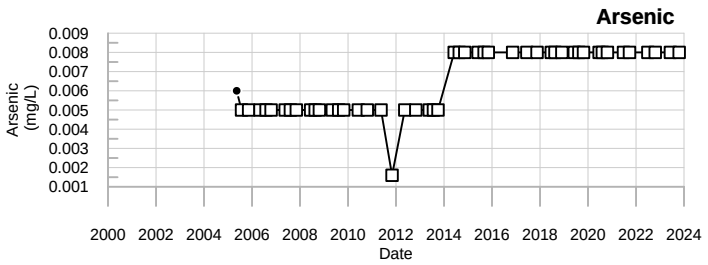


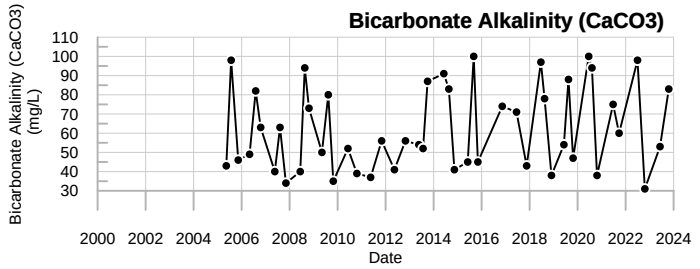


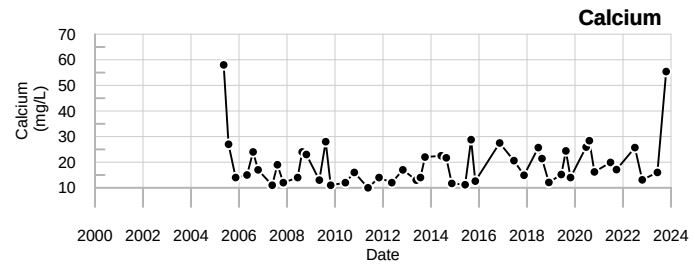


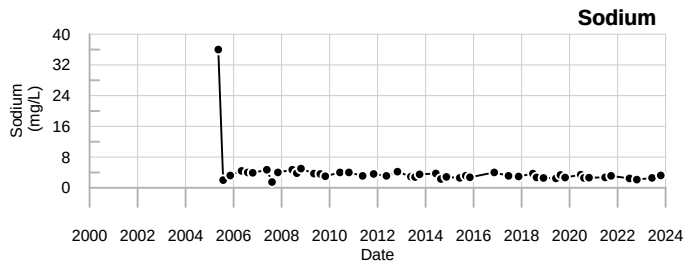


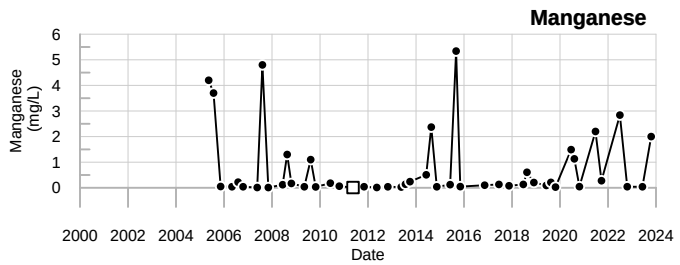


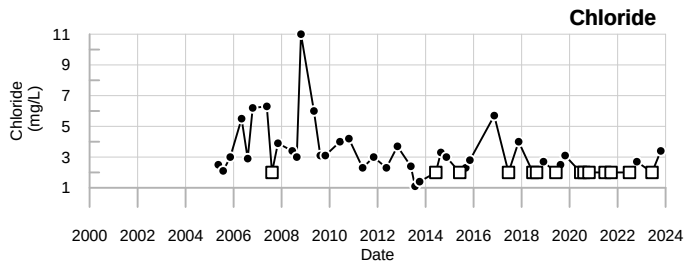












LEGEND

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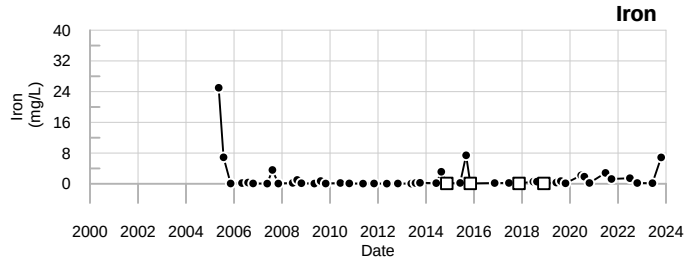

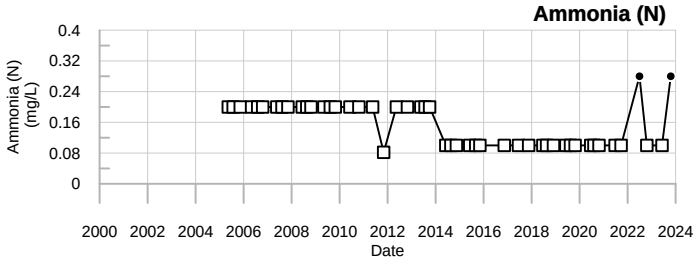

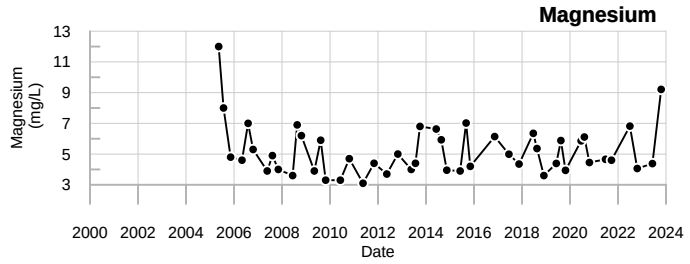

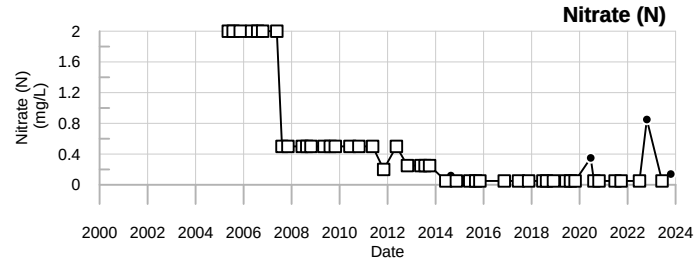

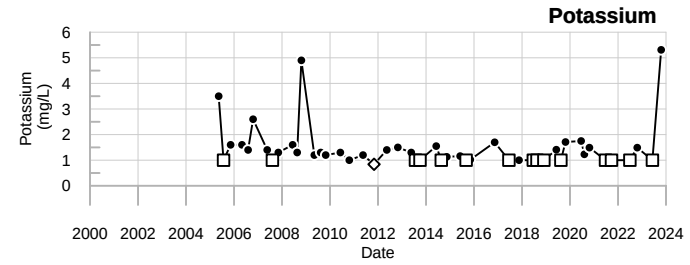

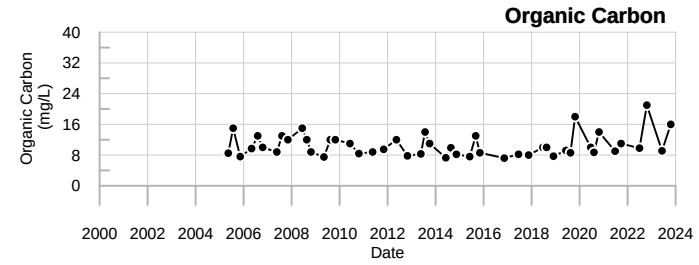

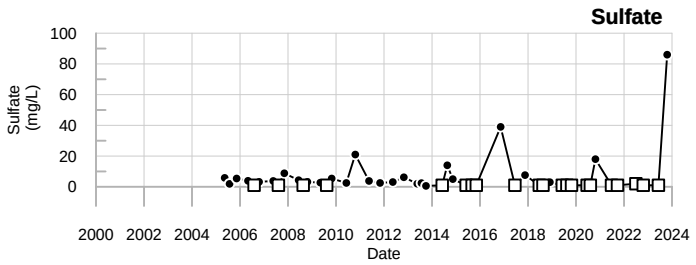

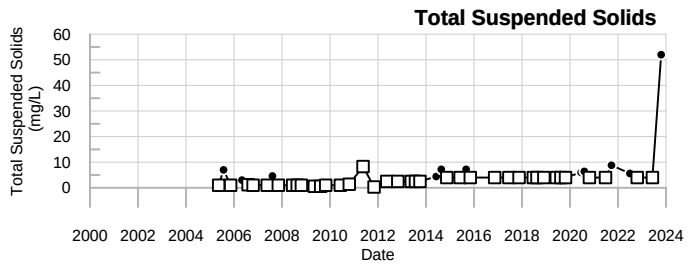

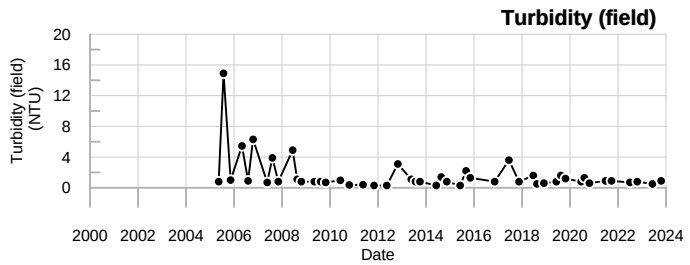

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SPOS
Dolby Landfill

Sevee & Maher Engineers, Inc.

APPENDIX N

MANN-KENDALL ANALYSES

SME
SEVEE & MAHER
ENGINEERS

Summary of Mann-Kendall Trend Analysis

Dolby Landfill

5-yr trend

Confidence Coefficient = 0.95 Level of Significance = 0.05

LOCATION	Increasing Trends	Decreasing Trends	No Trends
103		DO	pH, Spec Cond, Temp, TURB (fld), Water Depth, Water Elev.
104B	Fe, Mg, Mn, TSS	DO, NO3 - N, TDS	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, OC, pH, K, Na, Spec Cond, SO4, Temp, TURB (fld), Water Depth, Water Elev.
107A	NH3 - N, Fe, K, TSS	pH	ALK, As, HCO3, Ca, Hard(CaMg), Cl, DO, Mg, Mn, NO3 - N, OC, Na, Spec Cond, SO4, Temp, TDS, TURB (fld), Water Depth, Water Elev.
113		pH	DO, Spec Cond, Temp, TURB (fld), Water Depth, Water Elev.
202AR	Fe, Mg, Mn, OC, K, Na, Spec Cond, Water Elev.	pH, Water Depth	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, NO3 - N, SO4, Temp, TDS, TSS, TURB (fld)
202B			ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
202BR			ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
205A	NH3 - N, Fe	Cl, Mg, pH, Na	ALK, As, HCO3, Ca, Hard(CaMg), DO, Mn, NO3 - N, OC, K, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
205B			ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
206A		pH	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
206B		DO, pH	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, Fe, Mg, Mn, NO3 - N, OC, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
301		SO4	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
302B	ALK, NH3 - N, HCO3, OC, K, TDS	Cl	As, Ca, Hard(CaMg), DO, Fe, Mg, Mn, NO3 - N, pH, Na, Spec Cond, SO4, Temp, TSS, TURB (fld), Water Depth, Water Elev.
302C	NH3 - N, Mg, OC, K, Na, Spec Cond		ALK, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mn, NO3 - N, pH, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
303A	NH3 - N, Ca, Hard(CaMg), Fe, OC		ALK, As, HCO3, Cl, DO, Mg, Mn, NO3 - N, pH, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
303B			ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
304A	ALK, HCO3, Ca, Hard(CaMg), Cl, Mg, Mn, Na	TURB (fld)	NH3 - N, As, DO, Fe, NO3 - N, OC, pH, K, Spec Cond, SO4, Temp, TDS, TSS, Water Depth, Water Elev.
304B	Ca, Hard(CaMg)	DO	ALK, NH3 - N, As, HCO3, Cl, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.

LOCATION	Increasing Trends	Decreasing Trends	No Trends
401A	Ca, Hard(CaMg), Mg, Na, Temp	pH	ALK, NH3 - N, As, HCO3, Cl, DO, Fe, Mn, NO3 - N, OC, K, Spec Cond, SO4, TDS, TSS, TURB (fld), Water Depth, Water Elev.
401B	Ca	pH, TDS	ALK, NH3 - N, As, HCO3, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, K, Na, Spec Cond, SO4, Temp, TSS, TURB (fld), Water Depth, Water Elev.
402A	ALK, HCO3, Ca, Hard(CaMg), Mg, Mn, OC, Na, Spec Cond		NH3 - N, As, Cl, DO, Fe, NO3 - N, pH, K, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
402B	NH3 - N, Fe, Mn, K, SO4	ALK, HCO3, pH, TDS	As, Ca, Hard(CaMg), Cl, DO, Mg, NO3 - N, OC, Na, Spec Cond, Temp, TSS, TURB (fld), Water Depth, Water Elev.
CB#3		pH, Temp	DO, Spec Cond, TURB (fld)
LDS		ALK, NH3 - N, HCO3, Ca, Hard(CaMg), Mg, Mn, OC, pH, Spec Cond, TDS	As, Cl, DO, Fe, NO3 - N, K, Na, SO4, Temp, P, TSS, TURB (fld)
LP		Ba, pH, Temp	ALK, Al, NH3 - N, Sb, As, Be, HCO3, Cd, Ca, Hard(CaMg), Cl, Cr, Co, Cu, DO, Fe, Pb, Mg, Mn, Ni, NO3 - N, OC, K, Se, Ag, Na, Spec Cond, SO4, Tl, TDS, P, TSS, TURB (fld), Zn
LPD2			ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, P, TSS, TURB (fld)
ND			
PBFB	ALK, HCO3, Ca, Hard(CaMg), Mg		NH3 - N, As, Cl, DO, Fe, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, P, TSS, TURB (fld)
PBFR	ALK, HCO3		NH3 - N, As, Ca, Hard(CaMg), Cl, Cu, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, P, TSS, TURB (fld)
SPO	TURB (fld)	DO	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, P, TSS
SPON			ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, P, TSS, TURB (fld)
SPOS			ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, P, TSS, TURB (fld)
UDLP	DO	pH	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, Fe, Mg, Mn, NO3 - N, OC, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld)

LOCATION	Increasing Trends	Decreasing Trends	No Trends

Parameter Abbreviations:

Ag - Silver
Al - Aluminum
ALK - Alkalinity (CaCO3)
As - Arsenic
Ba - Barium
Be - Beryllium
Ca - Calcium
Cd - Cadmium
Cl - Chloride
Co - Cobalt
Cr - Chromium
Cu - Copper
DO - Dissolved Oxygen
Fe - Iron
Hard(CaMg) - Ca-mg Hardness (CaCO3)
HCO3 - Bicarbonate Alkalinity (CaCO3)
K - Potassium
Mg - Magnesium
Mn - Manganese
Na - Sodium
NH3 - N - Ammonia (N)
Ni - Nickel
NO3 - N - Nitrate (N)
OC - Organic Carbon
P - Total Phosphorus Mixed Forms (PO4 and Organic) As Phosphorus
Pb - Lead
pH - pH
Sb - Antimony
Se - Selenium
SO4 - Sulfate
Spec Cond - Specific Conductance
TDS - Total Dissolved Solids
Temp - Temperature
Tl - Thallium
TSS - Total Suspended Solids
TURB (fld) - Turbidity (field)
Water Depth - Water Level Depth
Water Elev. - Water Level Elevation
Well Depth - Well Depth
Zn - Zinc

Calculations are performed on ProUCL Version 5.2.
Values below the detection limit are passed to ProUCL as a value of zero.
Field duplicate samples are excluded from the analysis.

Summary of Mann-Kendall Trend Analysis

Dolby Landfill

5-yr trend

Confidence Coefficient = 0.95 Level of Significance = 0.05

LOCATION	Increasing Trends	Decreasing Trends	No Trends
103		DO	pH, Spec Cond, Temp, TURB (fld), Water Depth, Water Elev.
104B	Fe, Mg, Mn, TSS	DO, NO3 - N, TDS	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, OC, pH, K, Na, Spec Cond, SO4, Temp, TURB (fld), Water Depth, Water Elev.
107A	NH3 - N, Fe, K, TSS	pH	ALK, As, HCO3, Ca, Hard(CaMg), Cl, DO, Mg, Mn, NO3 - N, OC, Na, Spec Cond, SO4, Temp, TDS, TURB (fld), Water Depth, Water Elev.
113		pH	DO, Spec Cond, Temp, TURB (fld), Water Depth, Water Elev.
202AR	Fe, Mg, Mn, OC, K, Na, Spec Cond, Water Elev.	pH, Water Depth	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, NO3 - N, SO4, Temp, TDS, TSS, TURB (fld)
202B			ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
205A	NH3 - N, Fe	Cl, Mg, pH, Na	ALK, As, HCO3, Ca, Hard(CaMg), DO, Mn, NO3 - N, OC, K, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
205B			ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
206A		pH	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
206B		DO, pH	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, Fe, Mg, Mn, NO3 - N, OC, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
301		SO4	ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
302B	ALK, NH3 - N, HCO3, OC, K, TDS	Cl	As, Ca, Hard(CaMg), DO, Fe, Mg, Mn, NO3 - N, pH, Na, Spec Cond, SO4, Temp, TSS, TURB (fld), Water Depth, Water Elev.
302C	NH3 - N, Mg, OC, K, Na, Spec Cond		ALK, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mn, NO3 - N, pH, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
303A	NH3 - N, Ca, Hard(CaMg), Fe, OC		ALK, As, HCO3, Cl, DO, Mg, Mn, NO3 - N, pH, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
303B			ALK, NH3 - N, As, HCO3, Ca, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
304A	ALK, HCO3, Ca, Hard(CaMg), Cl, Mg, Mn, Na	TURB (fld)	NH3 - N, As, DO, Fe, NO3 - N, OC, pH, K, Spec Cond, SO4, Temp, TDS, TSS, Water Depth, Water Elev.
304B	Ca, Hard(CaMg)	DO	ALK, NH3 - N, As, HCO3, Cl, Fe, Mg, Mn, NO3 - N, OC, pH, K, Na, Spec Cond, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
401A	Ca, Hard(CaMg), Mg, Na, Temp	pH	ALK, NH3 - N, As, HCO3, Cl, DO, Fe, Mn, NO3 - N, OC, K, Spec Cond, SO4, TDS, TSS, TURB (fld), Water Depth, Water Elev.

LOCATION	Increasing Trends	Decreasing Trends	No Trends
401B	Ca	pH, TDS	ALK, NH3 - N, As, HCO3, Hard(CaMg), Cl, DO, Fe, Mg, Mn, NO3 - N, OC, K, Na, Spec Cond, SO4, Temp, TSS, TURB (fld), Water Depth, Water Elev.
402A	ALK, HCO3, Ca, Hard(CaMg), Mg, Mn, OC, Na, Spec Cond		NH3 - N, As, Cl, DO, Fe, NO3 - N, pH, K, SO4, Temp, TDS, TSS, TURB (fld), Water Depth, Water Elev.
402B	NH3 - N, Fe, Mn, K, SO4	ALK, HCO3, pH, TDS	As, Ca, Hard(CaMg), Cl, DO, Mg, NO3 - N, OC, Na, Spec Cond, Temp, TSS, TURB (fld), Water Depth, Water Elev.

Parameter Abbreviations:

Ag - Silver
Al - Aluminum
ALK - Alkalinity (CaCO3)
As - Arsenic
Ba - Barium
Be - Beryllium
Ca - Calcium
Cd - Cadmium
Cl - Chloride
Co - Cobalt
Cr - Chromium
Cu - Copper
DO - Dissolved Oxygen
Fe - Iron
Hard(CaMg) - Ca-mg Hardness (CaCO3)
HCO3 - Bicarbonate Alkalinity (CaCO3)
K - Potassium
Mg - Magnesium
Mn - Manganese
Na - Sodium
NH3 - N - Ammonia (N)
Ni - Nickel
NO3 - N - Nitrate (N)
OC - Organic Carbon
P - Total Phosphorus Mixed Forms (PO4 and Organic) As Phosphorus
Pb - Lead
pH - pH
Sb - Antimony
Se - Selenium
SO4 - Sulfate
Spec Cond - Specific Conductance
TDS - Total Dissolved Solids
Temp - Temperature
Tl - Thallium
TSS - Total Suspended Solids
TURB (fld) - Turbidity (field)
Water Depth - Water Level Depth
Water Elev. - Water Level Elevation
Well Depth - Well Depth
Zn - Zinc

Calculations are performed on ProUCL Version 5.2.
Values below the detection limit are passed to ProUCL as a value of zero.
Field duplicate samples are excluded from the analysis.

APPENDIX O

GAS MONITORING DATA

SME
SEVEE & MAHER
ENGINEERS

REPORT PREPARED: 1/10/2024 09:43
FOR: Dolby Landfill
DATE RANGE: 1/1/2021 - 12/31/2023

DATA SUMMARY TABLE

Landfill Gas Monitoring

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Methane Equivalent % Vol.	Methane Equivalent (Ambient) % Vol.	Hydrogen Sulfide ppm	Hydrogen Sulfide (Ambient) ppm
107B				
6/21/2021	0.1 US	0.1 US	0	0
9/20/2021	0.1 US	0.1 US	0	0
6/29/2022	0.1 US	0.1 US	0	0
10/17/2022	0.1 US	0.1 US	0	0
6/5/2023	0.1 US	0.1 US	0	0
10/16/2023	0.1 US	0.1 US	0	0
CB#3				
6/5/2023	20	0.1 US	0	0
10/16/2023	12	0.1 US	0	0
CB-6A				
6/21/2021	0.1 US	0.1 US	0	0
9/20/2021	0.1 US	0.1 US	0	0
6/29/2022	0.8	0.1 US	0	0
10/17/2022	0.1 US	0.1 US	0	0
6/5/2023	0.1 US	0.1 US	0	0
10/16/2023	A11	A11	A11	A11
CB-13				
6/21/2021	0.1 US	0.1 US	0	0
9/20/2021	0.1 US	0.1 US	0	0
6/29/2022	0.1 US	0.1 US	0	0
10/17/2022	0.1 US	0.1 US	0	0
6/5/2023	0.1 US	0.1 US	0	0
10/16/2023	0.1 US	0.1 US	0	0
CB-21				
6/21/2021	5	0.1 US	0	0
9/20/2021	0.15	0.1 US	0	0
6/29/2022	0.1 US	0.1 US	0	0
10/17/2022	0.1 US	0.1 US	0	0
6/5/2023	0.1 US	0.1 US	0	0
10/16/2023	0.1 US	0.1 US	3	0
CB-22				
6/21/2021	0.1 US	0.1 US	0	0
9/20/2021	0.1 US	0.1 US	0	0
6/29/2022	0.1 US	0.1 US	0	0
10/17/2022	0.1 US	0.1 US	0	0
6/5/2023	0.1 US	0.1 US	0	0
10/16/2023	0.1 US	0.1 US	0	0
CB-39				
6/21/2021	0.1 US	0.1 US	0	0
9/20/2021	0.1 US	0.1 US	0	0
6/29/2022	0.1 US	0.1 US	0	0
10/17/2022	0.1 US	0.1 US	0	0
6/5/2023	0.1 US	0.1 US	0	0
10/16/2023	0.1 US	0.1 US	0	0

DATA SUMMARY TABLE

Landfill Gas Monitoring

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(CB-43) Date	Methane Equivalent % Vol.	Methane Equivalent (Ambient) % Vol.	Hydrogen Sulfide ppm	Hydrogen Sulfide (Ambient) ppm											
CB-43															
6/21/2021	0.1 US	0.1 US	0	0											
9/20/2021	9	0.1 US	0	0											
6/29/2022	0.1 US	0.1 US	0	0											
10/17/2022	0.1 US	0.1 US	0	0											
6/5/2023	0.1 US	0.1 US	0	0											
10/16/2023	0.1 US	0.1 US	0	0											
CB-45															
6/21/2021	0.1 US	0.1 US	0	0											
9/20/2021	0.1 US	0.1 US	0	0											
6/29/2022	0.1 US	0.1 US	0	0											
10/17/2022	0.1 US	0.1 US	0	0											
6/5/2023	0.1 US	0.1 US	0	0											
10/16/2023	0.1 US	0.1 US	0	0											
CONEX BOX															
6/5/2023	0.1 US	0.1 US	0	0											
10/16/2023	0.1 US	0.1 US	0	0											
LEACHATE PUMP STATION															
6/21/2021	0.1 US	0.1 US	0	0											
9/20/2021	0.1 US	0.1 US	0	0											
6/29/2022	0.1 US	0.1 US	0	0											
10/17/2022	0.1 US	0.1 US	0	0											
6/5/2023	0.1 US	0.1 US	0	0											
10/16/2023	0.1 US	0.1 US	0	0											
LEACHATE WET WELL															
6/21/2021	0.1 US	0.1 US	0	0											
9/20/2021	0.1 US	0.1 US	0	0											
6/29/2022	0.1 US	0.1 US	0	0											
10/17/2022	0.1 US	0.1 US	0	0											
6/5/2023	0.1 US	0.1 US	0	0											
10/16/2023	0.1 US	0.1 US	0	0											

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Concentration Qualifier Notes:

A11 - Manholes are under new landfill cover.

US - Not Detected above the reported reporting limit determined by interpreted instrument specification.