PINE TREE LANDFILL

April 29, 2022

Susan Parmelee
Department of Environmental Protection
Bureau of Remediation and Waste Management
17 State House Station
Augusta, ME 04333-0017

Re: Pine Tree Landfill 2021 Annual Report

Dear Ms. Parmelee:

Enclosed for your review is the Pine Tree Landfill 2021 Annual Rep
documentation as required.

Should you require additional information or clarification, please do
contact me at 207-249-8025 or Wayne Boyd at 207-862-4200 ext. 2

Respectfully submitted,

New England Waste Services of ME, Inc.

Jeffrey Pelletier
Environmental Manager

Enclosure

Cc: Kathy Tarbuck, MEDEP
Paula Scott, Town of Hampden

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1.0 INTRODUCTION

This document and associated attachments are Pine Tree Landfill's (PTL) 2021 Annual Report. The information provided in this report also addresses the requirements of Section 401.6.C of Maine Solid Waste Management Rules, and Condition 22 of Department Order #S-001987-WN-HC-N. 2021 was the eleventh year of a 30-year post-closure monitoring period for PTL. The 2021 Annual Report fee was invoiced by the Maine Department of Environmental Protection (MEDEP) in March 2022 and was paid in early April 2022.

1.1 *Annual Report Format*

The following sections are addressed within this report. A further breakdown of the sections is listed in the Table of Contents.

1) Introduction
2) Summary of Site Activities
3) Facility Site Changes
4) Post-Closure Monitoring and Maintenance
5) Financial Assurance

1.2 Permit & License Applications Submitted & Approved for PTL during 2021

The following permits and licenses were submitted and or approved during 2021. No permits and license applications carried over into 2022.

- Air emission license change from a major to a minor source (A-850-71-E-R/A)
- US Fish & Wildlife Bird Depredation Permit Renewal (Permit #MB670894-0)

1.3 Site Overview

PTL is a 160-acre site located off Emerson Mill Road in Hampden, Maine. Figure 1-1 is a location map of the Pine Tree Landfill site and the surrounding facilities. Prior to closure, beginning in 1975, Pine Tree Landfill facility, formerly Sawyer Environmental Recovery Facilities, Inc. (SERF), had been used for disposal of municipal solid waste (MSW) and special solid waste at four licensed disposal facilities. Of the four, three facilities are secure landfills with liners and leachate collection systems. Listed below are descriptions of the four licensed facilities.

Conventional Landfill

The largest facility, a 19.8-acre landfill, is the Conventional Landfill, an attenuation landfill that was used between 1975 and 1992 for disposal of MSW, clean oil spill debris, construction and demolition debris, and asbestos.

Secure I Landfill

Secure I is a 1.6-acre clay-lined secure facility used between 1981 and 1985 for the disposal of special waste, including ash from municipal solid waste incinerators and fossil fuel boilers, sludges, sandblast grits, oily waste, and oil spill debris.

Secure II Landfill

Secure II is an 8.7-acre clay-lined secure landfill used between 1985 and 1993 for disposal of special wastes similar to those placed in Secure I. The Secure I and II Landfills were closed and the final covers applied shortly after they were filled.

Secure III Landfill

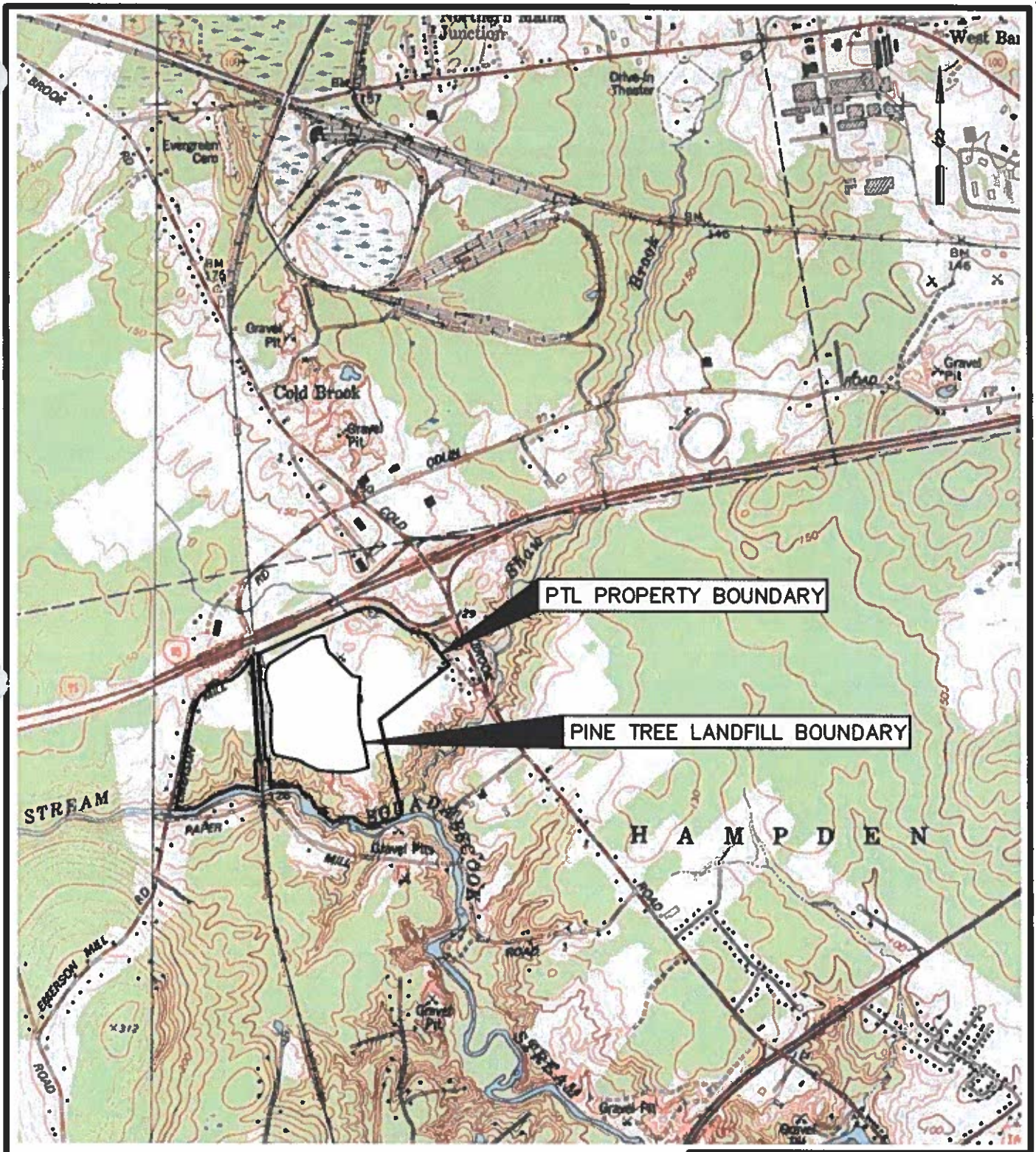
Phases I-V of the Secure III Landfill were permitted by the MEDEP in 1991. These phases include double liner systems with leak detection and leachate collection. Phases I-V received waste from 1993 through 2001. These Phases were formally closed with final cover being applied in 2002.

On October 28, 1998, PTL received a license from the MEDEP to expand the Secure III Landfill. The expansion included the addition of three Phases (VI, VII, & VIII), which provided additional capacity of 3.3 million cubic yards to Secure III. PTL began constructing Phase VIII-A during late 1999 and completed building the new cell by July 2000. Phase VIII-A received waste from July 2000 through October 2001. PTL began construction of Phase VI in May of 2001 and began utilizing the cell in October of the same year. Phase VI was utilized throughout 2002 into January 2003, with intermediate cover being placed on the phase in February 2003. Construction of Phase VIII-C, Stage-1 began in August 2002 with the MEDEP approving the use of the cell in January 2003. Stage-1 was substantially filled by the end of 2003, and the intermediate cover placed in November and December of 2003. The MEDEP approved construction of Phase VIII-C, Stage-2 on April 17, 2003 with construction beginning immediately thereafter. Stage-2 was approved to begin receiving wastes on August 15, 2003. Stage-2 was utilized from

September 2003 through August 2004 with intermediate cover being placed on the cell in October 2004. The construction of Phase VIII-C, Stage 3 was approved by the MEDEP on May 16, 2004 with construction completed by mid-August 2004. The MEDEP approved the use of the cell on August 23, 2004. Stage-3 was utilized from August 23, 2004 through mid-September 2005 with intermediate cover being placed on the cell in late 2005. Phase VII cell was constructed between May 9, 2005 and September 15, 2005 at which time the cell was approved for placement of wastes.

Landfill Phased Closure

On October 26, 2006, PTL received MEDEP and Town of Hampden approval of a proposed Schedule of Compliance laying out the timeline for phased closure of the PTL facility. The Schedule of Compliance committed to the cessation of waste acceptance by December 31, 2009, and the placement of all final cover systems by December 31, 2010. The Closure Plan for PTL included a change in final waste side slope grades from the previously approved 3 horizontal to 1 vertical (3H:1V) to 2.5 horizontal to 1 vertical (2.5H:1V) for the phases of Secure III where final cover had not already been applied. The change in side slope grades included the utilization of soil perimeter berms around the Secure III Phases. Construction of the portion of this berm along Phase VII began in December 2006, and was completed in April 2007. In June 2007, construction of the second phase of the berm along the perimeter of Phase VIII-C Stages 2 and 3 was started. This portion of the berm was completed in August 2007. Construction of the Phase VI perimeter berm began in April of 2008 and was completed and approved for waste placement on June 30, 2008. The final cover systems for Secure III, Phase VII and Phase VIII-C, Stage 3 were completed in late 2008. The final cover placement on Phase VI was completed in 2009, with the final stage of closure (Phase VIII-C, Stages 1 & 2) completed in 2010. On February 18, 2011, New England Waste Services of ME, Inc. (NEWSME) received a MEDEP memo dated January 13, 2011, which affirmed that the final stage of closure had been completed in general accordance with the approved plans and specifications. Therefore, in 2021, the PTL facility was in its eleventh year of the 30 year post-closure period.



BASE MAP ADAPTED FROM 7.5 MIN
USGS TOPOGRAPHIC QUADRANGLE:
BANGOR, ME – 1991

1000 0 2000 4000 FEET

FIGURE 1–1
SITE LOCATION MAP
PINE TREE LANDFILL
HAMPDEN, MAINE

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

DWG: SITE LMN: CTB: HPSTD REV: 4/30/10

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2.0 SUMMARY OF SITE ACTIVITIES

2.1 Landfill Activities

The following landfill related site activities occurred at PTL during 2021:

- Continuation of the Post-Closure Leachate Recirculation Program (minimally until November 2021). No leachate recirculation is planned for the future.
- Continuation of post-closure monitoring and maintenance.
- Completion of a minor stormwater improvement to Secure III drainage infrastructure near the Phase VII Pump Station. A Rip-Rap downspout was refreshed to allow for better stormwater drainage.

2.2 Other Onsite Activities

The following non-landfill related site activities occurred at the PTL facility during 2021:

- Pine Tree Transfer and Recycling continued to operate as a licensed transfer station by accepting CDD, clean wood, white goods, and universal wastes.
- The landfill gas-to-energy facility continued to operate by treating and combusting landfill gas for electrical energy production. On January 29, 2021 the facility was closed permanently, due to insufficient gas quality and decreasing gas flows from the closed landfill. The engines were sold, and the plant equipment dismantled.
- The adjacent container storage yard continued to be utilized by Pine Tree Waste for storage of their frontload and roll-off containers.
- North Coast Services continued to handle universal waste materials for the Pine Tree Transfer Station, and utilize the former Pine Tree universal waste consolidation area located in the former Pine Tree Landfill maintenance garage.
- Cianbro continued replacing the MEDOT I-95 bridge that transports vehicles over Emerson Mill Road and is adjacent to the PTL property line.

2.3 *Spills and Incidents During 2021*

During 2021, three spills and one fire related incident occurred on-site at PTL. One spill and one fire were associated with the adjacent transfer station. Details of the events are listed below.

- On July 1, 2021, Pine Tree Landfill experienced a small landfill gas condensate spill on the side slope of the closed landfill. The spill occurred when the top of leachate cleanout connected to the leachate recirculation force main, was struck while mowing the landfill. After the cleanout was struck, the flange gasket blew out, causing condensate to spray on the soil below. Due to the employee's quick response, the system was quickly shut down, keeping the spill relatively small. The impacted soils were removed using a vacuum truck and replaced with clean material and reseeded. The MEDEP Project manager was notified the following day.

- On July 12, 2021, Pine Tree Transfer and Recycling (PTT) noticed smoke coming out of the back of a recently loaded truck/dump trailer containing construction and demolition debris (CDD). The truck was quickly turned around and unloaded, placing the smoking material on an empty portion of the CDD concrete pad. Once separated, the material stopped burning immediately.

- On August 18, 2021, Pine Tree Landfill experienced a small oil spill when the front-end loader lost a rear axle oil seal while traveling around the paved access road of the closed landfill. The spill was quickly cleaned up using speedy dry and the onsite skid steer with sweeper attachment. The MEDEP spill hotline was notified and spill number B-339-2021 assigned.

- On October 8, 2021, Pine Tree Transfer and Recycling (PTT) operators noticed a strong chemical smell while pushing up the CDD pile with the front-end loader. After further investigation the smell was identified to be coming from an empty barrel of methacrylic acid that hadn't been rinsed properly. A small amount of residual was cleaned up using absorbent media and the MEDEP spill hotline was called. MEDEP sent a responder who was satisfied with the cleanup.

2.4 System Failures and/or Repairs

Routine and non-routine maintenance activities were performed on the leachate and landfill gas collection infrastructure, access roads, surface water structures, and cover system during 2021. Leachate maintenance activities are listed chronologically in Attachment B. All other identified landfill maintenance activities are listed chronologically in Attachment G.

3.0 FACILITY SITE CHANGES

During 2021, one site change occurred requiring department approval. This change is listed below.

- With the closure of the PTL Gas-to-energy plant on January 29, 2021, and removal of the plant engines, PTL is no longer considered a major source air emitter and no longer requires a Part 70 air license. This conclusion was determined during PTL's Part 70 air license renewal process, which issued a license change (from a major to minor source)on January 29, 2021, once an inspection was performed confirming the engines were permanently shut down. Under the new minor source license (A-850-71-E-R/A), PTL is no longer required to run the previously installed Thiopaq LFG treatment system (or other treatment systems) as long as emissions remain low, and limits followed.

3.1 Changes to the Facility's Post-Closure Monitoring and Maintenance Plan

In accordance with the Post-Closure Environmental Monitoring Plan and agreed upon with the MEDEP, water quality monitoring frequency was reduced in 2016 from three times annually to twice annually. This sampling frequency will remain in effect through 2021. Additionally, changes in sampling parameter lists were implemented based on the Monitoring Plan.

Consistent with recommendations made in the 2019 Annual Water Quality Report, and previous annual water quality reports (2015-2018), SME recommended that VOC sampling be removed from the monitoring program for monitoring locations 641, MW-916, and DW04-109. These recommendations were approved by a MEDEP Memorandum on October 19, 2020.

Consistent with recommendations made by Dr. Richard Wardwell in the 2019 Post-Closure Geotechnical Monitoring Report, for the remainder of the post-closure period, the geotechnical performance of the closed landfill be assessed using the ongoing site observational methodologies and that the topographic surveys of the foundation and landfill surface monuments be suspended and only be reinstated in areas where unusual deformations or adverse drainage conditions are detected by visual inspections. These recommendations were approved by a MEDEP email on October 23, 2020 and included as Appendix B of Attachment F of this report.

3.2 Proposed Changes

As communicated by PTL Staff to the MEDEP in early 2022, the Facility's Post-Closure Monitoring and Maintenance Plan will be fully updated in 2022 to incorporate site changes due to the closure of the PTL Gas-to-Energy Facility on January 29, 2021 and recently approved changes to the post-closure Environmental Monitoring Plan (EMP), to incorporated recent approvals granted by the MEDEP Memorandum (Pine Tree Landfill Hydrogeology Review of 2020 Water Quality Summary, dated October 15, 2021). The post-closure EMP changes will incorporate a reduction in sampling frequency from biannual to annual for post-closure monitoring years 2022 through 2040. This reduction in sampling frequency approved by MEDEP in October 2021, with exception of continued biannual monitoring at six monitoring locations until water quality improvements can be demonstrated at those locations. The monitoring wells are MW03-802B, MW03-802A, MW03-803A, MW03-803B, MW97-123 and 509B. Since approval of the change in monitoring frequency occurred in late 2021, changes will be initiated in 2022 and discussed in the 2022 Water Quality Report.

Additionally, SME recommends additional changes to the sample parameter list for two monitoring locations. SME proposes removal of the indicator parameter list and expanded parameter list for southeast monitoring locations 200 and MW-906B. With MEDEP approval, these southeast monitoring locations will be monitored for field parameters to evaluate the on-site post-closure threshold criterion for specific conductance values under 500 µmhos/cm. Further discussion is provided in the 2021 Water Quality Report, included as Attachment C of this report.

4.0 MONITORING

During 2021, PTL staff performed and documented various monitoring and inspections, as outlined in the PTL Post-Closure Monitoring and Maintenance Plan (Plan), in accordance with 401.6.b of the Regulations. Reports of monitoring were submitted in accordance with the Plan, and additional inspection documents are available to the MEDEP upon request and are maintained in the Environmental Manager's office.

4.1 Groundwater, Surface Water, and Leachate Monitoring

In 2021, the required water quality monitoring was performed twice annually, based on the PTL Environmental Monitoring Plan (EMP) which was revised in May 2011 and agreed upon by the MEDEP.

Once monitored, the 2021 water quality data of 22 on-site groundwater monitoring wells, four on-site and off-site surface water monitoring locations, two groundwater residential area wells, two landfill leachate locations, and the perimeter drain of the Conventional Landfill was compared/evaluated with historical monitoring data and the threshold criteria established for the site groundwater over the post-closure period. The 2021 Water Quality Report is included as Attachment C of this report.

As required by PTL's Industrial Wastewater Discharge Permit, leachate pumped from PTL to the Bangor Wastewater Treatment Facility (BWWTP), was sampled quarterly during 2021. Throughout 2021, 8,974,578 gallons of leachate was pumped from PTL to BWWTP. This is compared to 8,723,714 gallons of leachate pumped in 2020.

Additionally during 2021, a total of 97,281 gallons of leachate and condensate was recirculated into PTL's Secure III facility. This is compared to 169,316 gallons of leachate and condensate recirculated in 2020. Further details of leachate recirculation activities for 2021 are included as Attachment A, the 2021 Post-Closure Leachate Recirculation Annual Report.

Sample results for leachate monitoring and flow records of both the leachate collection/leak detection systems are kept on file in the Environmental Manager's office. PTL leachate collection/leak detection systems were monitored as outlined the PTL Post-Closure Monitoring and Maintenance Plan, with a discussion of those results included in the 2021 Water Quality Report.

4.2 Gas & Air Monitoring

Gas Monitoring

The 2021 PTL Gas Monitoring Report is included as Attachment D to this report. Throughout 2021, routine landfill gas (LFG) monitoring took place at various on-site gas management locations with results being submitted via electronic deliverable document to the MEDEP as required.

Air Monitoring

The 2021 PTL Air Monitoring Report is included as Attachment E to this report. No odor related complaints occurred at PTL in 2021 or 2020; further confirming that the final cover system is functioning properly. A surface scan was completed in December 20, 2021 using

a Micro FID® (flame ionizing detector) or similar mobile device. During the 2021 scan, PTL staff did not encounter any locations that had CH_4 readings above the 500 ppm throughout the entire landfill cover system and all of its penetrations.

4.3 Stability, Settlement, and Cover Monitoring

The 2021 Geotechnical Monitoring Report is provided in Attachment F of this report. During 2021, PTL continued to monitor site settlement and stability in Secure III as in the past with the assistance of Dr. Richard Wardwell. The stability of the cover and waste mass at the Pine Tree Landfill was primarily assessed by periodic landfill observations.

4.4 Rapid Waste Mass Stabilization (Leachate Recirculation) Monitoring

In 2021, a total of 97,281 gallons of leachate was introduced into PTL's waste mass. During this time, all 97,281 gallons were pumped into the two remaining active recirculation trenches. Routine inspections were continually performed in accordance with the Plan, to ensure proper system operation. Due to limited staffing and a lower demand for additional gas at the PTL GTE, the entire volume of leachate approved in the 2021 Recirculation Plan was not applied. Due to the permanent closure of the PTL GTE Facility on January 29, 2021, PTL no longer has a need to enhance gas production. In 2022 and beyond, PTL staff no longer plans to recirculate leachate. The PTL 2021 Post-Closure Leachate Recirculation Report will serve as the last report for the Program. The 2021 Post-Closure Leachate Recirculation Report is included as Attachment A of this report.

4.5 Tri-Annual Inspections

A sample copy of quarterly inspection forms in accordance with the Plan, along with other identified landfill maintenance items and their resolutions are listed chronologically in Attachments B and G.

4.6 Annual Compliance Self Audit and Report

As required by Condition 22 of Department Order #S-001987-WN-HC-N, PTL performed an annual evaluation of landfill post-closure activities for conformance to the Plan for calendar year 2021. A copy of the Audit is included as Attachment H. As requested by the MEDEP an Annual Solid Waste Management Report has been completed, despite PTL being closed and no longer accepting waste. The completed Annual Solid Waste Management Report is included as Attachment I.

5.0 FINANCIAL ASSURANCE

The post-closure costs have been updated, as of the end of calendar year 2021. A copy of the revised closure and post-closure costs may be found in Attachment J of this report. Following approval of the estimates, a revised financial assurance package will be submitted to the MEDEP under a separate cover.

ATTACHMENT A

POST-CLOSURE LEACHATE RECIRCULATION ANNUAL REPORT

PINE TREE LANDFILL

2021 POST-CLOSURE LEACHATE RECIRCULATION REPORT

Operated by New England Waste Services of ME, Inc.

358 Emerson Mill Road, Hampden, Maine 04444 • (207) 862-4200

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PINE TREE LANDFILL
POST-CLOSURE LEACHATE RECIRCULATION
2021 ANNUAL REPORT

1.0 INTRODUCTION

This document serves as the 2021 Annual Report for the Pine Tree Landfill (PTL) Post-Closure Leachate Recirculation Program (Program). The Program was initiated in 2011, in general accordance with the Pine Tree Landfill Post-Closure Leachate Recirculation Plan (Plan) (January 2011) approved by Maine Department of Environmental Protection (MEDEP) Order #S-001987-WD-XH-M.

In 2021, a total of 97,281[1] gallons of leachate were introduced into PTL's waste mass. During this time, all 97,281 gallons were pumped into the two remaining active recirculation trenches (recirculation trenches) LRT-2 & LRT-3.[2] No gas wells and/or gas collection trenches were used for recirculation during 2021. Procedures and monitoring requirements associated with these activities are further described in Section 4.0 of the Plan.

This report summarizes the 2021 Leachate Recirculation Program and proposes future plans to be carried out after April 2022.

2.0 HISTORY

On June 11, 2009, New England Waste Services of ME Inc., dba Pine Tree Landfill (PTL), submitted an application to the MEDEP seeking approval to perform a pilot study to evaluate the effectiveness of leachate recirculation at the facility. The program was expected to provide an environment within the landfill that would foster ongoing waste mass stabilization. The pilot study was also intended to evaluate whether the landfill gas (LFG) generation rate and methane content could be enhanced by maintaining moisture conditions in the waste mass. The leachate would replace the precipitation recharge eliminated by the installed final cover and serve to continue stabilization of the waste

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[1] Flow totals for 2021, for the purpose of this report, were computed from the sum of individual flow meters located at the recirculation manifold.

[2] In 2016, two of the four recirculation trenches (LRT-1 & LRT-4) were discontinued due to suspected short circuiting and leakage through geomembrane defects. There are no plans to return these two trenches to service.

mass. A secondary benefit to the program would be a reduced volume of leachate that ultimately required offsite disposal.

On August 12, 2009, the MEDEP approved a pilot project recirculation study (#S-001987-WZ-XG-N). The pilot project was conducted at the facility through the months of August – December 2009. Data collected throughout the pilot recirculation project indicated that leachate recirculation could provide a benefit to the facility by accelerating waste mass stabilization and increasing methane production for use at the landfill's gas-to-energy plant. This data was presented to the MEDEP.

On May 17, 2011, PTL received license #S-001987-WD-XH-M, approving the implementation of the Post-Closure Leachate Recirculation Program. In June 2011, PTL initiated the post-closure recirculation plan.

3.0 GENERAL RECIRCULATION SYSTEM LAYOUT AND DESCRIPTION

The PTL recirculation program incorporates two types of leachate recirculation techniques: (1) leachate introduction into the waste mass using four recirculation trenches; and (2) leachate introduction via injection into gas wells and gas collection trenches. The design plans for the leachate recirculation infrastructure are located in the approved Pine Tree Landfill Post-Closure Recirculation Plan, maintained on file in the Environmental Manager's office and previously provided to the MEDEP.

A four-inch leachate force main conveys leachate from the existing leachate storage tank pump station to a concrete manifold structure located at the top of the landfill (in Secure III, Phase VIII-C, Stage 2). The control and monitoring of the quantity of leachate being recirculated is done with an automated valve, flow meter, and separate pump, installed in the existing leachate tank pump station. The pumping system is designed to deliver a flow of approximately 150 gallons per minute (gpm) to a manifold system located at the top of the site in the distribution structure. The manifold contains manual valves for controlling and directing the leachate flow to each injection point. Each injection point has a flow meter to monitor flow if simultaneous injection occurs.

The injection points include four recirculation trenches located below the final cover in the top area of the landfill. The recirculation trenches run north to south, are approximately three feet wide, and are backfilled with tire chips to a depth of one and a half feet. The location and orientation of the trenches is shown on Figure 1-1 of the Plan. In the center of each trench, bedded in the tire chips, is a four-inch HDPE perforated pipe.

At the high point of the trench, the perforated pipe is connected to the leachate transmission pipe. Trenches are also equipped with cleanouts on the ends and injection risers at several locations along the trench. At the end of each trench, moisture inspection ports are also installed to provide a location to measure liquid level in the trenches. These structures are shown on Figure 1-1 of the Plan.

In addition to the recirculation trenches, three extraction points are located on the North, South, and West side of the top of the landfill to allow for leachate distribution to wells and collection trenches around the site. From these extraction points, leachate is distributed to individual wells and collection trenches using temporary piping that is in good working condition, with an appropriate pressure rating. The temporary piping, is connected to the well or collection trench piping, using a stainless-steel saddle coupling.

The leachate recirculation structures and conveyance pipes are designed to:

- Accommodate estimated waste settlement and maintain landfill stability.
- Operate in weather conditions anticipated during the period of planned leachate recirculation, i.e. throughout the year for the recirculation trenches, and during spring, summer, and fall months for the extraction points.
- Allow monitoring of water levels in the recirculation trenches and provide alternate access points in the trench for leachate addition.
- Provide for leachate flow monitoring to the various distribution points.
- Allow for periodic cleaning and maintenance, as necessary.
- Contain and control leachate during collection, transport, and re-introduction into the waste mass.
- Not create nuisance odors beyond the property boundary.
- Limit leachate head on the liner system to less than 12 inches.
- Maintain leachate quality compatibility with the collection, transport, storage, and treatment systems.
- Not create leachate breakouts on the landfill side slopes.

4.0 2021 OPERATIONS

4.1 *Operations Summary*

Throughout 2021, leachate was applied in accordance with the proposed application volumes approved by the MEDEP as part of the PTL 2020 Leachate Recirculation Annual Report (2021 Recirculation Plan), submitted with the Pine Tree Landfill Annual Report in April 2021. Due to limited staffing and a lower demand for additional gas at the PTL GTE,

the entire volume of leachate approved in the 2021 Recirculation Plan was not applied. Only light application volumes were introduced into the two remaining active recirculation trenches (LRT-2 & LRT-3), to accommodate condensate disposal from the PTL GTE.

4.2 *Monthly Leachate Addition*

Throughout 2021, leachate was introduced into the two remaining active recirculation trenches (LRT-2 & LRT-3). During active recirculation, flow rates ranged from 15 - 30 gpm, while accommodating condensate disposal from the PTL GTE.

Figure 4-1 below shows the leachate recirculation pumping structures utilized in 2021.

Figure 4-1 Leachate Recirculation Pumping Structure Locations for 2021

Below in Table 4-1 are monthly leachate addition totals of recirculation activities that occurred in 2021. All totalized flows reflect pumping flow measurements taken using flow meters located in the concrete manifold structure on top of the landfill. Due to limited staffing and a lower demand for additional gas at the PTL GTE, the entire volume of leachate approved in the 2021 Recirculation Plan was not applied. Only relatively light application volumes were introduced into the two active recirculation trenches (LRT-2 & LRT-3), to accommodate condensate disposal from the PTL GTE.

Table 4-1 Monthly Leachate Addition for 2021

	Pumping Structure					
Month	LRT-1	LRT-2	LRT-3	LRT-4	Well/GCT	Monthly Totals
January	0	0	18,533	0	0	18,533
February	0	0	12,718	0	0	12,718
March	0	0	15,947	0	0	15,947
April	0	0	12,883	0	0	12,883
May	0	0	7,597	0	0	7,597
June	0	0	738	0	0	738
July	0	1,676	12,456	0	0	14,132
August	0	2,310	0	0	0	2,310
September	0	0	7,393	0	0	7,393
October	0	0	3,308	0	0	3,308
November	0	0	1,722	0	0	1,722
December	0	0	0	0	0	0
Yearly Totals	0	3,986	93,295	0	0	
Yearly Grand Total		97,281				

** Leachate Recirculation Trench (LRT) / Gas Collection Trench (GCT)*

4.3 *Operational Issues*

Throughout 2021, PTL staff reported one operational issue with the Secure III Pump Station. At the end of September, the leachate collection pump failed after the wet end plugged with sand and grit. Once discovered the pump was removed from the sump and a replacement ordered. Due to limited part availability caused by Covid-19, the new pump could not be re-installed until the beginning of November. During that time, leachate collection levels in Secure III Pump Station were monitored daily to ensure liquid levels remained adequate for designed infrastructure. Due to dry state of the landfill at that time, the sump area of Secure III had no trouble storing the leachate. For the remainder of 2021, the system ran as intended.

4.4 *Inspections*

During 2021, various inspections were performed by PTL staff, ensuring compliance and the integrity of the landfill and recirculation system. While some routine settlement was observed, there were no obvious signs of erratic and unpredicted changes.
These inspections are listed below.

- Flows to structures were monitored and recorded using individual flow meters installed within the distribution structure.
- Moisture inspection ports were inspected weekly during leachate applications that lasted more than one day using a water level meter. Liquid levels were closely monitored, verifying no accumulation occurred within the trenches.
- Visual inspections of the landfill cover systems were performed weekly, during times of active recirculation, and again during routine well tuning. Inspections verified that no leaks, bulging, sliding, cracking, and or excessive settlement had occurred. During these inspections, PTL staff also verified that gas venting was not occurring around any recirculation trench access points.
- Daily totalized leachate flows for each site pump station were recorded and compared to pre-leachate application flows.
- Leachate quality was monitored in accordance with the Post-Closure Monitoring and Maintenance Plan and the City of Bangor's Industrial Wastewater Discharge Permit requirements. The sampling associated with the environmental monitoring plan was done tri-annually and the sampling associated with the discharge permit was done quarterly.
- Weekly inspections of exposed piping and components for leachate leaks, seeps, and overall condition were performed during overland recirculation activities. Drains in the distribution structure were also checked for functionality.
- Odor monitoring was conducted routinely in accordance with landfill site inspections and during well tuning activities.
- Leachate pump stations and facility wet-wells were inspected in accordance with PTL's quarterly landfill inspections. The criteria and procedures for these inspections are located within the PTL Post Closure Monitoring and Maintenance Plan.
- LFG flow, methane, and oxygen content were recorded at the GTE facility. Twice weekly H_2S readings were taken while the GTE facility remained operational.
- LFG composition readings were taken at extraction locations associated with, or adjacent to, recirculation areas. During this time, PTL staff tested for the

composition of Methane, Carbon Dioxide, Oxygen, and Balance Gas. LFG flow and temperature were also recorded.

- An annual comprehensive surface scan was completed to monitor fugitive LFG emissions through the cover. No discrepancies were found in 2021.

5.0 ANNUAL LEACHATE RECIRCULATION ASSESSMENT

5.1 *Phase VIII-C & Secure III Leachate Generation*

To evaluate the effects that the leachate recirculation has on the leachate flows, two pump stations were compared: (1) Phase VIII-C, and (2) Secure III, which collect leachate from the area overlain by the recirculation trenches. In Table 5-1, the 2021 total monthly leachate flows for these two locations were compared with those of 2010 (first year of closure, pre-recirculation) and 2020.

Table 5-1 Phase VIII-C & Secure III Leachate Collection Totals, 2010 & 2020 – 2021

Month	Phase VIII-C LC (gal)			Secure III LC (gal)		
	2010	2020	2021	2010	2020	2021
January	551,397	99,040	88,650	114,168	27,059	31,321
February	324,020	113,349	73,952	282,857	23,279	28,085
March	484,958	106,658	89,503	824,433	25,003	31,729
April	440,027	100,964	94,674	252,785	23,269	29,411
May	295,881	91,820	77,244	144,984	24,365	27,696
June	333,847	83,268	65,728	123,829	23,613	26,501
July	243,152	79,814	68,046	13,747	20,274	28,850
August	284,138	79,078	65,028	4	6,960	27,405
September	498,913	76,620	76,300	125,981	8,900	24,386
October	312,811	80,419	63,419	512,590	95,236	14
November	262,447	87,112	78,074	179,582	39,173	35,359
December	289,227	101,384	86,417	165,481	34,784	29,852
Total	4,320,818	1,099,526	927,035	2,740,441	351,915	320,609

When compared with 2010 totals, leachate flows in 2021 have decreased by 78.5% in the Phase VIII-C pump station, and 88.3% in the Secure III pump station. Both decreases are likely attributed to completing the final cover in 2010 and the reduced recirculation amounts within the last few years. In 2021, the data demonstrated a decrease in flow of 8.9% at the Secure III pump station and 15.7% at the Phase VIII-C pump station when

compared to 2020 totals. Low flows reported in October of 2021 are further explained in Section 4.3.

5.2 *Leachate Level Measurement on the Liner*

During 2021, PTL staff monitored the effects of the leachate recirculation by comparing leachate recirculation additions to the leachate flows into each pump station. Level transducers that were previously installed have been discontinued due to failure.

During periods of active leachate recirculation, monthly leachate flows at each pump station were tabulated alongside leachate recirculation rates. PTL staff monitored and reviewed leachate flows on a weekly basis to evaluate whether short circuiting was occurring. No suspicious trends or anomalies were observed while reviewing pump station and recirculation flows. Daily totals for 2021, reassured PTL staff that the leachate collection system was functioning properly. No evidence of increased head pressure or liquid level occurred on the liner in 2021.

In Table 5-2, monthly pump station flows totals are compared with the recirculation flows totals. These results, along with other visual inspections done during routine leachate system cleaning, point toward the proper function of the leachate collection system.

Table 5-2 Leachate Monthly Flows / Recirculation Mass Balance Worksheet for 2021

2021 Leachate Recirculation Mass Balance Worksheet						
Month	Secure III & Phase VIII		Phase VII		Phase VI	
	Combined Recirculated	Combined Flow	Recirculated	Flow	Recirculated	Flow
January	18,533	119,971	0	13,109	0	24,396
February	12,718	102,037	0	8,474	0	13,855
March	15,947	121,232	0	14,715	0	24,309
April	12,883	124,085	0	14,064	0	23,315
May	7,597	104,940	0	10,780	0	21,420
June	738	92,229	0	8,843	0	14,568
July	14,132	96,896	0	10,922	0	20,751
August	2,310	92,433	0	9,075	0	14,073
September	7,393	100,686	0	11,545	0	15,082
October	3,308	63,433	0	10,996	0	16,780
November	1,722	113,433	0	16,826	0	19,796
December	0	116,269	0	15,633	0	21,886

5.3 *Water Balance Evaluation*

In accordance with the Post-Closure Leachate Recirculation Plan, Section 3.2, a water balance evaluation was completed. Data was collected from all gas wells located in the leachate recirculation area of influence, then a water balance evaluation was completed using the following equation: *Waste Absorptive Capacity – Leachate Added to Date + Moisture Removed from Within LFG + Moisture Utilized in Methane Conversion – Reductions to address head on liner or other monitoring issues.* Table 5-3 below summarizes the water balance evaluation.

Table 5-3 Water Balance Evaluation, 2011 – 2021

Date	Starting Capacity	Leachate Added to the Trenches	Volume of Liquid Removed in Condensate	Water Consumed in Methane Generation	Annual Balance	Ending Leachate Recirculation Capacity
2011	36,000,000	3,259,025	11,759	30,694	3,216,572	32,783,428
2012	32,783,428	5,894,924	5,762	15,486	5,873,676	26,909,752
2013	26,909,752	3,517,962	25,642	59,029	3,381,832	23,476,461
2014	23,476,461	6,002,799	20,600	59,172	5,913,226	17,553,435
2015	17,553,435	2,975,127	17,849	38,603	2,918,675	14,634,760
2016	14,634,760	2,113,391	16,206	32,603	2,064,582	12,570,178
2017	12,570,178	881,189	16,834	32,586	831,769	11,738,409
2018	11,738,409	371,428	26,669	59,062	285,697	11,452,712
2019	11,452,712	355,488	14,028	32,941	308,520	11,144,192
2020	11,144,192	169,316	15,342	37,841	116,133	11,028,059
2021	11,028,059	97,281	1,170	2,376	93,735	10,934,324

**** All values are in gallons.***

The initial calculated capacity of the waste mass within the top landfill area where the four leachate recirculation trenches are located was 36,000,000 gallons. During 2021, 97,281 gallons of leachate was added into two recirculation trenches. After performing a water balance evaluation, in accordance with calculations presented in Attachment C of the Plan, the remaining capacity in the influence area of the four combined trenches at the end of 2021 was 10,934,324 gallons. Table 5-4 lists all gas wells that are in the influence area.

Table 5-4 Trench 1-4 Leachate Recirculation Influence Area Wells

Trench 1-4							
(Influence Area Wells)							
GW-8A	GW-8C	GW-8E	GW-36	GW-38	GW-42	GW-50	GW-114
GW-8B	GW-8D	GW-8G	GW-37	GW-41	GW-45	GW-53	GW-117

5.4 Assessment of Stability in Recirculation Areas

Throughout 2021, weekly visual inspections were performed within the recirculation areas to ensure the continued stability of PTL's waste mass. During these inspections, PTL staff walked and observed the landfill where leachate was added. Inspections ensured that no bulging, sliding, or cracking had occurred on or around the landfill cover system. Inspections also verified that no excessive settlement had occurred due to the leachate application. While some routine settlement was observed, there were no obvious signs of erratic and unpredicted changes.

For further assessment regarding the stability of the PTL, please refer to the 2021 Geotechnical Monitoring Report. No items of concern regarding recirculation were identified during 2021.

5.5 Impact Assessment of the LFG Quality at the GTE Facility

The intent of the recirculation program is to compensate for the reduction in the moisture content of the waste due to the installation of the final cover of the landfill, completed in 2010. The reduced moisture content of the waste has resulted in a decrease in the rate of waste mass stabilization and a reduction in the methane generation at the site. Knowing that this reduction has occurred, PTL's staff has utilized the Program to maximize energy extraction by increasing methane generation and quality.

Energy extracted from the influence area of the four recirculation trenches (above el. 310') was calculated and compared with energy extraction for the entire site for 2010 through 2021 as shown in Figure 5-1.

In 2021, PTL's declining gas trend continued, which began after the landfill's closure in 2010. The total energy extraction from the recirculation influence area decreased by 60.6% from 2020. In late January 2021, the PTL GTE facility was deemed no longer viable

and closed. The overall site wide energy extraction for 2021 was 78,877 MMBTUs, 11.9% of which came from the recirculation trench area.

A more complete summary of landfill gas generation and energy extraction is provided in the 2021 Annual Gas Monitoring Evaluation.

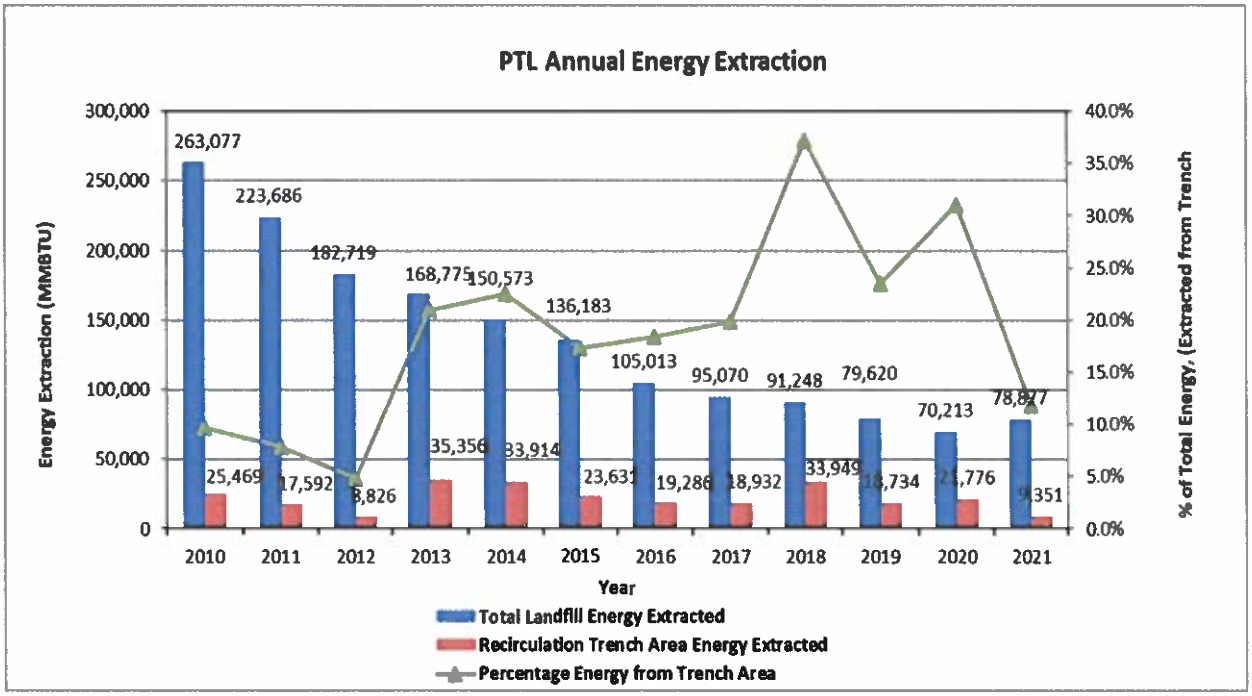

Figure 5-1 PTL Energy Extraction Comparison, 2010 – 2021

In addition to energy extraction, an evaluation of the H_2S concentrations at the PTL GTE facility was completed. As seen in Figure 5-2, H_2S levels at the PTL GTE facility fluctuated between 1,325 ppm and 1,475 ppm between January 1 – January 29, 2021, while the facility remained open.

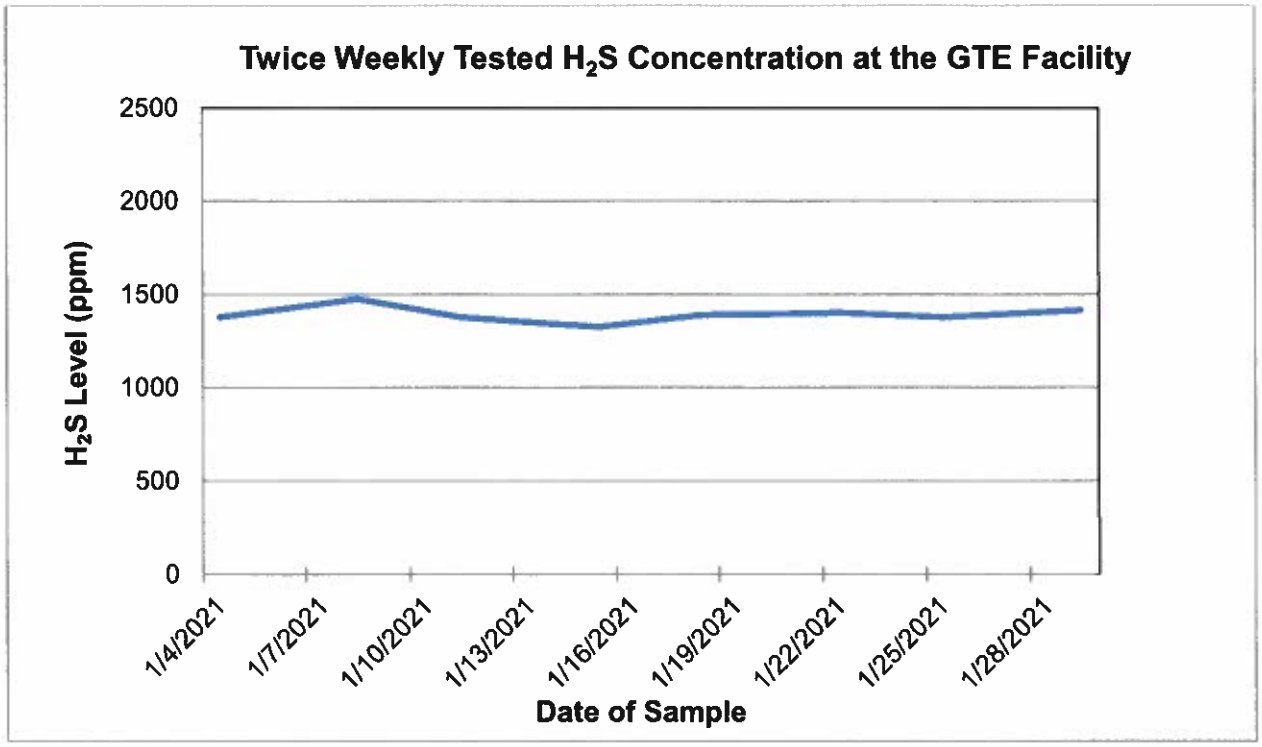

Figure 5-2 Twice Weekly Tested H_2S Concentration at the GTE Facility

After January 29th, PTL received a new minor source air license (A-850-71-E-R/A), which removed the facility's three engines from the license and no longer required H_2S treatment of landfill gas and twice weekly H_2S stain tube testing. In order to prove new air license compliance, PTL would continue to monitor LFG flow and would sample LFG quarterly for total reduced sulfur (TRS) compounds. Quarterly TRS sampling results are listed below in Table 5-5 to supplement H_2S level data for the remainder of 2021.

Table 5-5 PTL Quarterly TRS Sampling Results for 2021

2021 PTL Quarterly TRS Sampling Results	
Date	Result (PPM)
01-11-21	1,333
04-06-21	1,307
07-14-21	1,039
10-18-21	1,123

From January 1 – January 29, 2021, H_2S levels remained well within the licensed capacity of the facility's Thiopaq® treatment system. Beyond January 29, 2021, TRS levels have remained low, and PTL is complying with its new minor source air license.

6.0 PROPOSED PLANS FOR 2022 & BEYOND

Due to the permanent closure of the PTL GTE Facility on January 29, 2021, PTL no longer has a need to enhance gas production. The three engines were sold in June of 2021 and the rest of the plant equipment was dismantled throughout the remainder of the year.

In 2022 and beyond, PTL staff no longer plan to recirculate leachate. The PTL 2021 Post-Closure Leachate Recirculation Report will serve as the last report for the Program.

7.0 SUMMARY

In 2021, a total of 97,281 gallons of leachate was introduced into PTL's waste mass. During this time, all 97,281 gallons were pumped into the two remaining active recirculation trenches. Routine inspections were continually performed in accordance with the Plan, to ensure proper system operation. Due to limited staffing and a lower demand for additional gas at the PTL GTE, the entire volume of leachate approved in the 2021 Recirculation Plan was not applied.

Throughout 2021, PTL staff reported one operational issue. The issue involved a failed leachate collection pump in the Secure III Pump Station. Details are further discussed in Section 4.3. Overall, the system ran as intended throughout 2021.

During 2021, various inspections were performed by PTL staff, ensuring compliance and the integrity of the landfill and recirculation system. While some routine settlement was observed, there were no obvious signs of erratic and unpredicted changes.

Overall, leachate flows in 2021 remained relatively normal in the Phase VIII-C and Secure III pump stations. No direct correlation between leachate pumping totals and leachate application rates were found. No evidence indicated increased liquid level on the liner or short circuiting.

In 2021, PTL's declining gas trend continued, which began after the landfill's closure in 2010. The total energy extraction from the recirculation influence area decreased by 60.6% from 2020. In late January 2021, the PTL GTE facility was deemed no longer viable and closed. The overall site wide energy extraction for 2021 was 78,877 MMBTUs, 11.9% of which came from the recirculation trench area.

During 2021, H_2S levels at the PTL GTE facility fluctuated between 1,325 ppm and 1,475 ppm between January 1 – January 29, 2021. After January 29th, PTL received a new minor source air license (A-850-71-E-R/A), which removed the facilities three engines off the license and no longer required H_2S treatment of landfill gas and twice weekly H_2S stain tube testing. In order to prove new air license compliance, PTL would continue to monitor LFG flow and would sample LFG quarterly for total reduced sulfur (TRS) compounds. Quarterly TRS sampling results are listed in Table 5-5 to supplement H_2S level data for the remainder of 2021.

From January 1 – January 29, 2021, H_2S levels remained well within the licensed capacity of the facility's Thiopaq® treatment system. Beyond January 29, 2021, TRS levels have remained low, and PTL has remained in compliance of its new minor source air license.

Due to the permanent closure of the PTL GTE Facility on January 29, 2021, PTL no longer has a need to enhance gas production. In 2022 and beyond, PTL staff no longer plans to recirculate leachate. The PTL 2021 Post-Closure Leachate Recirculation Report will serve as the last report for the Program.

ATTACHMENT B

LEACHATE COLLECTION MAINTENANCE ACTIVITIES

2021 Pine Tree Landfill Leachate Maintenance and Repairs	
03/04/21	Removed extraction well EW-2 pump because it was plugged. A new wet end was ordered and installed when it arrived. (Reinstalled on 07-21-21)
03/24/21	Removed rain water, inspected and cleaned leachate force main manholes and pressure gauges.
04/03/21	Flow meter verification performed on Bangor pump station flow meter.
06/25/21	Removed rain water, inspected and cleaned leachate force main manholes and pressure gauges.
07/28/21	Removed rain water, inspected and cleaned leachate force main manholes and pressure gauges.
08/24/21	Cleaned Secure II and Perimeter Drain pumps, discharge lines, valves, and sumps.
09/13/21	Cleaned Secure I pump station.
09/16/21	Inspected the leachate tank and flushed both inlet and outlet lines.
09/20/21	Cleaned Secure III and Phase VIII leachate collection lines.
09/27/21	Began the disassemby and cleaning of the Secure III force main.
09/28/21	Cleaned the Secure III force main candy cane pipe and valves near the leachate tank. Replaced the leachate sampling line and associated valves.
09/29/21	Cleaned Secure III pump station leachate collection (LC) / leak detection (LD) pumps, piping, valves, and flow meters.
09/30/21	Finished cleaning Secure III force main. Removed the Secure III LC pump because it was plugged. A new wet end was ordered and installed when it arrived. (Reinstalled on 11-12-21)
10/01/21	Removed rain water, inspected and cleaned leachate force main manholes and pressure gauges.
11/08/21	Removed the spare Bangor pump station leachate pump. Inlet and outlet lines were capped off to allow for the pump to be rebuilt.
11/12/21	Cleaned Secure III LC sump and installed a new pump.

ATTACHMENT C

ANNUAL WATER QUALITY MONITORING REPORT

2021 WATER QUALITY REPORT
PINE TREE LANDFILL
HAMPDEN, MAINE

Prepared for

NEW ENGLAND WASTE SERVICES OF MAINE, INC.

April 2022

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2021 WATER QUALITY REPORT
PINE TREE LANDFILL
HAMPDEN, MAINE

1.0 INTRODUCTION

This report provides an overview of the 2021 environmental monitoring of the closed Pine Tree Landfill (PTL or "site") in Hampden, Maine. The facility is owned by New England Waste Services of Maine, Inc. (NEWSME). The site operated for 34 years between 1975 and 2009 for the disposal of municipal solid waste (MSW) and special wastes in four licensed landfills. Final closure of the site was completed over a three-year period with the construction of a composite final cover in three phases beginning in 2008. The final closure of the site was completed in 2010. As part of the final Maine Department of Environmental Protection (MEDEP) closure order MEDEP #S-001987-WN-HC-N, hereinafter referred to as the Department Closure Order, the MEDEP approved a post-closure Environmental Monitoring Plan (EMP)[1] prepared by Sevee & Maher Engineers, Inc. (SME) for the PTL on behalf of NEWSME. Post-closure monitoring began at the site in 2011. The post-closure EMP reflects the knowledge of site geologic and hydrogeologic conditions and the knowledge of influence of existing site facilities on site water quality developed during numerous site investigations and evaluations, as summarized in the site-wide closure plan.[2]

The post-closure EMP specified a 30-year post-closure monitoring period (i.e., 2011 through 2040) with a reduction in sampling frequency from triannual to biannual after the initial five years of post-closure sampling (i.e., 2011 through 2015). The reduction in sampling frequency from triannual to biannual, as well as several other modifications to the monitoring program, were approved by MEDEP in March 2016.[3]

The post-closure EMP specified a reduction in sampling frequency from biannual to annual for post-closure monitoring years 2021 through 2040. The reduction in sampling frequency from biannual to annual sampling was recommended in the 2020 Water Quality Report and approved by MEDEP in October 2021 with exception of continued biannual monitoring at six monitoring locations until water quality improvements can be demonstrated at those locations.[4,5] Since approval of the change in monitoring frequency occurred in late 2021, it will be initiated in 2022 and discussed in the 2022 Water Quality Report.

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[1] SME, 2011. Post-Closure Environmental Monitoring Plan, Pine Tree Landfill, Hampden, Maine, May 2011.
[2] SME, 2007. Site-Wide Closure Plan, Pine Tree Landfill, Hampden, Maine, March 2007.
[3] SME, 2011 (Revised 2016). Post-Closure Environmental Monitoring Plan, Pine Tree Landfill, Hampden, Maine, May 2011 (Revised March 2016).
[4] SME, 2021. 2020 Water Quality Report, Pinetree Landfill, Hampden, Maine. April 2021
[5] MEDEP, 2021. Memorandum with Subject: Pine Tree Landfill Hydrogeology Review of 2020 Water Quality Summary, dated October 15, 2021.

Figure 1-1 illustrates the site features, the post-closure EMP monitoring locations, and the areas of the four licensed landfills at the site (i.e., the Conventional Landfill and the Secure I, Secure II, and Secure III Landfills). The objectives of the post-closure EMP include:

- To routinely characterize groundwater, surface water, and leachate at the PTL during the post-closure period to monitor the performance of the landfill's final cover systems;
- To monitor the effectiveness of intermediate and long-term corrective actions that have been implemented at the PTL site to address leachate and landfill gas generated by the Conventional Landfill; and
- To evaluate the site's conformance with the threshold criteria established for the site groundwater over the post-closure period in order to demonstrate successful corrective action, as defined during the Department's review of the site-wide closure plan and included in the Department Closure Order. The water quality threshold criteria are:
    - Off-site groundwater quality:
        - Tested water quality parameters below applicable groundwater United States Environmental Protection Agency (U.S.EPA) Maximum Contaminant Levels (MCLs) and Maine Maximum Exposure Guidelines (MEGs),
        - The 95 percent upper confidence level for specific conductance at off-site private water supply wells below 400 micromhos per centimeter (µmhos/cm), and
        - Dissolved methane at off-site private water supply wells less than 700 micrograms per liter (µg/L).
    - On-site groundwater quality:
        - Specific conductance at on-site monitoring locations less than 500 µmhos/cm.
    - Off-site surface water quality:
        - Off-site surface water quality meets existing water quality classification standard.

2021 was the eleventh year of post-closure monitoring at the site in accordance with the post-closure EMP, which represents 37 percent of the 30-year post-closure monitoring period. The 2021 water quality generally indicates improvement during post-closure monitoring at the landfill; these improvements are supported by decreasing trends for multiple water quality parameters at multiple sampling locations and in various directions of groundwater flow away from the landfill. In the eleven years of post-closure monitoring, many of these improvements are attributed to the continued and enhanced corrective actions at the site (i.e., completion of closure and operation of the groundwater extraction system and landfill gas extraction system). The site is less than halfway through its 30-year post-closure monitoring period. While it is too soon to evaluate the ultimate effectiveness of closure in terms of achieving the post-closure threshold criteria given in the Department Closure Order, there are overall

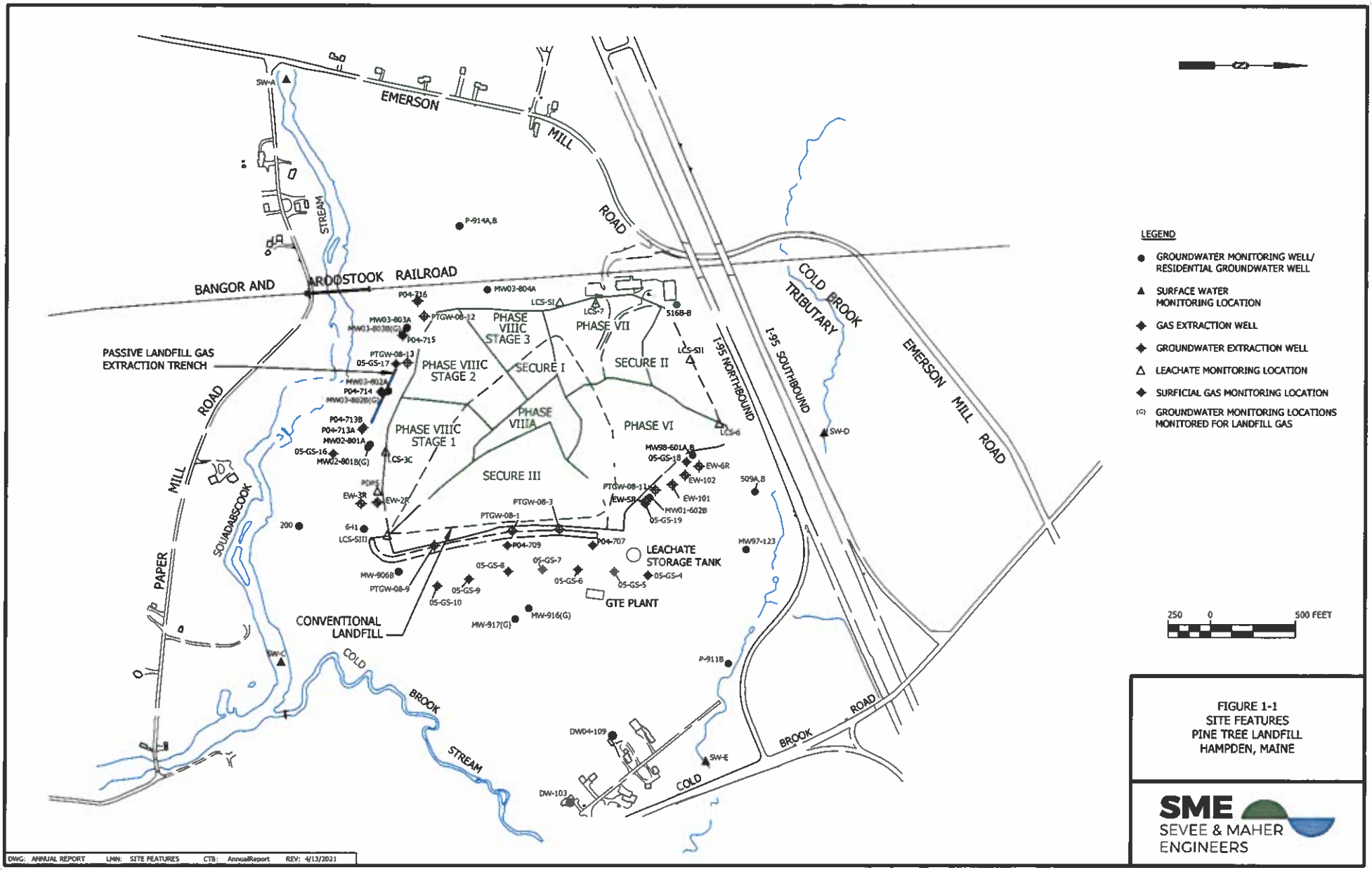

FIGURE 1-1
SITE FEATURES
PINE TREE LANDFILL
HAMPDEN, MAINE

trends toward improvements in groundwater quality in the eleven years of post-closure monitoring at the PTL. Several monitoring locations are either achieving or very close to achieving the threshold criteria. Additionally, multiple monitoring locations proximate to the Conventional Landfill indicate improvement to groundwater quality emanating from the Conventional Landfill.

Prior to final closure of the PTL (i.e., during 2010), only one of the 22 on-site groundwater monitoring wells met the on-site groundwater quality threshold criterion of specific conductance values less than 500 µmhos/cm during only one of the three annual monitoring events. During 2021, there were three on-site groundwater monitoring wells with specific conductance values less than 500 µmhos/cm during both the April 2021 and October 2021 monitoring events (i.e., MW01-602B, MW-906B, and 200). Monitoring well MW-916 had a specific conductance value less than 500 µmhos/cm during the October 2021 monitoring event. Monitoring locations MW03-802A, 509A, and 917 have also previously had one or more specific conductance values of less than 500 µmhos/cm during post-closure monitoring (i.e., since 2011), but had specific conductance values above 500 µmhos/cm during 2021.

Many of the on-site monitoring locations show signs of water quality improvement with respect to specific conductance value trends. Fifteen of the twenty-two on-site PTL monitoring locations have lower annual mean concentrations in 2021 than at the start of closure in 2008. Fifteen of the twenty-two on-site PTL monitoring locations have lower annual mean concentrations in 2021 than in 2020, with an average decrease of 108 µmhos/cm. In the seven wells that showed higher specific conductance in 2021 than 2020 the average increase was 66 µmhos/cm.

As discussed in Section 3.0, there is currently only one PTL groundwater monitoring location (P-914B) with a five-year statistically significant increasing trend (95 percent confidence level) for specific conductance and no locations with a three-year increasing trend. There are currently six PTL groundwater monitoring locations with three- and/or five-year statistically significant decreasing trends (95 percent confidence level) for specific conductance.

In general, the groundwater monitoring wells to the south, southeast, and east of the PTL continue to show lower specific conductance values compared to the start of closure in 2008, while groundwater monitoring wells to the southwest and west show an overall increase in specific conductance values since that time. Specific conductance values have decreased since the start of closure in 2008 at all of the northeast monitoring locations with the exception of MW98-601B; however, specific conductance values at MW98-601B have decreased by 14 percent since the start of post-closure monitoring in 2011. The annual average specific conductance value at the north monitoring location (516B-B) was somewhat higher in 2021 compared to the start of closure in 2008 but has generally decreased since 2018.

Decreasing specific conductance values for monitoring locations located proximate to the perimeter of the Conventional Landfill are of particular significance because they are indicative of improvement to groundwater quality emanating from the Conventional Landfill.

For the third consecutive year (i.e., in 2019 through 2021), DW04-109 has met all three of its off-site post-closure threshold criteria. Both off-site monitoring wells (DW-103 and DW04-109) had dissolved methane concentrations well below the threshold criterion of 700 µg/L in 2021. MW-916 and MW-917, which are located slightly beyond the site property boundaries, also met the off-site groundwater quality threshold criterion for dissolved methane in 2021.

The 2021 surface water data continues to show that there are no adverse effects from landfill operations on water quality in Souadabscook Stream or the Cold Brook Stream tributary. There were no Maine Freshwater Criterion Continuous Concentration (MFCCC) exceedances from surface water locations during 2021 water quality monitoring events for the parameters analyzed.

Substantial groundwater quality improvements with respect to dissolved methane concentrations have occurred since the closure of the PTL at both on-site and off-site groundwater monitoring locations. Dissolved methane concentrations provide an indication of the effectiveness of the landfill gas migration corrective actions on groundwater quality. In 2021, the methane concentrations reported at all eight on-site monitoring locations show substantial improvement to concentrations reported in 2008.

2.0 2021 SITE ACTIVITIES

This section gives a brief description of the 2021 PTL environmental monitoring activities, annual site precipitation, and the 2021 corrective action activities.

2.1 2021 Environmental Monitoring Activities

The 2021 environmental monitoring activities included two water quality sampling events that were completed by SME in April and October. In 2021, the post-closure water quality monitoring program included sampling groundwater at 22 on-site groundwater monitoring wells, on-site and off-site surface water at four monitoring locations, groundwater at two residential area wells, two landfill leachate locations, and the perimeter drain of the Conventional Landfill (i.e., PDPS). These post-closure monitoring locations are outlined in Table 3-1 in the post-closure EMP revised in March 2016. The frequency of monitoring and the components of the analytical program vary by monitoring location and are outlined in Table 3-2 and Table 3-3 in the post-closure EMP. After each monitoring event, the water quality data were forwarded to the MEDEP in its electronic data deliverable (EDD) format. The EMP also identifies sampling at 23 gas monitoring points around the landfill; samples were obtained at these locations by NEWSME in January 2021, May 2021, August 2021, and December 2021.

Supplemental sampling was completed during 2021 as recommended by SME and MEDEP at MW03-802B and MW03-803A to investigate increasing parameter concentrations in these wells.

The results of the 2021 environmental monitoring activities are discussed in Sections 3.0 through 3.4. Further sections of this report discuss: (1) the results of the leachate leak detection monitoring in 2021 (Section 4.0); (2) the data validation and laboratory quality control (Section 5.0); and (3) the results of the landfill perimeter gas monitoring in 2021 (Section 6.0).

2.2 2021 Precipitation

Based on National Climatic Data Center (NCDC) climatological data from the Bangor International Airport, the annual precipitation near the PTL was 40.85 inches during 2021. The 2021 annual precipitation was 0.86 inches below normal for the Bangor International Airport. Monthly precipitation totals ranged from a low of 0.97 inches in June 2021 to a maximum of 9.42 inches in September 2021.

2.3 2021 Groundwater Extraction Well and Perimeter Drain Activities

During 2021, NEWSME operated six groundwater extraction wells identified as EW-2R, EW-3R, EW-5R, EW-6R, EW-101, and EW-102. The locations of the extraction wells are shown on Figure 1-1. The purpose of operating the extraction wells is to capture groundwater outside of and downgradient of both the south and northeast edges of the Conventional Landfill. These areas are in the principal directions of

groundwater flow away from the landfills and, as a result, have historically been among the locations most impacted by leachate from the Conventional Landfill. In addition to the groundwater extraction wells, groundwater is pumped from the perimeter drain of the Conventional Landfill at the PDPS. The groundwater removed from the extraction wells and PDPS is collected in the on-site leachate storage tank and is either recirculated into the Secure III Landfill as part of the approved post-closure leachate recirculation program or is pumped via the Hermon sewer to the Bangor wastewater treatment plant. In 2021, the majority of the leachate produced was pumped to the Bangor wastewater treatment plant (8,974,578 gallons) and a small amount recirculated into the landfill (97,281 gallons).

Extraction wells EW-2R and EW-3R and the PDPS are used to intercept shallow groundwater outside of the south edge of the Conventional Landfill. As shown in Table 2-1, the total volume of water pumped from the south side of the Conventional Landfill at EW-2R, EW-3R, and PDPS in 2021 was approximately 4,807,168 gallons. For comparison, the total volume pumped from EW-2R, EW-3R, and the PDPS in 2020 was approximately 4,630,214 gallons.

TABLE 2-1

SOUTH EDGE EXTRACTION WELL PUMPING

South Edge Extraction Wells	Volume Pumped in 2021 (Gallons)
EW-2R	285,914
EW-3R	485,314
PDPS	4,035,940
TOTAL	**4,807,168**

More groundwater was pumped from the PDPS during 2021 (4,035,940 gallons) compared to 2020 (3,811,390 gallons), which is attributed to the higher precipitation total in 2021 (40.85 inches) compared to 2020 (37.60 inches). The combined pumping total of 771,228 gallons from EW-2R and EW-3R in 2021 is somewhat less than in 2020 (818,824 gallons). This is attributed to pump maintenance at EW-2R, in keeping with normal operation. The replacement part had a long lead time due to Covid and other factors and the pump was inactive during April, May, and June 2021. A similar delay occurred when ordering replacement parts for the Secure III pump station resulting in the pump not operating between September and November. The 2021 pumping totals from EW-2R and EW-3R, however, successfully maintained improved production over their inactivity in 2019 while off-line for repair and their relatively low combined pumping total of 265,776 gallons in 2018. As discussed in Section 3.1.2, greater extraction rates at EW-2R and EW-3R during closure and early into the post-closure period (e.g., an average of 1,203,394 gallons pumped per year from 2010 through 2013) compared to more recent years prior to 2020 (e.g., an average of 363,920 gallons pumped per year from 2014 through 2019) appears to correlate with groundwater quality trends at some south PTL groundwater monitoring locations during these periods. Optimizing groundwater extraction from EW-2R and EW-3R (as well as at the PDPS and other groundwater extraction wells at the PTL) during the remainder of closure will play a key role in achieving the PTL on-site threshold criteria.

Extraction wells EW-5R, EW-6R, EW-101, and EW-102 are used to intercept groundwater along the northeast corner of the site. EW-5R is screened in overburden sand located directly above the bedrock, while EW-6R, EW-101, and EW-102 are all screened across the sand and gravel and just into bedrock. The total volume of water pumped from the northeast side of the Conventional Landfill in 2021 was 2,805,918 gallons, as shown in Table 2-2. For comparison, the total volume pumped from the northeast side of the Conventional Landfill in 2020 was approximately 2,291,583 gallons.

TABLE 2-2

NORTHEAST CORNER EXTRACTION WELL PUMPING

Northeast Corner Extraction Wells	Volume Pumped in 2021 (Gallons)
EW-5R	880,347
EW-6R	625,491
EW-101	638,697
EW-102	661,383
TOTAL	**2,805,918**

The combined pumping total of 2,805,918 gallons from the northeast PTL extraction wells in 2021 successfully maintained improved production compared to more recent years prior to 2020 (e.g., an average of 1,345,182 gallons pumped per year from 2017 through 2019). As discussed in Section 3.1.1, greater extraction rates during closure and early into the post-closure period (e.g., an average of 2,800,227 gallons pumped per year from 2010 through 2016) compared to more recent years prior to 2020 appears to correlate with groundwater quality trends at some northeast PTL groundwater monitoring locations during these periods. Optimizing groundwater extraction from EW-5R, EW-6R, EW-101, and EW-102 (as well as at the PDPS and other groundwater extraction wells at the PTL) during the remainder of closure will play a key role in achieving the PTL on-site threshold criteria.

2.4 2021 Landfill and External Landfill Gas Extraction System Activities and Leachate Recirculation Program

Landfill gas is collected from both the Conventional Landfill and the Secure III Landfill using a combination of gas collection trenches, gas extraction wells, and gas collection connections to various leachate collection locations. Details of the landfill gas extraction are provided in the facility's Landfill Gas Monitoring Evaluation and are summarized below.

Extracted landfill gas was used at the landfill's gas-to-energy (LFGTE) plant from early 2008, when the LFGTE plant began operations, until January 2021, when the LFGTE plant engines were taken offline. The plant was decommissioned in 2021 following an inspection by the MEDEP Air Bureau.

NEWSME maintained a leachate recirculation program in the Secure III Landfill. The leachate was recirculated from either the on-site leachate storage tank or from two pump stations that collect condensate from the LFGTE facility. During 2021, a total of 97,281 gallons of condensate was recirculated into the Secure III facility. This is a reduction from the 169,316 gallons recirculated in 2020 since there is no longer need for additional gas at the LFGTE plant after January 2021. The entire volume of leachate approved in the 2021 Recirculation Plan was not applied. Further details of the leachate recirculation program are provided in the facility's Post-Closure Leachate Recirculation Annual Report.

In addition to the continued operation of the active gas collection system within the Conventional Landfill and the Secure III Landfill, NEWSME monitors, and operates when appropriate, the six external landfill gas extraction wells located outside of the east and southwest perimeter of the landfill. The east wells are installed on the east side of Secure III and the Conventional Landfill. The east external landfill gas extraction wells are identified as PTGW-08-1, PTGW-08-3, PTGW-08-9, and PTGW-08-11; their locations are shown on Figure 1-1. Gas extraction from these wells controls and limits gas migration from the landfill towards the east. Additionally, passive landfill gas extraction continued at the vents that were installed in a trench southwest of the landfill with a length of approximately 400 feet and a depth below ground surface ranging from approximately 8 to 14 feet. Two gas extraction wells, PTGW-08-12 and PTGW-08-13, are installed on the southwest side of the site directly adjacent to the Secure III Landfill boundary. Their locations are shown on Figure 1-1.

The external landfill gas extraction wells were monitored periodically throughout 2021 using a GEM2000 multi-gas meter. Gas has not been extracted from PTGW-08-3 during the post-closure monitoring period, including 2021, because of the lack of landfill gas at this location. A summary of the 2021 operations of the external landfill extraction wells is provided in Table 2-3.

TABLE 2-3

SUMMARY OF 2021 EXTERNAL LANDFILL GAS EXTRACTION WELL OPERATIONS

External Landfill Gas Extraction Wells	Average Methane Content (Percent by Volume)	Gas Volume Extracted (MSCF)	Methane Extracted During 2021 (Tons)	Average of Annual Total Methane Extracted Since 2011
PTGW-08-1	49.8	11.8	123	179
PTGW-08-9	2.8	1.8	1	<1
PTGW-08-11	27.7	1.5	9	19
PTGW-08-12	18.5	1.9	7	7
PTGW-08-13	12.7	2.4	6	4

Notes:
MSCF – million standard cubic feet

3.0 2021 WATER QUALITY EVALUATION

Post-closure monitoring began at the site in 2011. This section compares the 2021 water quality monitoring results to the post-closure threshold criteria given in the Department Closure Order and uses other approaches used historically to evaluate water quality at the site. These threshold criteria are intended to be achieved over the course of the entire 30-year post-closure period. This must be kept in mind when evaluating the 2021 water quality data, which is eleven years (i.e., 37 percent) into the closure period. The post-closure threshold criteria are shown below, along with descriptions of additional methods of post-closure monitoring data evaluation.

Post-Closure Threshold Criteria

The post-closure water quality threshold criteria are:

- Off-site groundwater quality:
  - Water quality parameters below applicable groundwater MCLs and MEGs;
  - The 95 percent upper confidence level for specific conductance at off-site private water supply wells below 400 µmhos/cm;[6] and
  - Dissolved methane at off-site private water supply wells less than 700 µg/L.
- On-site groundwater quality:
  - Specific conductance at on-site monitoring locations less than 500 µmhos/cm.
- Off-site surface water quality:
  - Off-site surface water quality meets existing water quality classification standard.

2021 and Historical Water Quality Data

Historical water quality data from 2008 through 2021 is included in Appendix A of this report for the sampling locations and parameters discussed in this report (i.e., closure and post-closure monitoring). A summary sheet for each monitoring location is provided in Appendix B which includes: (1) a description of the monitoring location; (2) a summary of the 2021 data for monitored parameters; (3) the historical range of values for monitored parameters; and (4) the mean and standard error of the mean for monitored parameters. For each off-site post-closure monitoring location and surface water monitoring location, the sheet also identifies the parameters that exceed applicable State of Maine water quality standards (i.e., MEGs, MCLs, and MFCCCs).

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[6] Since water quality improvements are anticipated for all monitoring locations over the full course of the 30-year post-closure monitoring period, the calculation of the 95 percent upper confidence level for specific conductance is made using the most recent data from the past five years. The five-year period is suitable for demonstrating whether or not a location has met the criterion for a sustained period.

Mann-Kendall Trend Analyses

Water quality trends are not part of the Department Closure Order threshold criteria; however, they are useful when evaluating changes in water quality over time. Mann-Kendall analyses were run for the site water quality data to screen for statistically significant changes in water quality parameter concentrations over time. The Mann-Kendall analysis was chosen because it is nonparametric and is not sensitive to outliers, missing data, and non-detects. The Mann-Kendall test was run for analyzed parameters, except for volatile organic compounds (VOCs), with a 0.05 Type-I error (i.e., 95 percent confidence level). For this evaluation, we consider a statistically significant trend to be one in which the potential Type-I error is less than 0.05.

Mann-Kendall trend analyses were run for the site data over two time periods: five years back from the end of 2021 and three years back from the end of 2021. The three-year timeframe is suitable for evaluating recent changes in water quality related to site operations (e.g., site corrective actions such as groundwater extraction wells and gas extraction wells). The five-year timeframe is suitable for clearly identifying ongoing water quality trends during post-closure monitoring. Trends identified over short periods may also be due to natural phenomena, such as drought or rainfall periods, that need to be considered when reviewing the monitoring data.

Discussion of trends in the water quality data is generally limited to increasing or decreasing trends of multiple parameters (three or more) at one sampling location. Since 2021 was the eleventh year of the 30-year post-closure period, the trend analyses are a quantitative means of assessing post-closure water quality trends over the early years (i.e., the first half) of the post-closure monitoring period. The trends must be considered in conjunction with the hydrogeologic setting of the site, on-site closure and post-closure activities, off-site activities, and the anticipated changes in site groundwater redox conditions as a result of the closure. It is also important to note that due to the nature of the monitoring program, where different locations have a different list of monitoring parameters and different parameters have different monitoring frequencies, the Mann-Kendall results cannot necessarily be compared by location. Rather, they should be considered individually by location.

The full results of Mann-Kendall analyses are included in Appendix C. The results are also discussed throughout Section 3.0 as they relate to relative positions of monitoring locations around the landfill.

Arsenic Concentrations

Site-wide arsenic concentrations were reported at notably lower values at most monitoring locations starting in October 2016. The presence of arsenic in groundwater at the PTL is attributed to a number of redox driven reactions that occur as the site adjusts to: (1) covering the landfill and cutting off recharge to the waste mass; and (2) the mixing of leachate emanating from under a closed, unlined landfill with groundwater. The presence of arsenic in groundwater surrounding the PTL is consistent with other

landfills that have been documented in literature.[7] The 2021 arsenic monitoring results are discussed throughout Section 3.0 as they relate to relative positions of monitoring locations around the landfill.

On-Site Post-Closure Specific Conductance and Dissolved Methane Data Summary

On-site groundwater quality changes are assessed here by comparison of 2021 specific conductance values and dissolved methane concentrations to values reported in 2008, when landfill closure activities began at the PTL, and values reported last year (i.e., from 2020) to assess the more recent water quality changes (see Table 3-1).

Changes in specific conductance values give a general sense of the changes in the total amount of dissolved constituents in the groundwater. Fifteen of the twenty-two on-site PTL monitoring locations have lower annual mean concentrations in 2021 than at the start of closure in 2008. Fifteen of the twenty-two on-site PTL monitoring locations have lower annual mean concentrations in 2021 than in 2020, with an average decrease of 108 µmhos/cm. In the seven wells that showed higher specific conductance in 2021 than 2020 the average increase was 66 µmhos/cm.

There is currently only one PTL groundwater monitoring location (P-914B) with a five-year statistically significant increasing trend (95 percent confidence level) for specific conductance and no locations with a three-year increasing trend. There are currently six PTL groundwater monitoring locations with three- and/or five-year statistically significant decreasing trends (95 percent confidence level) for specific conductance. Increased specific conductance levels at P-914B are likely due to cross-gradient groundwater flow from the Conventional Landfill, the effects of road salt and other upgradient site activities.

In general, the groundwater monitoring wells to the south, southeast, and east of the PTL continue to show lower specific conductance values compared to the start of closure in 2008, while groundwater monitoring wells to the southwest and west show an overall increase in specific conductance values since that time. Specific conductance values have decreased since the start of closure in 2008 at all of the northeast monitoring locations with the exception of MW98-601B; however, specific conductance values at MW98-601B have decreased by 14 percent since the start of post-closure monitoring in 2011. The annual average specific conductance value at the north monitoring location (516B-B) was somewhat higher in 2021 compared to the start of closure in 2008 but has generally decreased since 2018.

Dissolved methane concentrations provide an indication of the effectiveness of the landfill gas migration corrective actions on groundwater quality. In 2021, the methane concentrations reported at all eight on-site monitoring locations showed substantial improvement to concentrations reported in 2008.

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[7] e.g., Law-wai, 2001, *Mobilization and Transport of Arsenic by Landfill Leachates and Contamination of Groundwater at Winthrop, Maine*, Department of Earth and Environmental Engineering, Columbia University; and Harte, et. al, 2012, *Heterogeneous redox conditions, arsenic mobility, and groundwater flow in a fractured-rock aquifer near a waste repository site in New Hampshire, USA*. Hydrogeology Journal, DOI 10.1007/210040-012-0844-4.

TABLE 3-1

SUMMARY OF SPECIFIC CONDUCTANCE AND DISSOLVED METHANE RESULTS

Monitoring Location		Specific Conductance (µmhos/cm)				Dissolved Methane (µg/L)			
		2021 Range	2020 Range	2008 Mean	Historical Maximum*	October 2021	October 2020	2008 Mean	Historical Maximum*
Northeast Wells	MW97-123	1,085 – 1,119	932 – 1,425	1,171 [3]	1,834	NA			
	509A	739 – 917	820 – 1,091	965 (2007) [1]	1,234	NA			
	509B	698 – 853	829 – 1,093	969 (2007) [1]	1,249	Dissolved Methane Removed From Sampling Program in 2016			
	P-911B	**670** – 691	702 – 855	1,028 (2007) [1]	1,249	NA			
	MW98-601A	**1,672** – 1,973	1,789 – 1,882	2,202 [3]	4,140	NA			
	MW98-601B	1,434 – 1,510	1,117 – 1,497	1,338 [3]	2,840	NA			
	MW01-602B	368 – 424	459 – 631	3,057 [3]	5,770	NA			
South Wells	MW-906B	293 – 338	373 – 423	563 [3]	1,882	Dissolved Methane Removed From Sampling Program in 2016			
	200	**347** – 467	436 – 595	760 [3]	2,270	NA			
	641	675 – 849	912 – 983	1,890 [3]	6,520	28	510	1,193 [3]	3,290
	MW02-801A	1,896 – 1,942	1,932 – 2,378	4,330 [3]	6,490	630	270	1,863 [3]	4,300
	MW02-801B	1,688 – 1,906	667 – 2,626	2,191 [3]	5,850	NA			
	MW03-802A	604 – 823	842 – 845	852 [3]	1,168	**20 U**	260	4,720 [3]	9,010
	MW03-802B	845 – 1,132	804 – 1,242	1,003 [3]	1,587	590	2,200	3,230 [3]	6,740
	MW03-803A	1,680 – 1,699	1,600 – 1,764	1,037 [3]	1,867	**20**	58	1,353 [3]	3,570
	MW03-803B	1,352 – **1,613**	1,535 – 1,591	1,118 [3]	1,613	**64**	360	4,317 [3]	7,660
	MW03-804A	791 – 916	773 – 925	746 [3]	1,190	NA			
North Wells	516B-B	949 – 1,118	1,004 – 1,080	947 [3]	1,169	NA			
East Wells	MW-916	495 – 766	607 – 617	1,068 [3]	1,848	20 U	20 U	7,850 [3]	13,200
	MW-917	752 – 756	772 – 948	1,346 [3]	1,920	54	53	6,313 [3]	10,000
West Wells	P-914A	913 – 1,063	895 – 976	736 [3]	1,072	NA			
	P-914B	897 – **1,080**	884 – 963	617 [3]	1,080	NA			

Notes:
Numbers in superscript indicate the number of samples taken during the respective year; bold values represent new historical minimum or maximum values.
* Historical maximum values from sampling date ranges that vary by location; sampling date ranges for each well are included on the Water Quality Summary Reports included in Appendix B.
NA Not Applicable

Section 3.1 presents an evaluation of the on-site PTL groundwater quality during 2021. Further evaluation of water quality at the site is provided for: (1) groundwater quality at off-site residential area wells included in the site EMP (Section 3.2); (2) water quality at surface water monitoring locations around the PTL (Section 3.3); and (3) leachate monitoring locations (Section 3.4).

3.1 2021 On-Site Groundwater Quality Evaluation

Below are discussions of the 2021 PTL groundwater quality at monitoring wells, which are grouped based on their locations on-site with respect to the site's principal groundwater flow directions and/or landfill gas migration flow pathways. Monitoring results are compared to the site's post-closure threshold criteria established in the Department Closure Order.

3.1.1 Northeast On-Site Monitoring Locations

Monitoring locations northeast of the PTL are positioned in one of the two principal groundwater flow pathways away from the PTL. Groundwater quality northeast of the PTL is monitored by wells MW98-601A, MW98-601B, and MW01-602B, which are proximate to the northeast perimeter of the landfill; and by MW97-123, 509A, 509B, and P-911B, which are more distant from the landfill. Monitoring locations 509A, P-911B, MW98-601A, MW98-601B, and MW01-602B are monitored for field parameters, while MW97-123 and 509B are monitored for field parameters and sampled for a broader list of detection monitoring parameters. Groundwater quality data from northeast monitoring locations have historically exhibited influence from Conventional Landfill leachate and gas migration and site operations related to the secure landfills.

Corrective Activities

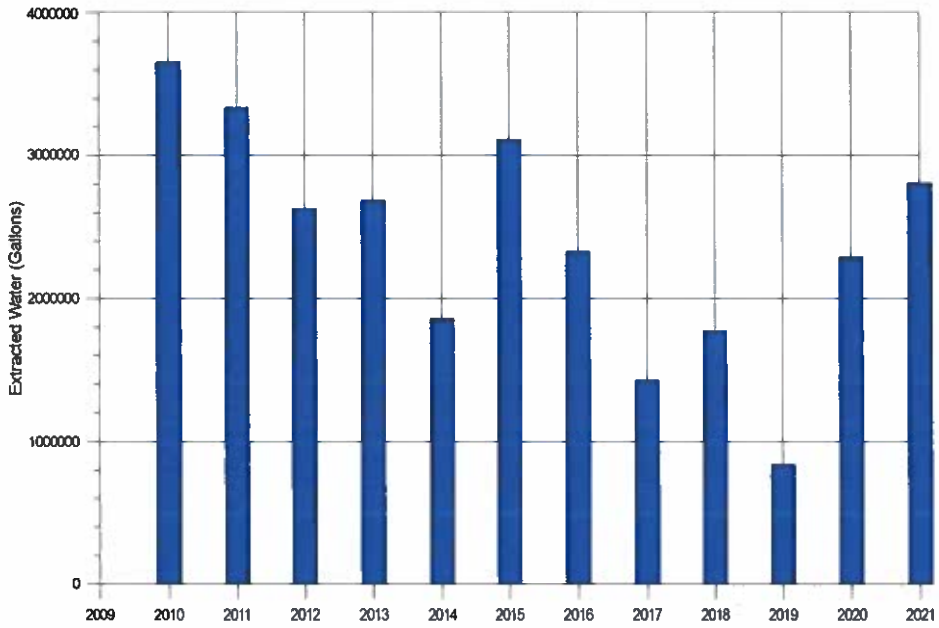
Corrective activities northeast of the landfill currently include groundwater extraction from four wells (EW-5R, EW-6R, EW-101, and EW-102) proximate to the perimeter of the Conventional Landfill and gas extraction from well PTGW-08-11, located outside of the Conventional Landfill. About 2,805,918 gallons of water were extracted from the northeast groundwater extraction wells in 2021 and about 9 tons of methane are estimated to have been removed from PTGW-08-11 in 2021.

Total annual groundwater extraction from EW-5R, EW-6R, EW-101, and EW-102, since the first full year that all four of these wells operated together in 2010, is shown on Figure 3-1. The combined pumping total of 2,805,918 gallons from the northeast PTL extraction wells in 2021 successfully maintained improved production compared to more recent years prior to 2020 (e.g., an average of 1,345,182 gallons pumped per year from 2017 through 2019). Greater extraction rates during closure and early into the post-closure period (e.g., an average of 2,800,227 gallons pumped per year from 2010 through 2016) compared to more recent years prior to 2020 appears to correlate with groundwater quality trends at some northeast PTL groundwater monitoring locations during these periods. Optimizing groundwater extraction from EW-5R, EW-6R, EW-101, and EW-102 (as well as at the PDPS and other groundwater

extraction wells at the PTL) during the remainder of closure will play a key role in achieving the PTL on-site threshold criteria.

FIGURE 3-1

GROUNDWATER PUMPED FROM NORTHEAST EXTRACTION WELLS EW-5R, EW-6R, EW-101, AND EW-102



Specific Conductance

Table 3-1 provides a relative assessment of specific conductance values for the northeast monitoring locations during 2021 compared to historical data from the previous year, at the start of landfill closure activities (i.e., 2008), and the historical maximum detection results at each well. Mean annual specific conductance values were lower at groundwater monitoring locations during 2021 than at the start of closure in 2008 by 87 percent at MW01-602B, by 34 percent at P-911B, by 20 percent at 509B, by 17 percent at MW98-601A, by 14 percent at 509A, and by 6 percent at MW97-123.[8]

The 2021 specific conductance values at MW98-601B increased by 10 percent compared to the start of closure in 2008 but have decreased by 14 percent since the start of post-closure monitoring in 2011. Similarly, while the mean annual specific conductance value was lower at MW97-123 during 2021 than at the start of closure in 2008 by only 6 percent, it has decreased by 38 percent since the start of post-closure monitoring in 2011.

[8] Note that monitoring at locations 509A, 509B, and P-911B began in 2010 with one monitoring event in August 2010. The percent change at those locations are calculated from 2010 to 2021.

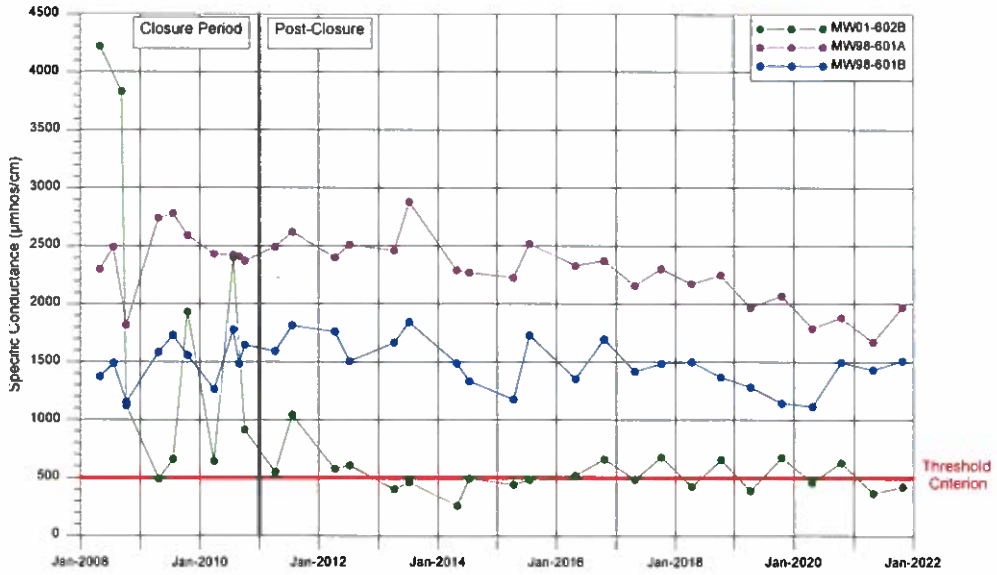
The specific conductance values measured at P-911B during the October 2021 monitoring event (670 µmhos/cm) and MW98-601A during the April 2021 monitoring event (1,672 µmhos/cm) were new historical minimum values. The remaining specific conductance values measured at the northeast monitoring locations during 2021 were within their respective historical ranges.

The post-closure threshold value for specific conductance in on-site groundwater is 500 µmhos/cm. At northeast on-site groundwater monitoring locations, this threshold was met at MW01-602B both in April 2021 (368 µmhos/cm) and October 2021 (424 µmhos/cm). The specific conductance values at the rest of the on-site northeast monitoring locations during 2021 were over the on-site post-closure threshold value of 500 µmhos/cm.

Specific conductance values since the start of closure in 2008 at the monitoring locations proximate to the northeast perimeter of the Conventional Landfill are shown on Figure 3-2.

FIGURE 3-2

SPECIFIC CONDUCTANCE
NORTHEAST ON-SITE MONITORING LOCATIONS (LANDFILL PERIMETER)



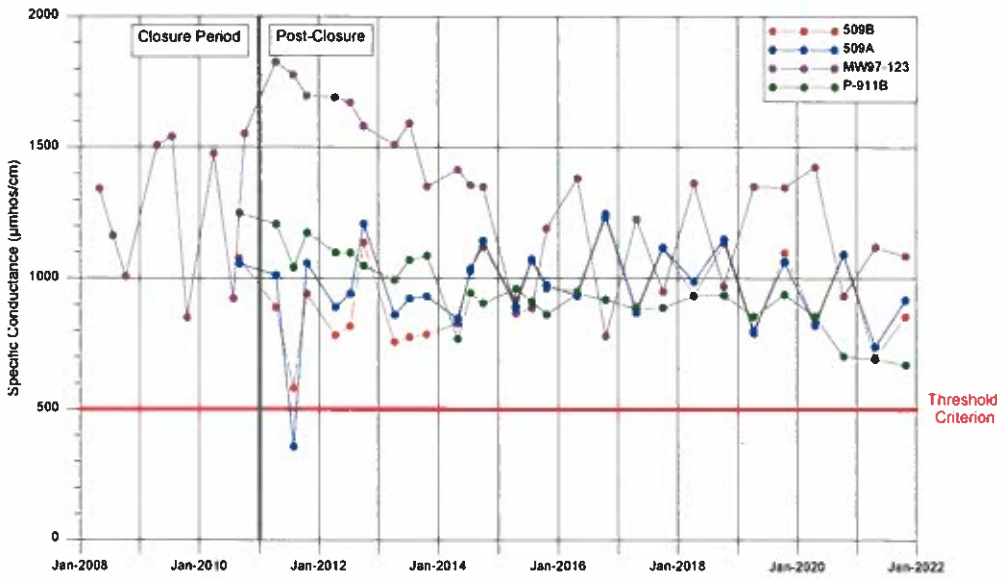
Specific conductance values at MW01-602B, which is located in close proximity to the northeast perimeter of the Conventional Landfill and extraction well EW-5R, have been stable and intermittently below the on-site threshold value of 500 µmhos/cm from 2013 through 2021. Visual review of the specific conductance values at MW98-601A shows that they are gradually decreasing, which is supported by statistically significant decreasing trends (95 percent confidence level) over the past three years and five years. Visual review of specific conductance values at MW98-601B show an overall gradual decrease since

the start of post-closure monitoring in 2011 but with a notable rebound in the fall of 2020 and during 2021. The decreases in specific conductance values at MW98-601A and MW98-601B are of particular significance because they are located between the Conventional Landfill and EW-6 and are indicative of improvement to groundwater quality emanating from the Conventional Landfill.

Specific conductance values since the start of closure in 2008 at monitoring locations further downgradient from the northeast perimeter of the Conventional Landfill (i.e., at MW97-123, 509A, 509B, and P-911B) are shown on Figure 3-3. Specific conductance values at these locations do not have statistically significant increasing or decreasing trends (95 percent confidence level) over the past three or five years.

FIGURE 3-3

SPECIFIC CONDUCTANCE
NORTHEAST ON-SITE MONITORING LOCATIONS (DISTANT FROM LANDFILL)



Specific conductance values at monitoring locations 509A and 509B have been rather stable during the first eleven years of post-closure monitoring, but visually show an overall decrease since the fall of 2016. Water quality at 509A and 509B may be influenced by the presence of Interstate 95 and other upgradient site activity in close proximity to these wells as well as by the landfill, which needs to be considered when reviewing the water quality data.

Specific conductance values at MW97-123 generally decreased during the first few years of post-closure monitoring (i.e., 2011 through 2014), but these decreases have mostly ceased since that time. Similarly, specific conductance value decreases at P-911B during the first few years of post-closure monitoring (i.e., 2011 through 2014) were followed by rather stable values through 2018. Specific conductance values have

since resumed decreasing at P-911B, with a new historical minimum value of 670 µmhos/cm in October 2021. These trends correlate with the generally declining total volume of groundwater extracted from the four wells located proximate to the northeast perimeter of the Conventional Landfill during post-closure monitoring through 2019 (see Figure 3-1). The 2021 annual mean specific conductance values at MW97-123 and P-911B have decreased since the start of post-closure monitoring (i.e., in 2011) by 38 percent and 40 percent, respectively.

The combined 2021 total groundwater extraction flow for northeast extraction wells, 2,805,918 gallons, was the greatest pumped from these locations since a comparable combined extraction flow of 3,112,039 gallons was pumped in 2015. Ongoing optimization of groundwater extraction from northeast extraction wells EW-5R, EW-6R, EW-101, and EW-102 will serve to both: (1) accelerate capture of the finite influences on water quality from the northeast side of the Conventional Landfill; (2) serve as a hydraulic barrier between the Conventional Landfill and groundwater further downgradient from it (e.g., groundwater monitoring at MW97-123, 509A, 509B, and P-911B); and (3) improve groundwater quality at the northeast groundwater monitoring locations and aid in achieving the PTL on-site threshold criteria at those locations.

Trend Analysis

A summary of the results of the statistically significant increasing and decreasing trends (95 percent confidence level) identified by the Mann-Kendall analyses is presented in Table 3-2 for northeast monitoring locations. The full results of the Mann-Kendall analyses are included in Appendix C.

The only statistically significant trend (95 percent confidence level) for specific conductance at northeast monitoring locations were for three-year and five-year decreasing trends at MW98-601A.

TABLE 3-2

SUMMARY OF MANN-KENDALL ANALYSES AT NORTHEAST MONITORING WELLS

Monitoring Location	Decreasing Trends						Increasing Trends					
	3-Year			5-Year			3-Year			5-Year		
	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane
MW97-123	No	No	NS	No	No	NS	No	No	NS	No	No	NS
509A	-	No	NS	-	No	NS	-	No	NS	-	No	NS
509B	No	No	NS	Yes (4) manganese, bicarbonate, Eh, sodium	No	NS	No	No	NS	No	No	NS
P-911B	-	No	NS	-	No	NS	-	No	NS	-	No	NS
MW98-601A	-	Yes	NS	-	Yes	NS	-	No	NS	-	No	NS
MW98-601B	-	No	NS	-	No	NS	-	No	NS	-	No	NS
MW01-602B	-	No	NS	-	No	NS	-	No	NS	-	No	NS

Notes:
1 Number of parameters with trend shown in parenthesis for analyses with three or more trends (95 percent confidence level). Locations monitored for field parameters only are not assessed for multiple (three or more) parameters.

NS – parameter not analyzed for a specific location
I – insufficient sample data points for analyses

Detection Monitoring Parameters

MW97-123 and 509B are monitored for a broad list of detection monitoring parameters. Monitoring locations 509A, P-911B, MW98-601A, MW98-601B, and MW01-602B are monitored for field parameters only. The results of 2021 detection monitoring at MW97-123 and 509B are summarized in Appendix B and are discussed below.

There are no parameters with statistically significant increasing or decreasing trends (95 percent confidence level) at monitoring location MW97-123 over the past three years and five years. Many detection monitoring parameter values at MW97-123 in 2021 remain lower compared to those at the start of post-closure monitoring in 2011. Parameters with overall lower annual mean values in 2021 than in 2011 at MW97-123 include specific conductance (38 percent decrease), arsenic (an approximate 86 percent decrease), calcium (27 percent decrease), sodium (10 percent decrease), total dissolved solids (25 percent decrease), magnesium (27 percent decrease), manganese (32 percent decrease), potassium (14 percent decrease), sulfate (56 percent decrease), bicarbonate (13 percent decrease), organic carbon (22 percent decrease), and chloride (37 percent decrease).

Multiple detection monitoring parameters at monitoring location 509B generally had increasing values over the first few years of post-closure monitoring; however, these trends have begun to reverse since about 2015 to 2016. There are currently four parameters (manganese, bicarbonate, Eh, and sodium) that

have statistically significant decreasing trends (95 percent confidence level) over the past five years at monitoring location 509B. There are not multiple parameters (i.e., three or more) with statistically significant increasing trends (95 percent confidence level) at monitoring location 509B over the past three-year and five-year periods. Several parameters have now begun to have overall lower annual mean values in 2021 than at the start of post-closure monitoring in 2011 at monitoring location 509B, including specific conductance (3 percent decrease), calcium (6 percent decrease), sodium (3 percent decrease), total dissolved solids (8 percent decrease), potassium (14 percent decrease), and bicarbonate (5 percent decrease). Sulfate and arsenic at 509B have had greater concentration decreases of 79 percent and 76 percent, respectively, since 2011.

Arsenic

At the northeast on-site monitoring locations, arsenic concentrations are measured twice annually at monitoring locations 509B and MW97-123. Arsenic concentrations detected at these monitoring locations since October 2016 have generally been considerably lower than the arsenic concentrations detected in and prior to April 2016. A summary of 2021 arsenic concentrations at northeast on-site monitoring locations is provided in Table 3-3. These monitoring results are consistent with the generally site-wide lower arsenic values observed since October 2016, as discussed earlier in Section 3.0.

TABLE 3-3

ARSENIC CONCENTRATIONS AT NORTHEAST ON-SITE MONITORING LOCATIONS

Monitoring Well	Concentration (mg/L)		
	April 2021	October 2021	2016 Annual Maximum
509B	0.006	0.005	0.063
MW97-123	0.005 U	0.005 U	0.078

Notes:
U = not detected above indicated laboratory reporting limit

3.1.2 South On-Site Monitoring Locations

Monitoring locations south (i.e., southeast, south, and southwest) of the PTL are positioned in one of the two principal groundwater flow pathways away from the landfill. Groundwater quality south of the landfill is monitored by wells MW-906B, 641, and 200 to the southeast; MW02-801A, MW02-801B, MW03-802A, and MW03-802B directly south of the landfill; and MW03-803A, MW03-803B, and MW03-804A southwest of the landfill. During the post-closure period, monitoring locations MW02-801B and MW03-804A are monitored only for field parameters and monitoring locations MW03-802B and MW03-803A are monitored only for field parameters and dissolved methane. The remaining wells are tested for a broader list of detection monitoring parameters.

Supplemental sampling parameters were also completed during 2021 as part of an investigation recommended by SME and MEDEP at MW03-802B and MW03-803A. These wells exhibited increases for

multiple parameters prior to and during the post-closure monitoring program. This was the sixth consecutive year of sampling for supplemental parameters at these locations. A discussion of the results of the supplemental sampling at MW03-802B and MW03-803A is provided later in this section. While some improvements to the water quality trends at these wells have been observed in recent years, continued supplemental sampling in 2022 is recommended for these well.

Corrective Actions

Corrective actions south of the landfill currently include groundwater extraction and landfill gas extraction. Groundwater quality data from wells south of the landfill have historically exhibited influence from Conventional Landfill leachate and landfill gas migration and site operations related to the secure landfills. Locations of corrective activities associated with the wells south of the landfills include: (1) the perimeter drain, which collects groundwater at the toe of the Conventional Landfill; (2) two groundwater extraction wells (i.e., EW-2R and EW-3R) that are operated proximate to wells located south and southeast of the Secure III Landfill; and (3) the passive landfill gas extraction trench and two landfill gas extractions wells (i.e., PTGW-08-12 and PTGW-08-13) proximate to the monitoring wells located south and southwest of the Secure III Landfill.

The south/southwest side of the landfill has been one of the principal directions of landfill gas migration from the Conventional Landfill. NEWSME monitors and operates the two perimeter extraction wells, PTGW-08-12 and PTGW-08-13, on the southwest side of the landfill. Additionally, passive landfill gas extraction continues at the vents that were installed in a trench southwest of the landfill. As shown on Table 3-1, dissolved methane concentrations in groundwater have substantially improved at the dissolved methane sampling locations south of the landfill (i.e., 641, MW02-801A, MW03-802A, MW03-802B, MW03-803A, and MW03-803B). The decreases in dissolved methane concentrations have resulted in a statistically significant decreasing trend (95 percent confidence level) for the past five years at monitoring location MW02-801A. Mean annual dissolved methane concentrations in 2021 have decreased since the start of closure activities at the PTL in 2008 by approximately 98 percent at monitoring location 641, 66 percent at MW02-801A, more than 99 percent at MW03-802A, 82 percent at MW03-802B, 99 percent at MW03-803A, and 99 percent at MW03-803B. These decreasing dissolved methane concentrations are likely attributed to:

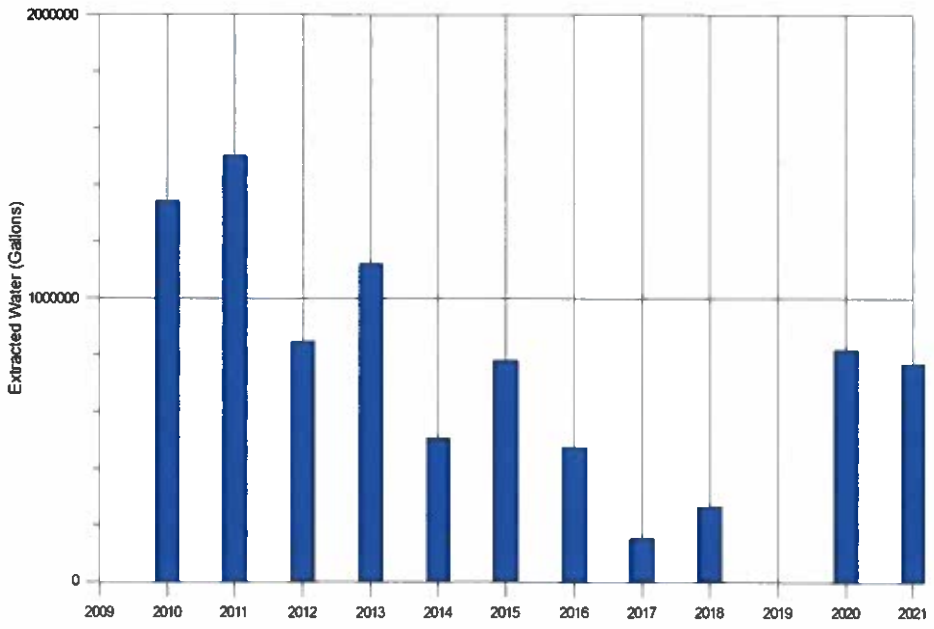
1. The overall decrease in methane generated by the Conventional Landfill, as observed in a general site-wide trend of decreasing methane concentrations detected at the various monitoring points (see Section 6.0);
2. The removal of methane from the passive landfill gas extraction trench; and
3. The removal of methane from gas extraction wells PTGW-08-12 (7 tons of methane removed during 2021) and PTGW-08-13 (6 tons of methane removed during 2021).

Corrective activities south of the landfill also include groundwater extraction from the PDPS and from two wells (EW-2R and EW-3R) proximate to the perimeter of the Conventional Landfill. Approximately 4,035,940 gallons of water were extracted from the PDPS in 2021. Approximately 771,228 gallons of water were extracted from the south groundwater extraction wells in 2021.

Total annual groundwater extraction from EW-2R and EW-3R is shown on Figure 3-4, with data since the first full year that these two wells operated together in 2010. The 2021 pumping totals from EW-2R and EW-3R have successfully maintained improved production over their inactivity in 2019 due to repair and their relatively low combined pumping total of 265,776 gallons in 2018. Greater extraction rates at EW-2R and EW-3R during closure and early into the post-closure period (e.g., an average of 1,203,394 gallons pumped per year from 2010 through 2013) compared to more recent years prior to 2020 (e.g., an average of 363,920 gallons pumped per year from 2014 through 2019) appears to correlate with groundwater quality trends at some south PTL groundwater monitoring locations during these periods. Optimizing groundwater extraction from EW-2R and EW-3R (as well as at the PDPS and other groundwater extraction wells at the PTL) during the remainder of closure will play a key role in achieving the PTL on-site threshold criteria.

FIGURE 3-4

GROUNDWATER PUMPED FROM SOUTH EXTRACTION WELLS EW-2R AND EW-3R



Specific Conductance

Table 3-1 provides a relative assessment of specific conductance values for the south monitoring locations during 2021 compared to historical data from the previous year, at the start of landfill closure activities (i.e., 2008), and the historical maximum detection results at each well. Seven of the ten south monitoring locations had 2021 mean specific conductance values that were lower than the mean values at the start of landfill closure activities in 2008. It is notable that the improvements are observed at monitoring wells located southeast and directly south of the PTL (i.e., MW-906B, 200, 641, MW02-801A, MW02-801B, MW03-802A, and MW03-802B), which are located close to extraction wells EW-2R and EW-3R. Mean annual specific conductance values were lower at groundwater monitoring locations during 2021 than at the start of closure in 2008 by 44 percent at MW-906B, by 46 percent at 200, by 60 percent at 641, by 56 percent at MW02-801A, by 18 percent at MW02-801B, by 16 percent at MW02-802A, and by 1 percent at MW02-802B.

The increases in specific conductance values since 2008 have occurred at monitoring locations southwest of the PTL (i.e., MW03-803A, MW03-803B, and MW03-804A), farther from extraction locations. The mean specific conductance value was lower at MW03-803B during 2021 compared to 2020 (5 percent decrease). The mean specific conductance values at southwest monitoring wells MW03-803A and MW03-804A rose from 2020 to 2021, but only by less than one percent. These results indicate relatively stable specific conductance values at these locations from 2020 to 2021.

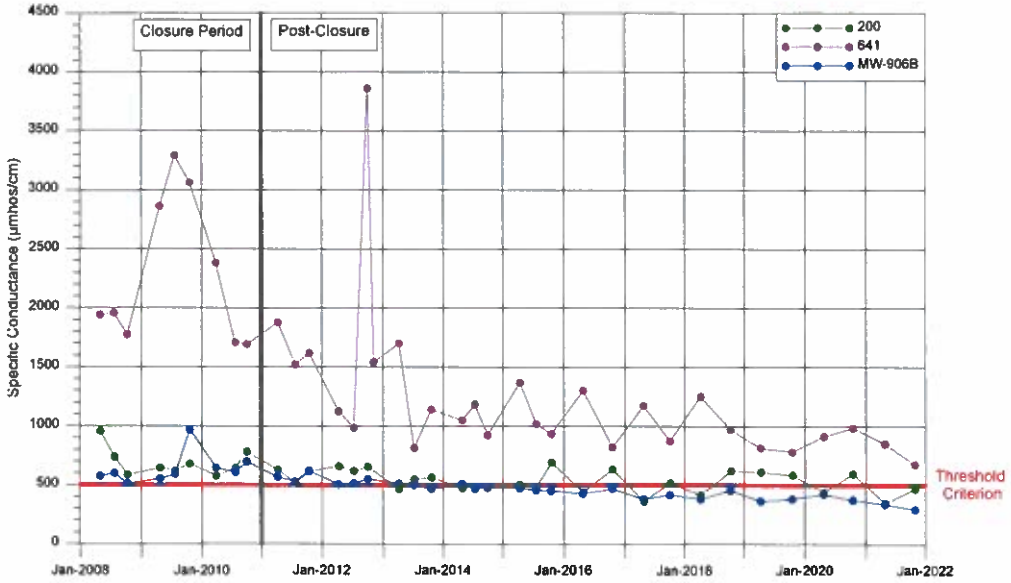
The specific conductance value measured at monitoring location 200 during the April 2021 monitoring event (347 µmhos/cm) was a new historical minimum value. The specific conductance value measured at MW03-803B during the October 2021 monitoring event (1,613 µmhos/cm) was a new historical maximum value. The remaining specific conductance values measured at the south monitoring locations during 2021 were within their respective historical ranges.

The post-closure threshold value for specific conductance in on-site groundwater is 500 µmhos/cm. At south on-site groundwater monitoring locations, this threshold was met at: (1) MW-906B in April 2021 (338 µmhos/cm) and October 2021 (293 µmhos/cm); and (2) monitoring location 200 in April 2021 (347 µmhos/cm) and October 2021 (467 µmhos/cm). The specific conductance values at the rest of the on-site south monitoring locations were over the on-site post-closure threshold value during 2021.

Specific conductance values since the start of closure in 2008 at the monitoring locations proximate to the southeast perimeter of the Conventional Landfill are shown on Figure 3-5.

FIGURE 3-5

SPECIFIC CONDUCTANCE
SOUTH ON-SITE MONITORING LOCATIONS (SOUTHEAST LOCATIONS)



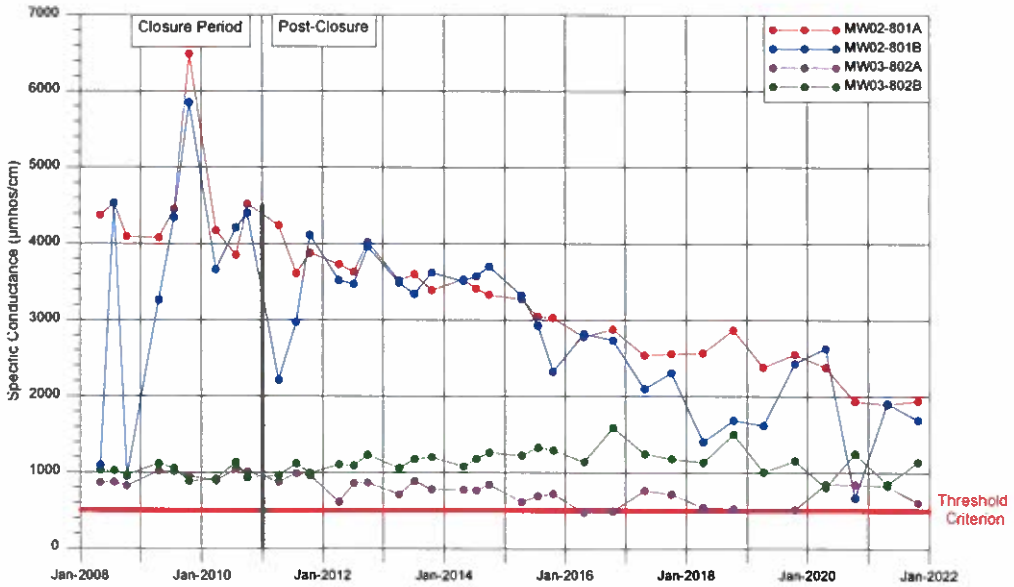
The specific conductance values at MW-906B have been under the threshold value for specific conductance in on-site groundwater since July 2014. During the post-closure monitoring period, the specific conductance values at monitoring location 200 have periodically been under the threshold value for specific conductance in on-site groundwater since 2013.

Specific conductance values at monitoring location 641 remain above the post-closure threshold of 500 µmhos/cm. Specific conductance values have generally declined during post-closure monitoring at monitoring location 641. Monitoring location 641 is in proximity to south extraction wells EW-2R and EW-3R (see Figure 1-1). The greater specific conductance values at monitoring location 641 in 2020 compared to 2019 are likely associated with the inactivity of EW-2R and EW-3R during 2019 and through late March 2020. Extraction wells EW-2R and EW-3R resumed operation in late March 2020 and pumped 818,824 gallons through December 2020 and 771,228 gallons during 2021. Specific conductance values have resumed decreasing at monitoring location 641 with the returned operation of the south extraction wells.

Specific conductance values since the start of closure in 2008 at the monitoring locations more directly south of the perimeter of the Conventional Landfill are shown on Figure 3-6.

FIGURE 3-6

SPECIFIC CONDUCTANCE
SOUTH ON-SITE MONITORING LOCATIONS (DIRECTLY SOUTH LOCATIONS)



Monitoring locations MW02-801A and MW02-801B historically have had the highest specific conductance values at the PTL, but they have shown significant and generally steady decreases over the first eleven years of post-closure monitoring. Monitoring locations MW-02-801A and MW02-801B are proximate to south extraction wells EW-2R and EW-3R (see Figure 1-1). Both MW02-801B and the south extraction wells are screened in the shallow overburden and review of Figure 3-6 shows a correlation between the specific conductance trend from 2018 through 2020 at MW02-801B and the inactivity of EW-2R and EW-3R during 2019 and through late March 2020. The resumed operation of extraction wells EW-2R and EW-3R in late March 2020 has resulted in the resumed trajectory of specific conductance decreases at MW02-801B.

It is significant that the south extraction wells do not serve as a cutoff between the Conventional Landfill and MW02-801A and MW02-801B (located west of these extraction locations). The groundwater sampled from MW02-801A and MW02-801B emanates from the south side of the Conventional Landfill and improving groundwater quality at these monitoring locations is indicative of improvement to groundwater quality emanating from the south side of the Conventional Landfill. Future optimization of groundwater extraction from EW-2R and EW-3R will serve to both: (1) accelerate capture of the finite influences on water quality from the south side of the Conventional Landfill to further improve water quality in downgradient areas; and (2) serve as a hydraulic barrier between the Conventional Landfill and groundwater further downgradient from it (e.g., groundwater at monitoring location 200).

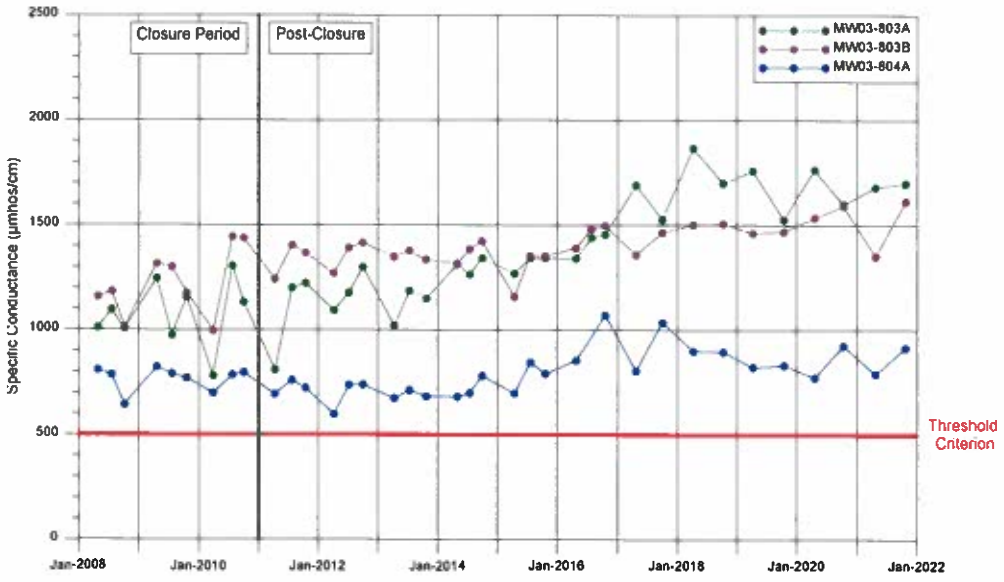
At monitoring location MW03-802A, specific conductance values have generally decreased during post-closure monitoring. The mean of specific conductance values measured during 2021 at MW03-802A (714 µmhos/cm) is lower than the 2011 mean specific conductance value of 941 µmhos/cm at the start of post-closure monitoring.

At MW03-802B, specific conductance values generally increased for the first six years of post-closure monitoring (i.e., from 2011 through 2016). Specific conductance values have since steadily decreased from a 2016 mean of 1,361 µmhos/cm to a 2021 mean of 989 µmhos/cm. Monitoring location MW03-802B is currently being investigated with supplemental sampling. As discussed later in this section, there is now a five-year statistically significant decreasing trend (95 percent confidence level) for specific conductance at MW03-802B, which is a marked improvement from the specific conductance trend prior to 2017.

Post-closure specific conductance values since the start of closure in 2008 at the monitoring locations southwest of the perimeter of the Conventional Landfill are shown on Figure 3-7.

FIGURE 3-7

SPECIFIC CONDUCTANCE
SOUTH ON-SITE MONITORING LOCATIONS (SOUTHWEST LOCATIONS)



Specific conductance values have generally increased since the start of post-closure monitoring (or before) at monitoring locations MW03-803A, MW03-803B, and MW03-804A; however, in more recent years these trends have begun to stabilize or reverse. Whereas specific conductance values had five-year statistically significant increasing trends (95 percent confidence level) at MW03-803A and MW03-803B

for the analyses completed for 2020 data, there are not currently five-year and/or three-year statistically significant trends from data going back from the end of 2021.

At MW03-804A, specific conductance values generally increased for the first six years of post-closure monitoring (i.e., from 2011 through 2016). Specific conductance values have since steadily decreased from a 2016 mean of 962 µmhos/cm to a 2021 mean of 854 µmhos/cm.

Trend Analysis

A summary of the results of the statistically significant increasing and decreasing trends (95 percent confidence level) identified by the Mann-Kendall analyses are presented in Table 3-4 for south monitoring locations. The full results of the Mann-Kendall analyses are included in Appendix C.

TABLE 3-4

SUMMARY OF MANN-KENDALL ANALYSES AT SOUTH MONITORING WELLS

Monitoring Location	Decreasing Trends						Increasing Trends					
	3-Year			5-Year			3-Year			5-Year		
	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane
MW-906B	No	No	NS	No	Yes	NS	No	No	NS	No	No	NS
200	No	Yes	NS	No	No	NS	No	No	NS	No	No	NS
641	No	No	I	No	No	No	No	No	I	No	No	No
MW02-801A	Yes (4) specific conductance, magnesium, sodium, total dissolved solids	Yes	I	Yes (8) specific conductance, dissolved methane, magnesium, nickel, total dissolved solids, sodium, potassium, bicarbonate	Yes	Yes	No	No	I	No	No	No
MW02-801B	-	No	NS	-	No	NS	-	No	NS	-	No	NS
MW03-802A	No	No	I	No	No	No	No	No	I	No	No	No
MW03-802B	-	No	I	Yes (5) specific conductance, dissolved oxygen, magnesium, calcium, Eh	Yes	No	-	No	I	No	No	No
MW03-803A	-	No	I	No	No	No	-	No	I	No	No	No
MW03-803B	No	No	I	No	No	No	No	No	I	Yes (5) potassium, pH, total dissolved solids, sodium, magnesium	No	No
MW03-804A	-	No	NS	-	No	NS	-	No	NS	-	No	NS

Notes:

[1] Number of parameters with trend shown in parenthesis for analyses with three or more trends (95 percent confidence level). Locations monitored for field parameters only are not assessed for multiple (three or more) parameters.

NS – parameter not analyzed for a specific location
I – insufficient sample data points for analyses

There were no statistically significant increasing trends (95 percent confidence level) for specific conductance at any of the south monitoring locations over the past three years or five years. While this is generally consistent with post-closure monitoring results southeast and south of the PTL, it marks progress to water quality south of the PTL at MW03-802B and southwest of the PTL at MW03-803A, MW03-803B, and MW03-804A.

The Mann-Kendall results indicate improvements to groundwater quality south of the Conventional Landfill at MW02-801A over the past three years (four parameters with decreasing trends, including specific conductance) and five years (eight parameters with decreasing trends, including specific conductance).

The Mann-Kendall results indicate improvements to groundwater quality south of the Conventional Landfill at MW02-802B over the past five years (five parameters with decreasing trends, including specific conductance). Monitoring location MW03-802B is currently being investigated with supplemental sampling for increasing trends leading up to 2016.

There are currently five parameters at MW03-803B with statistically significant increasing trends (95 percent confidence level) over the past five years.

Detection Monitoring Parameters

MW02-801B and MW03-804A are monitored for field parameters only, as specified in the post-closure EMP. Monitoring locations MW-906B, 200, 641, MW02-801A, MW03-802A, and MW03-802B are monitored for a broad list of detection monitoring parameters. During 2021 and since 2016, supplemental sampling was completed as part of an investigation recommended by SME and MEDEP at MW03-802B and MW03-803A, which have exhibited increases for multiple parameters prior to and during the post-closure monitoring periods. In addition to the monitoring of field parameters and dissolved methane specified in the post-closure EMP, these wells were sampled for a broader list of detection parameters, including VOCs, in October 2020. The results of 2021 detection monitoring locations south of the Conventional Landfill are summarized in Appendix B and are discussed below.

Southeast Monitoring Locations: Multiple parameters at monitoring locations 200, 641, and MW-906B have generally steady decreases during the first eleven years of post-closure monitoring. At monitoring location 200, the parameters that have lower annual mean values in 2021 compared to the start of post-closure monitoring in 2011 include specific conductance (31 percent decrease), arsenic (23 percent decrease), sodium (56 percent decrease), total dissolved solids (26 percent decrease), magnesium (41 percent decrease), sulfate (81 percent decrease), bicarbonate (9 percent decrease), organic carbon (32 percent decrease), and chloride (73 percent decrease).

At monitoring location 641, the parameters that have lower annual mean values in 2021 compared to the start of post-closure monitoring in 2011 include specific conductance (54 percent decrease), methane (98 percent decrease), arsenic (50 percent decrease), nickel (approximately 62 percent or more decrease), calcium (35 percent decrease), sodium (64 percent decrease), total dissolved solids (50 percent decrease), magnesium (42 percent decrease), manganese (56 percent decrease), potassium (66 percent decrease), sulfate (66 percent decrease), bicarbonate (37 percent decrease), chloride (81 percent decrease), iron (57 percent decrease), and organic carbon (67 percent decrease).

At monitoring location MW-906B, the parameters that have lower annual mean values in 2021 compared to the start of post-closure monitoring in 2011 include specific conductance (45 percent decrease), arsenic (approximately 35 percent or more decrease), calcium (19 percent decrease), sodium (70 percent decrease), total dissolved solids (31 percent decrease), manganese (85 percent decrease), sulfate (approximately 24 percent or more decrease), and chloride (72 percent decrease).

Directly South Monitoring Locations: Multiple parameters at monitoring locations MW02-801A and MW03-802A have generally steady decreases during the first eleven years of post-closure monitoring. At monitoring location MW02-801A, the parameters that have lower annual mean values in 2021 compared to the start of post-closure monitoring in 2011 include specific conductance (51 percent decrease), dissolved methane (56 percent decrease), arsenic (32 percent decrease), calcium (25 percent decrease), sodium (48 percent decrease), total dissolved solids (43 percent decrease), magnesium (34 percent decrease), manganese (36 percent decrease), potassium (33 percent decrease), bicarbonate (22 percent decrease), chloride (70 percent decrease), organic carbon (58 percent decrease), cobalt (approximately 38 percent or more decrease), lead (63 percent decrease), and nickel (48 percent decrease).

At monitoring location MW03-802A, the parameters that have lower annual mean values in 2021 compared to the start of post-closure monitoring in 2011 include specific conductance (24 percent decrease), dissolved methane (more than 99 percent decrease), arsenic (approximately 85 percent or more decrease), total dissolved solids (35 percent decrease), calcium (16 percent decrease), sodium (20 percent decrease), magnesium (80 percent decrease), potassium (71 percent decrease), sulfate (79 percent decrease), bicarbonate (44 percent decrease), organic carbon (26 percent decrease), and iron (more than 99 percent decrease).

South monitoring location MW03-802B, which is currently being investigated with supplemental sampling, is further discussed later in this section.

Southwest Monitoring Locations: MW03-803B is the shallow southwest monitoring location paired with deeper monitoring location MW03-803A. Groundwater quality during the first eleven years of post-closure monitoring at MW03-803B is characterized by a set of parameters with increasing values and a set of parameters with decreasing values.

The following parameters at MW03-803B that have higher annual mean values in 2021 compared to the start of post-closure monitoring in 2011: specific conductance (11 percent increase), total dissolved solids (8 percent increase), sodium (31 percent increase), magnesium (77 percent increase), potassium (47 percent increase), chloride (66 percent increase), and iron (266 percent increase).

The following parameters at MW03-803B that have lower annual mean values in 2021 compared to the start of post-closure monitoring in 2011: dissolved methane (99 percent decrease), arsenic (60 percent decrease), manganese (60 percent decrease), bicarbonate (11 percent decrease), cobalt (65 percent decrease), and nickel (84 percent decrease).

Monitoring location MW03-803A, which is currently being investigated with supplemental sampling, is further discussed later in this section.

Supplemental Monitoring at MW03-802B and MW03-803A: 2021 was the sixth year of supplemental sampling at MW03-802B and MW03-803A. The supplemental sampling at these locations was initiated to investigate increasing specific conductance values during the early to mid-2010s. In most cases, the supplemental sampling parameters were previously included in routine sampling prior to post-closure monitoring. The supplemental sampling results from 2016 through 2021 confirm many of the detection monitoring parameters at MW03-802B and MW03-803A, for which sampling had not been done since 2010, have increased since the start of the post-closure monitoring period. One or more VOCs were detected above their respective laboratory reporting limits at MW03-802B and MW03-803A in 2021, which are summarized later in this section.

The noted increases in parameter concentrations at MW03-802B and MW03-803A likely signify groundwater quality impacts from a condition in the landfill cover on the southwest side of the landfill identified by NEWSME on June 21, 2016. Leachate was noted to be draining from several defects in the cover onto the soils surrounding the landfill. The length of time that this condition existed is unknown. This condition was reported to the MEDEP on the same day; NEWSME then removed the visually impacted soils and repaired the cover during the week of July 10, 2016.

The noted leachate seeps from the cover defects may have been associated with the leachate recirculation program. Approximately 2,615,975 gallons of leachate and condensate was recirculated into the Secure III Landfill in 2016, which followed the approximately 4,256,525 gallons recirculated in 2015. Since then, less leachate has been recirculated into the Secure III Landfill with consecutively decreasing volumes of approximately 1,296,813 gallons (2017), 371,428 gallons (2018), 355,488 gallons (2019), 169,316 gallons (2020), and 97,281 gallons (2021).

MW03-803B and MW03-804A, which are also located on the southwest side of the landfill, have shown some similar water quality changes to those at MW03-802B and MW03-803A. Water quality at MW03-802B, MW03-803A, MW03-803B, and MW03-804A share some characteristics that may suggest influence from the abated leachate seeps from the landfill cover defects, including increasing dissolved oxygen and, by association, iron concentrations where monitored. A potential source of the higher dissolved oxygen concentrations may be from the conditions created by the removal of the impacted soil from the leachate seeps cleaned up in 2016. In 2021, the dissolved oxygen concentrations at MW03-802B, MW03-803A, MW03-803B, and MW03-804A have returned to or have started to return to concentrations similar to those prior to the noted increases.

With more than five years of monitoring data since the corrective actions completed in 2016, there are many parameters at MW03-802B and MW03-803A that have remained below peak values detected in 2016 or early 2017. These observations are summarized in Table 3-5.

TABLE 3-5

SUMMARY OF RECENT WATER QUALITY AT MW03-802B and MW03-803A

Monitoring Location	Parameters	Peak Concentration and Date (from 2016 through 2018)	October 2021 Value
MW03-802B	Specific Conductance (µmhos/cm)	**1,587 (Oct-2016)**	989 [1]
	Total Dissolved Solids (mg/L)	**877 (Oct-2016)**	627
	Arsenic (mg/L)	**0.146 (Apr-2016)**	0.031
	Calcium (mg/L)	140 (Apr-2017)	120
	Magnesium (mg/L)	**57 (Apr-2017)**	48
	Manganese (mg/L)	22.3 (Apr-2016)	8.9
	Bicarbonate (mg/L)	575 (Oct-2016)	490
	Nickel (mg/L)	0.029 (Oct-2016)	0.005 U
	Organic Carbon (mg/L)	8.7 (Oct-2016)	4.2
	Potassium (mg/L)	13.1 (Oct-2016)	2.4
	Chloride (mg/L)	140 (Apr-2017)	22
	Sodium (mg/L)	**71.3 (Oct-2016)**	19
MW03-803A	Specific Conductance (µmhos/cm)	**1,867 (Apr-2018)**	1,690 [1]
	Total Dissolved Solids (mg/L)	**1,178 (Apr-2017)**	1,103
	Arsenic (mg/L)	**0.048 (Jul-2016)**	0.005 U
	Calcium (mg/L)	222 (Oct-2016)	200
	Magnesium (mg/L)	**75 (Apr-2017)**	61
	Manganese (mg/L)	3.13 (Jul-2016)	4.9
	Bicarbonate (mg/L)	491 (Jul-2016)	530
	Nickel (mg/L)	**0.020 (Apr-2017)**	0.018
	Organic Carbon (mg/L)	2 U (Apr-2016)	2 U
	Potassium (mg/L)	3.3 (Apr-2017)	2.6
	Chloride (mg/L)	**450 (Apr-2017)**	200
	Sodium (mg/L)	**42 (Apr-2017)**	30

Notes:

[1] Mean value from April 2021 and October 2021.

U – Not detected above indicated laboratory reporting limit.

Bold text indicates historical maximum value.

The results of the five-year Mann Kendall trend analyses show positive signs that the groundwater quality at these monitoring locations has stabilized. There are no parameters at MW03-803A and MW03-802B with five-year statistically significant increasing trends (95 percent confidence level). There are five parameters with statistically significant decreasing trends (95 percent confidence level) at MW03-802B over the past five years: specific conductance, magnesium, calcium, Eh, and dissolved oxygen. Visual review of the specific conductance data at MW03-803A shows stable values since October 2018 with a slight decrease from the historical maximum value measured in April 2018.

Based on these noted groundwater quality trends and the water quality data summarized in Table 3-5, water quality at these wells shows some signs of overall improvement following abatement of the cover defects. Continued monitoring in 2022 will be useful to determine if these tendencies continue. We recommend that supplemental sampling at these two locations be continued in 2022 as they were done in 2021.

VOCs: Samples for laboratory analysis of VOCs were obtained and analyzed during the October 2021 monitoring event at south monitoring locations MW02-801A, MW03-802A, MW03-802B, MW03-803A, and MW03-803B. There were no VOCs detected above their respective laboratory reporting limits during 2021 at monitoring location MW03-802A. The VOCs detected above laboratory reporting limits at the south on-site monitoring locations are included in the historical water quality data summary reports in Appendix B.

Only one VOC detected above laboratory reporting limits, vinyl chloride, was at a concentration above an MCL and/or MEG. Vinyl chloride was detected at MW03-803B at a concentration of 1.8 µg/L in October 2021, which is below its MCL of 2 µg/L and above its MEG of 0.2 µg/L. This is consistent with previous vinyl chloride MEG exceedances at MW03-803B. Water quality parameters less than applicable groundwater MCLs and MEGs at on-site monitoring wells is not a post-closure threshold criterion given in the Department Closure Order.

VOC detections during 2021 at the south monitoring locations are consistent with historical VOC detections at these monitoring locations. At monitoring location MW03-803B, 1,1-dichloroethane, 1,2-dichloropropane, cis-1,2-dichloroethene, and diethyl ether were detected at new historical minimum concentrations of 3.4 µg/L, 1.2 µg/L, 3.0 µg/L, and 81 µg/L, respectively. At monitoring location MW03-802B, diethyl ether was detected at a new historical minimum concentration of 4.0 µg/L.

All 2021 VOC detection concentrations at the south monitoring locations remained below their respective historical maximum values.

Arsenic

At the south on-site monitoring locations, arsenic concentrations were measured during both 2021 monitoring events at monitoring locations MW-906B, 200, 641, MW02-801A, MW03-802A, and MW03-803B; and once in October 2021 at MW03-802B and MW03-803A. Arsenic concentrations detected at these monitoring locations have been considerably lower than the annual maximum arsenic concentrations detected in 2016. A summary of 2021 arsenic concentrations at south on-site monitoring locations is provided in Table 3-6. These monitoring results are consistent with the generally site-wide lower arsenic values observed since October 2016, as discussed earlier in Section 3.0.

TABLE 3-6

ARSENIC CONCENTRATIONS AT SOUTH ON-SITE MONITORING LOCATIONS

Monitoring Well	Concentration (mg/L)		
	April 2021	October 2021	2016 Annual Maximum
MW-906B	0.005 U	0.008	0.026
200	0.030	0.042	0.057
641	0.034	0.030	0.067
MW02-801A	0.079	0.062	0.256
MW03-802A	0.005 U	0.005 U	0.034
MW03-802B	NS	0.031	0.146
MW03-803A	NS	0.005 U	0.048
MW03-803B	0.068	0.023	0.181

Notes:
U = not detected above indicated laboratory reporting limit
NS = not sampled

3.1.3 North On-Site Monitoring Location

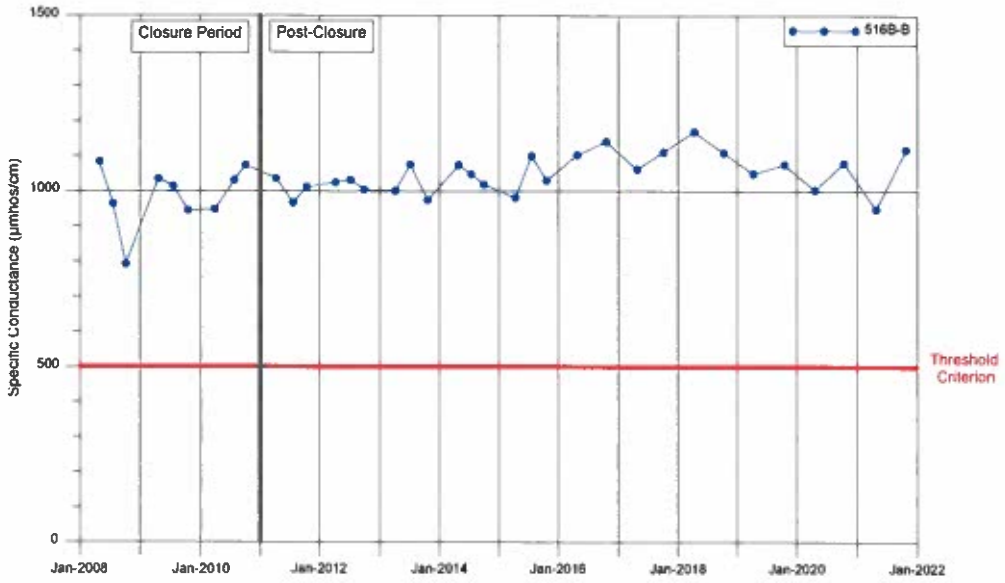
Monitoring well 516B-B monitors groundwater quality in the bedrock at the north corner of the PTL site. This well is hydraulically upgradient of the Conventional Landfill and Secure Landfills. Similar to water quality at 509B (as discussed in Section 3.1.1), the close proximity of 516B-B to the site facilities may indicate landfill influences; however, the presence of Interstate 95 and other upgradient site activity in close proximity to this well needs to be considered when reviewing the water quality data.

Specific Conductance

North on-site specific conductance results are summarized in Table 3-1 for 2021 and show that monitoring well 516B-B is above the on-site closure threshold value of 500 µmhos/cm. Specific conductance values since the start of closure in 2008 at 516B-B have been rather steady during post-closure monitoring at the PTL, which is illustrated on Figure 3-8. The 2021 annual mean specific conductance value at 516B-B has increased by 9 percent compared to the annual mean specific conductance value at the start of closure monitoring in 2008. The average of 2021 annual specific conductance values at 516B-B have generally decreased (9 percent decrease) since 2018. This is supported by a statistically significant decreasing trend (95 percent confidence level) for specific conductance at 516B-B over the past five years.

FIGURE 3-8

SPECIFIC CONDUCTANCE
NORTH ON-SITE MONITORING LOCATION



Trend Analysis

A summary of the results of the statistically significant increasing and decreasing trends (95 percent confidence level) identified by the Mann-Kendall analyses are presented in Table 3-7 for monitoring location 516B-B. The full results of the Mann-Kendall analyses are included in Appendix C.

TABLE 3-7

SUMMARY OF MANN-KENDALL ANALYSES AT NORTH MONITORING WELL

Monitoring Location	Decreasing Trends							Increasing Trends					
	3-Year			5-Year				3-Year			5-Year		
	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane		Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane
516B-B	No	No	NS	Yes (3) specific conductance, calcium, dissolved oxygen	Yes	NS		No	No	NS	No	No	NS

Notes:

[1] Number of parameters with trend shown in parenthesis for analyses with three or more trends (95 percent confidence level). Locations monitored for field parameters only are not assessed for multiple (three or more) parameters.

NS – parameter not analyzed for a specific location
I – insufficient sample data points for analyses

There are not statistically significant increasing trends (95 percent confidence level) for any of the monitored parameters at monitoring location 516B-B over the past three years and five years.

There were three parameters with statistically significant decreasing trends (95 percent confidence level) at monitoring location 516B-B over the past five years: specific conductance, calcium, and dissolved oxygen. The statistically significant decreasing trend for specific conductance going back five years from 2021 was its first five-year or three-year statistically significant decreasing trend during post-closure monitoring at 516B-B.

Detection Monitoring Parameters

Monitoring location 516B-B is monitored for a broad list of detection monitoring parameters. The results of 2021 detection monitoring at 516B-B are summarized in Appendix B and are discussed further below.

All parameters monitored at 516B-B in 2021 were within their respective historical ranges with the exception of a new historical minimum value of dissolved oxygen in April 2021 (0.2 mg/L). With few exceptions, detection monitoring during post-closure monitoring at 516B-B has shown stable parameter values. Arsenic, manganese, and iron all increased in concentration at 516B-B during early post-closure monitoring but have since begun to decrease. These trends are coupled with generally decreasing Eh values during early post-closure monitoring.

Arsenic

The 2021 annual maximum arsenic concentration at monitoring location 516B-B was 0.007 mg/L in October 2021, which is substantially lower than the historical maximum arsenic concentration of 0.062 mg/L detected at 516B-B in April 2016. This is consistent with generally site-wide lower arsenic concentrations since October 2016.

3.1.4 East On-Site Monitoring Locations

Shallow and deep bedrock groundwater quality east of the landfill are monitored by MW-916 and MW-917, respectively. Monitoring wells MW-916 and MW-917 were installed and constructed as landfill monitoring wells and their locations are in close proximity to the PTL site boundaries. Over their monitoring history, groundwater in these wells previously had high concentrations of bicarbonate and dissolved methane and low concentrations of leachate-related parameters. This indicates a primary historical influence from Conventional Landfill gas (i.e., carbon dioxide and methane). The groundwater quality in both wells is similar in concentrations and trends over time.

Corrective Activities

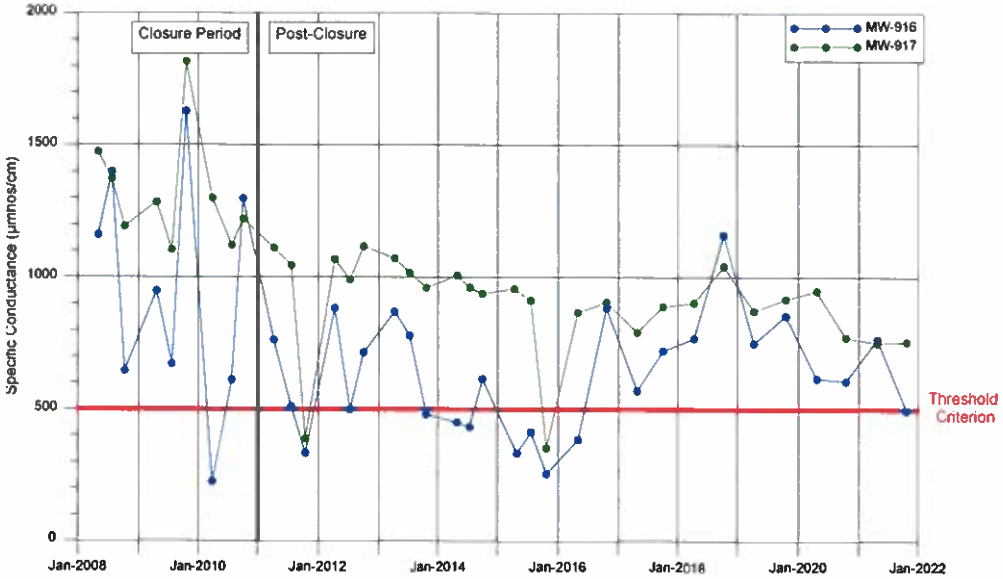
Substantial reductions in the concentrations of dissolved methane and bicarbonate at MW-916 and MW-917 since 2009 are attributed to the implemented corrective action plan; namely, the nearby perimeter landfill gas extraction wells located outside of the east perimeter of the Conventional Landfill that began operation in May 2009. About 123 tons of methane gas were removed during 2021 from PTGW-08-1, which is located east of the landfill. The annual mean bicarbonate concentration at MW-916 in 2021 (240 mg/L) has decreased by approximately 79 percent from a historical maximum value of 1,120 mg/L in October 2007 and the dissolved methane concentration at MW-916 in 2021 (not detected above the laboratory reporting limit of 20 µg/L) has decreased by more than 99 percent from a historical maximum value of 13,200 mg/L in October 2006. The mean bicarbonate concentration at MW-917 in 2021 (430 mg/L) has decreased by approximately 61 percent from a historical maximum value of 1,098 mg/L in March 2002 and the dissolved methane concentration at MW-917 in 2021 (54 µg/L) has decreased by more than 99 percent from a historical maximum value of 10,000 mg/L in April and June 2006.

Specific Conductance

The specific conductance value at MW-916 was below the post-closure threshold criterion of 500 µmhos/cm during the October 2021 monitoring event (495 µmhos/cm). The specific conductance values at MW-916 and MW-917 during the April 2021 monitoring event and at MW-917 during the October 2021 monitoring event were above the post-closure threshold criterion of 500 µmhos/cm. Monitoring results at the east monitoring locations for specific conductance are summarized in Table 3-1 for 2021. Specific conductance values since the start of closure in 2008 at monitoring locations east of the PTL (i.e., at MW-916 and MW-917) are shown on Figure 3-9.

FIGURE 3-9

SPECIFIC CONDUCTANCE
EAST ON-SITE MONITORING LOCATIONS



Specific conductance values at MW-916 and MW-917 generally decreased during the first five years of post-closure monitoring (i.e., 2011 through 2015). This was followed by generally increasing specific conductance values through 2018. Visual review of the data shows decreases for specific conductance at MW-916 and MW-917 from the end of 2018 through 2021. The mean 2021 specific conductance values at MW-916 and MW-917 were 631 µmhos/cm and 754 µmhos/cm, respectively.

The 2021 annual mean specific conductance values at MW-916 and MW-917 have decreased by approximately 41 percent and 44 percent, respectively, compared to the annual mean specific conductance values at the start of closure in 2008.

Trend Analysis

A summary of the results of the statistically significant increasing and decreasing trends (95 percent confidence level) identified by the Mann-Kendall analyses are presented in Table 3-8 for the east monitoring locations. The full results of the Mann-Kendall analyses are included in Appendix C.

TABLE 3-8

SUMMARY OF MANN-KENDALL ANALYSES AT EAST MONITORING WELLS

Monitoring Location	Decreasing Trends						Increasing Trends					
	3-Year			5-Year			3-Year			5-Year		
	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane
MW-916	No	No	I	No	No	No	No	No	I	No	No	No
MW-917	Yes (3) iron, total dissolved solids, arsenic	No	I	Yes (3) chloride, iron, arsenic	No	No	No	No	I	No	No	No

Notes:

[1] Number of parameters with trend shown in parenthesis for analyses with three or more trends (95 percent confidence level). Locations monitored for field parameters only are not assessed for multiple (three or more) parameters.

I – insufficient sample data points for analyses

There are statistically significant decreasing trends (95 percent confidence level) for multiple parameters (i.e., three or more) at MW-917 over the past three years (iron, total dissolved solids, and arsenic) and five years (chloride, iron, and arsenic).

There are not statistically significant increasing trends (95 percent confidence level) for any monitored parameters at MW-917 over the past three years and five years.

There are not statistically significant increasing or decreasing trends (95 percent confidence level) for multiple parameters (i.e., three or more) at MW-916 over the past three years and five years.

Detection Monitoring Parameters

Monitoring locations MW-916 and MW-917 are monitored for a broad list of detection monitoring parameters. The results of 2021 detection monitoring at MW-916 and MW-917 are summarized in Appendix B. All parameters monitored at MW-916 and MW-917 in 2021 were within their respective historical ranges.

Multiple detection monitoring parameters at MW-916 have lower 2021 mean concentrations since the start of post-closure monitoring in 2011: arsenic (78 percent decrease), iron (64 percent decrease), manganese (94 percent decrease), total dissolved solids (21 percent decrease), organic carbon (approximately 31 percent or more decrease), and bicarbonate (45 percent decrease).

Multiple detection monitoring parameters at MW-917 have lower 2021 mean concentrations since the start of post-closure monitoring in 2011: specific conductance (11 percent decrease), arsenic (35 percent

decrease), calcium (9 percent decrease), iron (61 percent decrease), magnesium (29 percent increase), sodium (13 percent decrease), total dissolved solids (23 percent decrease), bicarbonate (31 percent decrease), and chloride (31 percent decrease).

Dissolved methane concentrations at MW-916 and MW-917 in 2021 have decreased by more than 99 percent from their respective historical maximum concentrations.

The chloride concentrations at MW-916 and MW-917 remain very low with 2021 annual maximum concentrations of 2.0 mg/L (October 2021) and 5.9 mg/L (October 2021), respectively. The low chloride concentrations at MW-916 and MW-917 are an indication that the recent specific conductance increases are not associated with influence from PTL leachate.

A VOC sample was collected and analyzed during the October 2021 monitoring event at MW-916. There were no VOCs detected above laboratory reporting limits at MW-916 in October 2021.

Arsenic

A summary of 2021 arsenic concentrations at east on-site monitoring locations is provided in Table 3-9. At the east on-site monitoring locations, arsenic concentrations were measured two times during 2021 at monitoring locations MW-916 and MW-917. The April and October 2021 arsenic concentrations of 0.007 mg/L and 0.005 mg/L, respectively, at MW-916 are well below the arsenic concentration at this location at the start of landfill closure monitoring in July 2008 (0.072 mg/L). Since October 2016, the arsenic concentrations detected at MW-917 have been considerably lower than the arsenic concentration detected in and prior to April 2016. These monitoring results from MW-917 are consistent with the generally site-wide lower arsenic values observed since October 2016, as discussed earlier in Section 3.0. There are three-year and five-year statistically significant decreasing trends (95 percent confidence level) for arsenic at MW-917.

TABLE 3-9

ARSENIC CONCENTRATIONS AT EAST ON-SITE MONITORING LOCATIONS

Monitoring Well	Concentration (mg/L)		
	April 2021	October 2021	2016 Annual Maximum
MW-916	0.007	0.005	0.008
MW-917	0.086	0.085	0.185

Off-site Threshold Criteria

Although MW-916 and MW-917 are located slightly beyond the site property boundaries, they have historically been considered on-site wells due to their location relative to the landfill. Since they are located beyond the site property boundaries, the 2021 groundwater quality at MW-916 and MW-917 are also discussed here as they relate to the post-closure threshold criteria for off-site groundwater quality. These criteria are: (1) parameter concentrations below MCLs and MEGs; (2) a specific conductance upper 95 percent confidence limit of less than 400 µmhos/cm; and (3) a dissolved methane concentration of less than 700 µg/L. Comparison of 2021 water quality to these criteria is discussed below:

- MW-916, shallow groundwater:
  - The off-site groundwater quality threshold criterion for parameters with concentrations below MCLs and MEGs was satisfied at MW-916 during 2021;
  - The upper limit of the 95 percent confidence interval for specific conductance data at MW-916 for the past five years of the post-closure monitoring period (i.e., since 2017) is 846 µmhos/cm, which does not satisfy the off-site groundwater quality threshold criterion of 400 µmhos/cm; and
  - Dissolved methane at MW-916 was not detected above the laboratory reporting limit of 20 µg/L in October 2021, which satisfies the off-site groundwater quality threshold criterion of 700 µg/L for dissolved methane.
- MW-917, deep groundwater:
  - The arsenic concentrations at MW-917 exceeded the MCL and MEG of 0.01 mg/L in April 2021 (0.086 mg/L) and October 2021 (0.085 mg/L). The iron concentrations at MW-917 exceeded the MEG of 5 mg/L in April 2021 (6.8 mg/L) and October 2021 (7.0 mg/L). The manganese concentration at MW-917 exceeded the MEG of 0.3 mg/L in October 2021 (0.59 mg/L). These parameters have previously exceeded their respective standards at MW-917;
  - The upper limit of the 95 percent confidence interval for specific conductance data at MW-917 for the past five years of the post-closure monitoring period (i.e., since 2017) is 923 µmhos/cm, which does not satisfy the off-site groundwater quality threshold criterion of 400 µmhos/cm; and
  - Dissolved methane at MW-917 was detected at a concentration of 54 mg/L in October 2021, which satisfies the off-site groundwater quality threshold criterion of 700 µg/L for dissolved methane.

3.1.5 West On-Site Monitoring Locations

Monitoring locations P-914A and P-914B are located over 800 feet to the west of the Conventional Landfill and are used to monitor bedrock groundwater quality. P-914B is monitored only for field parameters under the post-closure EMP. P-914A is monitored for field parameters as well as the detection monitoring parameters.

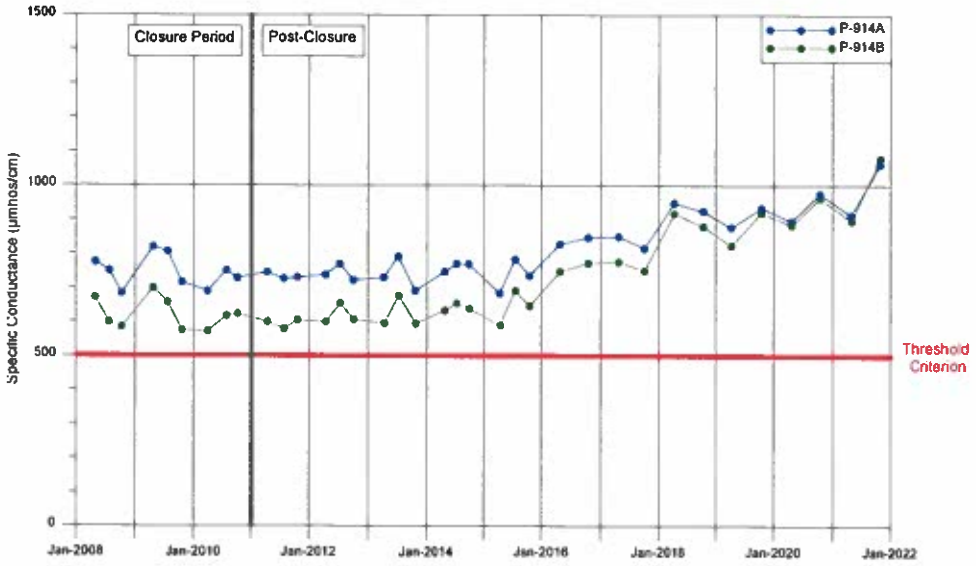
With respect to groundwater flow, this group of wells is cross-gradient to the Conventional Landfill and the Secure I, Secure II, and Secure III Landfills and downgradient from Interstate 95 and the PTL entrance road and scale. Historical water quality for multiple parameters at P-914A is generally similar to that at well 516B-B although with some higher parameter values at 516-B, which is located much closer to Interstate 95. The effects of road salt and other upgradient site activities should be considered when reviewing water quality at both west on-site monitoring locations.

Specific Conductance

The specific conductance values at P-914A and P-914B were above the post-closure threshold criterion of 500 µmhos/cm during 2021. Monitoring results at the west monitoring locations for specific conductance are summarized in Table 3-1 for 2021. Specific conductance values since the start of closure in 2008 at monitoring locations west of the PTL (i.e., at P-914A and P-914B) are shown on Figure 3-10.

FIGURE 3-10

SPECIFIC CONDUCTANCE
WEST ON-SITE MONITORING LOCATIONS



The mean 2021 specific conductance values at P-914A and P-914B were 988 µmhos/cm and 989 µmhos/cm, respectively. The 2021 specific conductance values at P-914A were within historical range. The 2021 specific conductance value at P-914B in October 2021 was a new historical maximum value.

Specific conductance values at P-914A and P-914B were rather stable during the first five years of post-closure monitoring (i.e., from 2011 through 2015) but have since generally increased through 2021. The 2021 annual mean specific conductance values at P-914A and P-914B have increased by approximately 34 percent and 60 percent, respectively, compared to the annual mean specific conductance values at the start of post-closure monitoring in 2008.

Trend Analysis

A summary of the results of the statistically significant increasing and decreasing trends (95 percent confidence level) identified by the Mann-Kendall analyses are presented in Table 3-10 for the west monitoring locations. The full results of the Mann-Kendall analyses are included in Appendix C.

TABLE 3-10

SUMMARY OF MANN-KENDALL ANALYSES AT WEST MONITORING WELLS

Monitoring Location	Decreasing Trends						Increasing Trends					
	3-Year			5-Year			3-Year			5-Year		
	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane	Multiple Parameters with Trend [1]	Specific Conductance	Dissolved Methane
P-914A	No	No	NS	No	No	NS	No	No	NS	Yes (3) calcium, magnesium, total dissolved solids	No	NS
P-914B	-	No	NS	-	No	NS	-	Yes	NS	-	Yes	NS

Notes:
[1] Number of parameters with trend shown in parenthesis for analyses with three or more trends (95 percent confidence level). Locations monitored for field parameters only are not assessed for multiple (three or more) parameters.

NS – parameter not analyzed for a specific location
I – insufficient sample data points for analyses

Currently, there are five-year statistically significant increasing trends (95 percent confidence level) for specific conductance and dissolved oxygen at P-914B. There are also five-year statistically significant increasing trends (95 percent confidence level) for three parameters at P-914B (calcium, magnesium, and total dissolved solids).

Detection Monitoring Parameters

P-914A is monitored for a broad list of detection monitoring parameters. P-914B is monitored for field parameters only. The results of 2021 detection monitoring at P-914A are summarized in Appendix B and are discussed below.

Multiple detection monitoring parameters at MW-914A have greater 2021 mean concentrations since the start of post-closure monitoring in 2011: specific conductance (35 percent increase), calcium (34 percent increase), iron (approximately 225 percent or more increase), lead (approximate 200 percent or more increase), magnesium (24 percent increase), manganese (82 percent increase), potassium (15 percent increase), sodium (84 percent increase), sulfate (135 percent increase), total dissolved solids (42 percent increase), and chloride (78 percent increase).

Arsenic

At the west on-site monitoring locations, arsenic concentrations were measured two times during 2021 at monitoring location P-914A. Arsenic was not detected above the laboratory reporting limit of 0.005 mg/L in April 2021 or October 2021 at P-914A. As a point of comparison, the 2016 annual maximum arsenic concentration for this location was 0.050 mg/L in April 2016. The 2021 monitoring results are consistent with generally site-wide lower arsenic concentrations since October 2016.

3.2 Residential Wells

Off-site groundwater quality data are obtained from one residential water supply well (i.e., DW-103) and one open borehole bedrock monitoring well (non-water supply) located at a residential location near the PTL (i.e., DW04-109). DW04-109 is considered a residential well due to its location and construction; however, DW04-109 is not used as a water supply well.

DW-103 and DW04-109 are located east from the landfill. As outlined in the post-closure EMP: (1) field parameters and dissolved methane samples were obtained at DW04-109 and DW-103 during the April 2021 sampling event; and (2) field parameters, dissolved methane samples, and samples for the indicator parameter and expanded parameter lists were obtained at DW04-109 and DW-103 during the October 2021 sampling event. The post-closure threshold criteria for off-site groundwater quality are: (1) parameter concentrations below MCLs and MEGs; (2) a specific conductance upper 95 percent confidence limit of less than 400 µmhos/cm; and (3) a dissolved methane concentration of less than 700 µg/L. For the third consecutive year, DW04-109 has meet all three of its post-threshold criteria. Comparison of 2021 water quality to these criteria are discussed below.

Off-site MCL and MEG Exceedances

The off-site applicable MCL and MEG criteria for DW-103 and DW04-109 (based on parameters analyzed at those locations) are summarized in Table 3-11.

TABLE 3-11

SUMMARY OF 2021 OFF-SITE RESIDENTIAL WELL MCL AND/OR MEG EXCEEDANCES

Parameter Exceeding Standard	DW-103	DW04-109
Arsenic (0.01 mg/L MCL/MEG)	Not Exceeded	Not Exceeded
Sodium (20 mg/L MEG)	32	Not Exceeded
Nickel (0.02 mg/L MEG)	Not Exceeded	Not Exceeded
Manganese (0.5 mg/L MEG)	Not Exceeded	Not Exceeded
Lead (0.01 mg/L MEG, 0.015 mg/L MCL)	Not Exceeded	Not Exceeded
Iron (5 mg/L MEG)	Not Exceeded	Not Exceeded
Cobalt (0.01 mg/L MEG)	Not Exceeded	Not Exceeded

There were no MCL or MEG exceedances for parameters analyzed at DW04-109 in October 2021. The off-site groundwater quality threshold criterion for parameters with concentrations below MCLs and MEGs has now been satisfied for three consecutive years at DW04-109.

The sodium concentration exceeded its MEG at DW-103 in October 2021; however, its value is consistent with historical data and there is not a statistically significant increasing trend (95 percent confidence level) for sodium at DW-103 over the past five years.

Off-site Specific Conductance Threshold Criterion

SME calculated the 95 percent upper confidence limit for specific conductance values measured for the past five years of the post-closure monitoring period (i.e., since 2017) at the off-site residential wells for comparison to the post-closure threshold criterion of 400 µmhos/cm. The 2021 specific conductance values at DW-103 and DW04-109 are shown in Table 3-12.

TABLE 3-12

2021 OFF-SITE SPECIFIC CONDUCTANCE EVALUATION

Monitoring Location	Specific Conductance (µmhos/cm)		
	April 2021	October 2021	Upper Limit of the 95 percent confidence interval for the past 5 years
DW-103	355	377	468
DW04-109	192	183	227

The upper limit of the 95 percent confidence interval for specific conductance data for the past five years of the post-closure monitoring period (i.e., since 2017) exceeds the threshold criterion of 400 µmhos/cm at DW-103. The upper limit of the 95 percent confidence interval for specific conductance data at DW-103 for five-year intervals had been slowly increasing from 2015 when it was 422 µmhos/cm to 481

µmhos/cm in 2020, but has now begun to decrease (468 µmhos/cm in 2021). The specific conductance values at DW-103 were below 400 µmhos/cm during both the April 2021 and October 2021 monitoring events.

The upper limit of the 95 percent confidence interval for specific conductance data for the past five years of the post-closure monitoring period (i.e., since 2017) is below the threshold criterion of 400 µmhos/cm at DW04-109. This is the third consecutive year that the specific conductance threshold criterion was met over a five-year period at DW04-109.

Off-site Dissolved Methane Threshold Criterion

The threshold criterion for dissolved methane of 700 µg/L was met at DW04-109 and DW-103 in 2021. The 2021 dissolved methane concentrations at these locations are shown in Table 3-13.

TABLE 3-13

2021 RESIDENTIAL DISSOLVED METHANE CONCENTRATIONS

Monitoring Location	Dissolved Methane (µg/L)	
	April 2021	October 2021
DW-103	37	28
DW04-109	20 U	24

Notes:
U = not detected above indicated laboratory reporting limit

Dissolved methane concentrations at DW04-109 in 2021 have decreased substantially from 2008 values that ranged from 5,580 µg/L to 7,320 µg/L. Historical dissolved methane data has never exceeded 700 µg/L at DW-103. The decrease in dissolved methane concentrations at DW04-109 indicates that the external landfill gas extraction system (which was installed in 2009) has shown effectiveness on groundwater quality farther east of the landfill. Dissolved methane currently has three-year and five-year statistically significant decreasing trends (95 percent confidence level) at DW04-109.

Trend Analysis

There are not multiple parameters (i.e., three or more) with statistically significant increasing or decreasing trends (95 percent confidence level) over the past three years or five years at DW-103 and DW04-109.

3.3 Surface Water Quality

Under the current post-closure EMP, surface water quality is monitored two times annually at two locations along Souadabscook Stream and at two locations on a tributary to Cold Brook Stream.

Monitoring locations along both water courses include locations upstream and downstream with respect to the landfill. Notable observations at these locations during 2021 include:

Souadabscook Stream

During 2021, chemical parameter concentrations in Souadabscook Stream upstream of the landfill (SW-A) remained very similar to the location downstream of the landfill (SW-C) (see Water Quality Summary reports in Appendix B). At upgradient monitoring location SW-A and downgradient monitoring location SW-C, all of the monitored parameters were within their respective historical ranges.

There were no MFCCC surface water quality standards exceeded at SW-A or SW-C in Souadabscook Stream during 2021 monitoring for the parameters analyzed. Annual maximum specific conductance values were low at both SW-A (119 µmhos/cm in October 2021) and SW-C (124 µmhos/cm in October 2021). There are currently three-year statistically significant decreasing trends for specific conductance at SW-A and SW-C. Chloride concentrations were low at both SW-A and SW-C (both locations had concentrations of 12 mg/L in April 2021 and October 2021).

Arsenic was not detected above the laboratory reporting limit of 0.005 mg/L at SW-A and SW-C in April 2021 and at SW-A in October 2021. Arsenic was detected at the laboratory reporting limit (0.005 mg/L) at SW-C in October 2021.

Water quality at downgradient surface water sampling location SW-C is not indicative of impact from landfill leachate.

Cold Brook Stream

Surface water sampling stations along the tributary to Cold Brook Stream (SW-D and SW-E) have generally higher constituent concentrations than along Souadabscook Stream (SW-A and SW-C) (see Water Quality Summary reports in Appendix B). This is consistent with historical water quality data when comparing these two water bodies. The higher concentrations occur both upstream and downstream from the PTL and are likely due to the close proximity of the Cold Brook Stream tributary to major roadways, commercial development in the watershed of the stream, landfill site operations, and the higher suspended sediment loads caused by the silt-clay substrate over which the stream runs. Monitoring location SW-D is located hydraulically upgradient from the PTL and on the north and upstream side of Interstate 95 (the PTL is on the south side of Interstate 95). Monitoring location SW-E is located downgradient from the PTL and Interstate 95, just upstream from Cold Brook Road.

At upgradient monitoring location SW-D and downgradient monitoring location SW-E, all of the 2021 parameters had values within their respective historical ranges.

The 2021 specific conductance values at upgradient monitoring location SW-D (421 µmhos/cm in April 2021 and 271 µmhos/cm in October 2021) were somewhat less than those at downgradient

monitoring location SW-E (687 µmhos/cm in April 2021 and 495 µmhos/cm in October 2021). The 2021 chloride concentrations at upgradient monitoring location SW-D (97 mg/L in April 2021 and 48 mg/L in October 2021) were less than those at downgradient monitoring location SW-E (150 mg/L in April 2021 and 90 mg/L in October 2021). The parameters with higher concentrations at the downgradient sampling location of the tributary to Cold Brook Stream (SW-E) are likely in part attributed to SW-D being upstream of both Interstate 95 and landfill operations. There were no MFCCC surface water quality exceedances at SW-D or SW-E during 2021, which is consistent with recent historical data.

Arsenic was not detected above the laboratory reporting limit of 0.005 mg/L at SW-D in April 2021 and at SW-D and SW-E in October 2021. Arsenic was detected at the laboratory limit (0.005 mg/L) at SW-E in April 2021.

Visual review of the water quality data from SW-D and SW-E shows that many of the monitored parameters generally increased during the first several years of post-closure monitoring, typically up until about 2017. These values have begun to decrease in most instances. Parameters with recent visually apparent decreases at both SW-D and SW-E include specific conductance, arsenic, calcium, sodium, total dissolved solids, magnesium, manganese, bicarbonate, and chloride. Dissolved oxygen also began increasing at these locations starting in 2015. There are currently three-year statistically significant decreasing trends (95 percent confidence level) for specific conductance and total dissolved solids at SW-E.

The Mann-Kendall trend analyses have identified that there are not statistically significant increasing or decreasing trends (95 percent confidence level) for multiple parameters (i.e., three or more) for the past three years or five years at SW-A, SW-C, SW-D, and SW-E.

3.4 Leachate

Leachate from the Secure Landfills is captured by leachate collection systems and is stored in an on-site, aboveground, 980,000-gallon leachate storage tank. Currently, groundwater impacted by the residual leachate from the Conventional Landfill is captured by a groundwater interceptor drain (i.e., perimeter drain) and six groundwater extraction wells. This groundwater is also conveyed to and stored in the on-site aboveground leachate storage tank. The leachate and extracted groundwater from the storage tank is either recirculated in the landfill or sent to the Bangor wastewater treatment plant. In 2021, a total of 97,281 gallons of this leachate were recirculated into the Secure III facility and 8,974,578 gallons sent to the Bangor wastewater treatment plant.

Under the current post-closure EMP, the PDPS and leachate monitoring location LCS-3C are monitored annually for: (1) field parameters and the indicator list of parameters during the spring (i.e., April) monitoring event; and (2) field parameters, the indicator list of parameters, the expanded list of parameters, dissolved methane, and VOCs during the fall (i.e., October) monitoring event. Conventional

Landfill leachate parameter concentrations are monitored at a manhole on the perimeter drain at the southeast toe of the Conventional Landfill (PDPS). LCS-3C is the leachate sampling location at the Phase VIII-C pump station and has been monitored since 2011.

In addition to monitoring at the PDPS and LCS-3C, for each year during the 2021 through 2040 post-closure monitoring period, leachate sampling is conducted at one location alternating among the five other site leachate monitoring locations (i.e., LCS-SI, LCS-SII, LCS-SIII, LCS-6, and LCS-7) during the fall sampling event. Each of these five locations will be monitored every five years during this period. Leachate monitoring at location LCS-SI was conducted in October 2021 for field parameters, the indicator list of parameters, the expanded list of parameters, dissolved methane, and VOCs.

The results from the 2021 monitoring from PDPS, LCS-3, and LCS-SI samples are summarized below, including comparison to historical results.

Key Indicator Parameters

A summary of the key indicator parameter values at the PDPS and leachate monitoring locations sampled in 2021 is shown in Table 3-14.

TABLE 3-14

SUMMARY OF 2021 ANNUAL MAXIMUM LEACHATE KEY INDICATOR VALUES

Parameter	PDPS	LCS-3C [1]	LCS-SI
Specific Conductance (µmhos/cm)	3,240 (6,670) [2]	32,200 (36,400)	11,140 (16,250)
Chloride (mg/L)	360 (1,610)	2,700 (19,200)	1,800 (2,070)
Dissolved Methane (µg/L)	130 (4,200)	410 (4,010)	20 U [3] (8,750)
Arsenic (mg/L)	0.210 (0.171)	0.460 (0.239)	0.140 (0.108)

Notes:
1 LCS-3C is the leachate sampling location at the Phase VIII-C pump station.
2 2011 maximum annual parameter values (i.e., the first year of post-closure) are included in parentheses for comparison to 2021 parameter values.
3 U = not detected above laboratory reporting limit

Specific conductance values and chloride concentrations at PDPS and LCS-3C during 2021 are considerably lower than during the first year of post-closure monitoring in 2011. The specific conductance values at PDPS during 2021 were within their respective historical ranges. The April 2021 specific conductance value of 12,190 µmhos/cm at leachate monitoring location LCS-3C was a new historical minimum value. The October 2021 specific conductance value of 11,140 µmhos/cm at leachate monitoring location LCS-SI was a new historical minimum value.

The October 2021 dissolved methane concentrations from the LCS-3C (410 µg/L) and LCS-SI (less than the laboratory reporting limit of 20 µg/L) were new historical minimum values. The dissolved methane concentration at PDPS is considerably lower than the dissolved methane concentration detected when post-closure monitoring began in 2011.

The lower dissolved methane concentrations detected from the perimeter drain and leachate sample LCS-3C in 2021 is concurrent with the substantial decrease in dissolved methane concentrations during the post-closure monitoring period at south and east monitoring locations 641, MW02-801A, MW03-802A, MW03-802B, MW03-803A, MW03-803B, MW-916, and MW-917 (see Table 3-1); this suggests that the Conventional Landfill is not producing as much methane as has been generated in the past.

Annual maximum arsenic concentrations from the perimeter drain and leachate samples from the PDPS, LCS-3C, and LCS-SI were higher during 2021 than during the first year of post-closure monitoring in 2011. These increases are likely attributed to a number of redox driven reactions that occur in leachate after covering the landfill and cutting off recharge to the waste mass. Therefore, increased arsenic concentrations at these locations are not unexpected following the closure (which occurred from 2008 through 2010).

VOC Analyses

Samples for VOC analyses were obtained during the October 2021 monitoring event at the PDPS, LCS-3C, and LCS-SI. The following VOCs were detected above laboratory reporting limits at these monitoring locations during 2021:

- Acetone at PDPS (33 µg/L), LCS-3C (110 µg/L), and LCS-SI (35 µg/L);
- Tetrahydrofuran at PDPS (27 µg/L), LCS-3C (290 µg/L), and LCS-SI (71 µg/L);
- 1,4-dichlorobenzene at PDPS (2.3 µg/L) and LCS-3C (2.6 µg/L);
- Diethyl ether at PDPS (11 µg/L);
- Methyl ethyl ketone at LCS-3C (53 µg/L);
- Benzene at LCS-3C (2.5 µg/L);
- Toluene at LCS-3C (16 µg/L);
- Ethylbenzene at LCS-3C (4.7 µg/L);
- m,p-xylene at LCS-3C (8.2 µg/L); and
- o-xylene at LCS-3C (4.4 µg/L).

The 2021 VOC parameters with detections at PDPS, LCS-3C, and LCS-SI are consistent with previous VOC parameter detections at these locations.

Trend Analysis

The Mann-Kendall trend analyses for the PDPS indicate that there are not multiple parameters (i.e., three or more) with statistically significant increasing or decreasing trends (95 percent confidence level) over the past five-year and three-year periods. There is a statistically significant decreasing trend (95 percent confidence level) for arsenic at the PDPS over the past five years.

The Mann-Kendall trend analyses for LCS-3C indicate that specific conductance, sodium, total dissolved solids, sulfate, arsenic, organic carbon, chloride, potassium, and magnesium have statistically significant decreasing trends (95 percent confidence level) over the past three years. The Mann-Kendall trend analyses for LCS-3C indicate that specific conductance, chloride, calcium, magnesium, potassium, total dissolved solids, and sodium have statistically significant decreasing trends (95 percent confidence level) over the past five years. There are no parameters monitored at LCS-3C with statistically significant increasing trends (95 percent confidence level) over the past three years and five years.

Due to the limited sampling frequency from LCS-SI, there is insufficient data for three-year and five-year Mann-Kendall trend analyses.

Annual flows from the leachate collection pump stations at Secure I, Secure II, Secure III, Phase VI, Phase VII, and Phase VIII-C have shown a decreasing trend since post-closure monitoring began in 2011. Since 2019 the flows at the perimeter drain pump station have started to display an overall increasing trend. As noted in Section 2.2, the increase in flow from 2020 to 2021 is consistent with the higher precipitation total that occurred in 2021 compared to 2020. Monitoring of the leachate collection pump stations will continue in 2022. The annual data for the leachate collection pump stations are provided on the graphs in Appendix F.

4.0 LEAK DETECTION MONITORING

During 2021, the flow rates in the leak detection systems of the Secure III Landfill were recorded by NEWSME at the systems' discharge point for Phase VI, Phase VII, Phase VIII-C (Stage 1, Stage 2, and Stage 3), and Phases I through V, and VIII-A (the flows are recorded for Phase VIII-A at two locations: at the south and north end of Secure III Landfill within leak detection manholes). These flows drain to the Secure III pump station, which serves Phases I through V, and VIII-A of Secure III. The leak detection flows are collected and treated as leachate. A summary of the leak detection data provided to SME is found in Appendix D. SME reviewed the data and, where appropriate, compared detected leakage flows to the Action Leakage Rate (ALR-1) from each leak detection sump.

The total reported leak detection flow from the Phases I through V and Phase VIII-A sump in 2021 was 5,299 gallons. The 2021 average daily leakage flow rate detection from the sump was approximately 15 gallons per day (gpd). The lowest daily average leak detection flow over a calendar month was approximately 1 gpd in October 2021. The highest daily average leak detection flow over a calendar month was approximately 25 gpd in September 2021. Average daily flow rates were below the ALR-1 value of 676 gpd for this area for all months during 2021.

The total reported leak detection flow from the Phase VI leak detection sump in 2021 was 4,934 gallons. The 2021 average daily leakage flow rate detection from the sump was approximately 14 gpd. The lowest daily average leak detection flow over a calendar month was less than 1 gpd in October 2021. The highest daily average leak detection flow over a calendar month was approximately 44 gpd in July 2021. The daily average leak detection flows were below the ALR-1 value of 210 gpd for this area for all months during 2021.

The total reported leak detection flow from the Phase VII leak detection sump in 2021 was 37,211 gallons. The 2021 average daily leakage flow rate detection from the sump was approximately 102 gpd. The lowest daily average leak detection flow over a calendar month was approximately 3 gpd in June 2021. The highest daily average leak detection flow over a calendar month was approximately 264 gpd in November 2021. The daily average leak detection flows were above the ALR-1 value of 130 gpd for this area in March 2021 (156 gpd), April 2021 (163 gpd), November 2021 (264 gpd), and December 2021 (204 gpd). The daily detected leakage flows during these periods did not occur for greater than four consecutive weeks above the ALR-1 for this area during periods in March, April, November, and December.[9] Historically, the flow levels seen in the Phase VII leak detection sump have followed a similar pattern. Historically, the Phase VII leak detection sump has typically collected a greater average leak detection flow, especially during times of increased precipitation totals, than at other landfill leak detection locations. Average daily flow rates were below the ALR-1 value of 130 gpd for this area for all the remaining months during 2021.

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[9] Daily leak detection flows are based on an assumed daily average leakage derived from the volume of a leachate sump pumping event if it is proceeded by days without leachate sump operation.

The total leak detection flow reported by NEWSME from the Phase VIII-C, Stages 1, 2, and 3 leak detection sump in 2021 was 36,875 gallons. The 2021 average daily leakage flow rate detection from the sump was approximately 101 gpd. There were no leak flows in February 2021, June 2021, August 2021, and October 2021. The highest daily average leak detection flow over a calendar month was approximately 311 gpd in September 2021. Average daily flow rates were below the ALR-1 value of 336 gpd for this area for all months during 2021.

Annual flows from the leak detection pump stations at Secure III and Phase VI have shown a decreasing trend since post-closure monitoring began in 2011. Annual flows from the Phase VII and Phase VIII-C leak detection pump stations have shown an increasing trend since post-closure monitoring began in 2011. As noted previously in this section, the Phase VII leak detection sump has typically collected a greater average leak detection flow, especially during times of increased annual precipitation totals, than at other landfill leak detection locations. This is consistent with the data observed in 2021. The flows at the Phase VIII-C pump station will continue to be monitored in 2022. The annual data for the leak detection pump stations is provided on the graphs in Appendix F.

5.0 DATA VALIDATION AND LABORATORY QUALITY CONTROL

Quality assurance (QA)/ quality control (QC) activities associated with sampling include the utilization of standardized collection procedures and sample data records, calibration of field instruments, and the use of chain-of-custody procedures. SME followed EMP procedures to ensure that both the field instruments and protocols employed generate data that are reliable and provide valid analysis results. Instruments were calibrated, analyses were conducted to determine potential matrix interference as necessary, precision and accuracy were checked, and hold-times were verified. Analytical QA/QC involves the use of approved analytical protocols by a qualified laboratory. Water quality samples were all analyzed within the required hold-times.

Data validation and laboratory quality control procedures were generally followed and documented as described in the MEDEP Solid Waste Management Rules, Chapter 405. During 2021 sampling rounds, duplicate water quality samples were obtained from several monitoring locations, as discussed in water quality data submittals for each round. Reports on Relative Percent Difference (RPD), calculated ratios of TDS to specific conductance, and values falling outside of historical ranges for each sampling round were presented and discussed in each of the data transmittals provided in 2021.

No VOCs were detected in the trip blanks associated with the 2021 sampling events.

Most groundwater turbidity values measured during 2021 were 5 nephelometric turbidity units (NTU) or less. The exceptions are:

- 5.5 NTU at MW03-803B in April 2021; and
- 8.2 NTU at P-914B in April 2021.

Based on our review of data quality, there are no issues affecting the usability of the data for its intended purposes.

6.0 LANDFILL GAS MONITORING SUMMARY

As part of the post-closure monitoring program, 23 gas probes around the Conventional Landfill are monitored by NEWSME for subsurface landfill gas on a quarterly basis. These gas probe locations are listed in Table 3-1 in the post-closure EMP and are shown on Figure 1-1 of this report. Landfill gas monitoring parameters are methane (CH_4), carbon dioxide (CO_2), oxygen (O_2), balance gas, and pressure. Procedures and equipment for measuring gas at these locations are discussed in Section 4.5 of the post-closure EMP. A GEM2000 multi-gas meter was used for subsurface landfill gas monitoring during 2021.[10]

Methane gas readings for 2021 are summarized in Appendix E. The results are organized by monitoring location and by the orientation of the monitoring locations in relation to the Conventional Landfill (i.e., northeast, south, and east). The intent of this monitoring program is to assist in evaluating the effectiveness of the gas collection systems installed to collect gas generated by the Conventional Landfill.

Northeast of the Conventional Landfill, subsurface landfill gas is monitored at 05-GS-18 and 05-GS-19. During 2021, methane gas in the headspace of 05-GS-18, which is located in close proximity to the perimeter of the Conventional Landfill, ranged from not detected (May 2021 and August 2021) to 1.4 percent by volume (January 2021). The annual average methane gas in the headspace of 05-GS-18 in 2021 was 0.4 percent by volume, which is the lowest annual average at this location since subsurface landfill gas monitoring began in 2013 when the annual average was 56.6 percent methane by volume. Monitoring location 05-GS-19 is in close proximity to external landfill gas extraction well PTGW-08-11, which removed a total of about 9 tons of methane in 2021. Methane gas was not detected in 05-GS-19 in January 2021, May 2021, and August 2021 and was detected at a low value of 0.1 percent volume in December 2021. These values are consistent with historical monitoring at this location, which range from non-detect to 7.1 percent by volume since 2013.

South of the Conventional Landfill, subsurface landfill gas is monitored at ten locations which are identified in the summary tables in Appendix E and shown on Figure 1-1. Methane gas has typically been present in the headspace of monitoring locations MW03-802B, MW03-803B, P04-714, and P04-715, which are along the southwest side of the Conventional Landfill. The 2021 annual average methane percent by volume in the headspace of these monitoring locations were approximately 12.4, 0.3, 20.5, and 9.3, respectively. These values are down from 2013 annual average methane percent by volume values of 35.3, 54.2, 46.6, and 57.9, respectively. These decreases from 2013 correlate generally well with decreasing dissolved methane concentrations detected in the groundwater samples collected from the monitoring wells located south of the Conventional Landfill (see Table 3-1).

Dissolved methane in groundwater southeast of the Conventional Landfill and the methane content in the headspace of wells and gas probes at monitoring locations closer to the south and southeast perimeter

[10] GEM2000 multi-gas meter accuracy is ±0.5 percent for detections ranging from 0-5 percent, and ±3.0 percent for detections ranging from 5-15 percent.

of the Conventional Landfill are typically low. Methane gas was non-detect in the headspace of 05-GS-16 in 2021. Methane ranged from non-detect to 0.1 percent by volume in 2021 at subsurface landfill gas monitoring locations MW02-801B, P04-713A, and P04-713B. Subsurface landfill gas monitoring south of the Conventional Landfill at 05-GS-17 was non-detect for methane in May 2021 and August 2021. Methane gas was detected at an annual maximum value of 17.2 percent methane by volume at 05-GS-17 in January 2021.

East of the Conventional Landfill, subsurface landfill gas is monitored at eleven locations, which are identified in the summary tables in Appendix E and shown on Figure 1-1. The subsurface landfill gas monitoring results east of the Conventional Landfill have generally been low for the past several years. Methane gas was non-detect in the headspace of MW-916, P04-709, 05-GS-07, and 05-GS-10 in 2021. Methane ranged from non-detect to 0.1 percent by volume in 2021 at subsurface landfill gas monitoring locations 05-GS-4, 05-GS-5, and 05-GS-8. Methane ranged from non-detect to 0.4 percent by volume in 2021 at subsurface landfill gas monitoring location P07-707. At 05-GS-9, methane gas ranged from non-detect to 30.8 percent by volume in 2021. The annual average methane gas at 05-GS-9 during 2021 (20.8 percent methane by volume) has decreased since 2013 (28.8 percent methane by volume). The low to non-detect methane content in 2021 at monitoring locations east of the Conventional Landfill are associated with landfill gas extraction east of the landfill perimeter at PTGW-08-01, where about 123 tons of methane were removed during 2021.

The MEDEP Closure Order (#S-001987-WN-HC-N) defines a successful corrective action criterion for landfill gas migration at the PTL as maintenance of a zero or negative pressure at the landfill's external gas probes. The gas pressures reported during the 2021 subsurface landfill gas monitoring events are included in the tables provided in Appendix E. Based on reported measurements made during 2021, zero or negative pressures were maintained at the external gas probes for approximately 90 percent of the measurements made. The overall historical decrease in methane measured in both the gas probes, and at the various water quality sampling locations, indicates that the amount of methane being generated by the Conventional Landfill is decreasing as the post-closure period continues.

7.0 SUMMARY AND RECOMMENDATIONS

7.1 Summary

Post-closure monitoring began at the site in 2011 under the Post-Closure EMP approval by the MEDEP. The post-closure EMP specified a reduction in sampling frequency from biannual to annual for post-closure monitoring years 2021 through 2040. The reduction in sampling frequency from biannual to annual sampling was recommended in the 2020 Water Quality Report and approved by MEDEP in October 2021 with exception of continued biannual monitoring at six monitoring locations until water quality improvements can be demonstrated at those locations.[11,12] Since approval of the change in monitoring frequency occurred in late 2021, it will be initiated in 2022 and discussed in the 2022 Water Quality Report.

2021 was the eleventh year of post-closure monitoring at the PTL, which represents less than one-half of the 30-year post-closure monitoring period. The 2021 water quality data for the PTL site are consistent with the historical use and operations of the site and generally indicate improvement over the past several years; these improvements are supported by decreasing trends for multiple water quality parameters at multiple sampling locations and in various directions of groundwater flow away from the landfill. Many of these improvements are attributed to the continued and enhanced corrective actions at the site (i.e., completion of closure, the groundwater extraction system, and the landfill gas extraction system). While it is too soon to evaluate the ultimate effectiveness of closure in terms of achieving the post-closure threshold criteria given in the Department Closure Order, there are overall trends toward improvements in groundwater quality in the eleven years of post-closure monitoring at the PTL. Several monitoring locations are either achieving or very close to achieving the threshold criteria. Additionally, multiple monitoring locations proximate to the Conventional Landfill indicate improvement to groundwater quality emanating from the Conventional Landfill.

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[11] SME, 2021. 2020 Water Quality Report, Pinetree Landfill, Hampden, Maine. April 2021

[12] MEDEP, 2021. Memorandum with Subject: Pine Tree Landfill Hydrogeology Review of 2020 Water Quality Summary, dated October 15, 2021.

On-Site Post-Closure Threshold Criteria

Prior to final closure of the PTL (i.e., during 2010), only one of the 22 on-site groundwater monitoring wells met the on-site groundwater quality threshold criterion of specific conductance values less than 500 µmhos/cm during only one of the three annual monitoring events. During 2021, there were three on-site groundwater monitoring wells with specific conductance values less than 500 µmhos/cm during both the April 2021 and October 2021 monitoring events (i.e., MW01-602B, MW-906B, and 200). Monitoring well MW-916 had a specific conductance value less than 500 µmhos/cm during the October 2021 monitoring event. Monitoring locations MW03-802A, 509A, and 917 have also previously had one or more specific conductance values of less than 500 µmhos/cm during post-closure monitoring (i.e., since 2011), but had specific conductance values above 500 µmhos/cm during 2021.

Many of the on-site monitoring locations show signs of water quality improvement with respect to specific conductance value trends. Fifteen of the twenty-two on-site PTL monitoring locations have lower annual mean concentrations in 2021 than at the start of closure in 2008. Fifteen of the twenty-two on-site PTL monitoring locations have lower annual mean concentrations in 2021 than in 2020, with an average decrease of 108 µmhos/cm. In the seven wells that showed higher specific conductance in 2021 than 2020 the average increase was 66 µmhos/cm.

There is currently only one PTL groundwater monitoring location (P-914B) with a five-year statistically significant increasing trend (95 percent confidence level) for specific conductance and no locations with a three-year increasing trend. There are currently six PTL groundwater monitoring locations with three- and/or five-year statistically significant decreasing trends (95 percent confidence level) for specific conductance.

In general, the groundwater monitoring wells to the south, southeast, and east of the PTL continue to show lower specific conductance values compared to the start of closure in 2008, while groundwater monitoring wells to the southwest and west show an overall increase in specific conductance values since that time. Specific conductance values have decreased since the start of closure in 2008 at all of the northeast monitoring locations with the exception of MW98-601B; however, specific conductance values at MW98-601B have decreased by 14 percent since the start of post-closure monitoring in 2011. The annual average specific conductance value at the north monitoring location (516B-B) was somewhat higher in 2021 compared to the start of closure in 2008 but has decreased by 9 percent since 2018.

Improvements to PTL water quality with respect to average annual specific conductance values in 2021 compared to the start of closure in 2008 are summarized in Table 7-1.

TABLE 7-1

SUMMARY OF POST-CLOSURE SPECIFIC CONDUCTANCE IMPROVEMENTS

Monitoring Location (Direction from PTL)	Percent Decrease of Annual Mean Specific Conductance from 2008 to 2021 (%)	2021 Annual Mean Specific Conductance (µmhos/cm)	Comments
MW01-602B (Northeast)	87	396	Met On-Site Threshold Criterion in April 2021 and October 2021
641 (Southeast)	60	762	-
MW02-801A (South)	56	1,919	Three- & Five-Year Mann-Kendall Decreasing Trends
200 (Southeast)	46	407	Met On-Site Threshold Criterion in April 2021 and October 2021 New Historical Minimum (April 2021)) Three-Year Mann-Kendall Decreasing Trend
MW-906B (Southeast)	44	316	Met On-Site Threshold Criterion in April 2021 and October 2021 Five-Year Mann-Kendall Decreasing Trend
MW-917 (East)	44	631	-
MW-916 (East)	41	754	Met On-Site Threshold Criterion in October 2021 [2]
P-911B (Northeast) [1]	34	681	New Historical Minimum (October 2021)
509B (Northeast) [1]	20	776	-
MW02-801B (South)	18	1,797	42 Percent Decrease Since 2011
MW98-601A (Northeast)	17	1,823	New Historical Minimum (April 2021) Three- & Five-Year Mann-Kendall Decreasing Trends
MW03-802A (South)	16	714	-
509A (Northeast) [1]	14	828	-
MW97-123 (Northeast)	6	1,102	38 Percent Decrease Since 2011
MW03-802B (South)	1	989	27 Percent Decrease Since 2016 Five-Year Mann-Kendall Decreasing Trend

Notes:

1. Monitoring locations 509A, 509B, and P11B began monitoring in 2010 and were monitored once in August 2010. The percent change at those locations are calculated from 2010 and 2021 data.
2. MW-916 has historically been considered an on-site well due to its locations relative to the landfill but is located slightly beyond the property boundary.

The decreases for monitoring locations located proximate to the Conventional Landfill perimeter (i.e., MW01-602B, MW98-601A, MW02-801A, MW02-801B, MW02-802A, and 641) are of particular significance because they are indicative of improvement to groundwater quality emanating from the Conventional Landfill.

The monitoring locations with greater average annual specific conductance values in 2021 compared to the start of closure in 2008 are MW03-803A (63 percent increase), MW-914B (60 percent increase), MW-914A (34 percent increase), MW03-803B (33 percent increase), MW03-804A (14 percent increase), MW98-601B (10 percent increase), and 516B-B (3 percent increase). Of note is that four of these seven monitoring locations have more recently begun to exhibit visual decreasing trends:

- MW98-601B (15 percent decrease since 2011);
- MW03-804A (11 percent decrease since 2016);
- 516B-B (9 percent decrease since 2018); and
- MW03-803A (5 percent decrease since 2018).

Off-Site Post-Closure Threshold Criteria

Groundwater quality improvements have occurred during the first eleven years of post-closure monitoring at both on-site and off-site groundwater monitoring locations. Water quality results are discussed in detail in Section 3.2 above, and water quality improvements are summarized here:

- For the third consecutive year in post-closure monitoring, DW04-109 has meet all three of its post-closure threshold criteria.
- DW-103 met the criterion for dissolved methane in 2021.
- While the criterion for specific conductance (i.e., upper limit of the 95 percent confidence interval for specific conductance for the past five years below the threshold criterion of 400 µmhos/cm) was exceeded at DW-103, both individual specific conductance measurements in 2021 were less than the threshold criterion.
- There were no MCL or MEG exceedances at DW04-109, and only sodium was detected at a concentration exceeding the MEG (at a value consistent with historical data) at DW-103.
- Monitoring wells MW-916 and MW-917 (near the site boundary) also showed water quality improvements:
    - Monitoring well MW-916 met the off-site post-closure threshold criteria for dissolved methane and water quality standards but did not yet meet the criterion for specific conductance.
    - Monitoring well MW-917 met the off-site post-closure threshold criterion for dissolved methane but did not yet meet the criteria for specific conductance values and water quality standards.

Surface Water Post-Closure Threshold Criteria

The 2021 surface water data continues to show that there are no adverse effects from landfill operations on water quality in Souadabscook Stream or the Cold Brook Stream tributary. There were no Maine Freshwater Criterion Continuous Concentration (MFCCC) exceedances from surface water locations during 2021 water quality sampling events for the parameters analyzed.

Site-Wide Dissolved Methane

Continued or sustained substantial improvement to site-wide water quality with respect to decreasing dissolved methane concentrations occurred on a site-wide basis during 2021. All of the eight on-site

dissolved methane monitoring locations had 2021 mean dissolved methane concentrations substantially lower than at the start of landfill closure activities in 2008 (see Table 3-1). There were no off-site post-closure threshold criterion exceedances for dissolved methane at the off-site monitoring locations during 2021. The substantial water quality improvements surrounding the PTL with respect to dissolved methane are attributed to both the decrease in methane being generated in the landfill and the methane gas removal from the landfill perimeter gas extraction wells surrounding the site. During 2021, a combined total of approximately 146 tons of methane were removed from landfill gas extraction wells PTGW-08-1, PTGW-08-9, PTGW-08-11, PTGW-08-12, and PTGW-08-13.

Site-Wide Arsenic

Arsenic increases in groundwater are not unexpected adjacent to the PTL following the closure and has been a topic of discussion with the MEDEP following the closure of the site. During the first few years of post-closure monitoring, arsenic concentrations generally increased at most on-site monitoring locations. In 2017 through 2021, arsenic concentrations were reported at lower concentrations than 2016 annual maximum values at site-wide monitoring locations. The improvements to water quality with respect to arsenic concentrations at PTL monitoring locations are discussed in Section 3.0.

Arsenic was not detected above its MCL and MEG of 0.01 mg/L at off-site monitoring locations DW-103, DW04-109, or MW-916 during 2021. While arsenic concentrations exceeded the MCL and MEG at MW-917 during both 2021 monitoring events, the detected concentrations have decreased from the historical maximum arsenic concentration at this location.

2021 Supplemental Sampling

Supplemental sampling at two monitoring locations in the southwest region of the PTL is primarily associated with the former leachate seeps identified and corrected in 2016. The rationale and scope for supplemental sampling and the actions to correct the seep are described in Section 3.1.2.

In addition to the monitoring of field parameters and dissolved methane, as specified in the post-closure EMP, MW03-802B and MW03-803A were sampled for a broader list of detection parameters, including VOCs, in October 2021. 2021 was the sixth year of supplemental sampling at these locations. In most cases, the supplemental sampling parameters were included in routine sampling prior to post-closure monitoring. The supplemental sampling results from 2016 through 2021 confirm many of the detection monitoring parameters at MW03-802B and MW03-803A, which had previously not been sampled since 2010, have increased since the start of the post-closure monitoring period.

MW03-803B and MW03-804A, which are also located on the southwest side of the landfill, have shown some similar water quality changes to those at MW03-802B and MW03-803A. Water quality at MW03-802B, MW03-803A, MW03-803B, and MW03-804A share some characteristics that may suggest influence from the abated leachate seeps from the landfill cover defects, including increasing dissolved oxygen and, by association, iron concentrations where monitored, which may be associated with the removal of the impacted soil from the leachate seeps cleaned up in 2016. In 2021, the dissolved oxygen concentrations at MW03-802B, MW03-803A, MW03-803B, and MW03-804A have returned to or have started to return to concentrations similar to those prior to the noted increases.

With more than five years of monitoring data since the corrective actions completed in 2016, there are many parameters at MW03-802B and MW03-803A that have remained below peak values detected in between 2016 and 2018 (see Table 3-5). Water quality at these wells shows some signs of overall improvement following abatement of the cover defects.

The results of the five-year Mann Kendall trend analyses show positive signs that the groundwater quality at these monitoring locations has stabilized or begun to improve, as discussed in detail in Section 3.1.2.

Based on these noted groundwater quality trends and the water quality data summarized in Table 3-5, water quality at these wells shows some signs of overall improvement following abatement of the cover defects. Continued monitoring in 2022 will be useful to determine if these tendencies continue. We recommend that supplemental sampling at these two locations be continued in 2022 as they were done in 2021.

Groundwater Extraction Corrective Actions

Corrective activities south of the landfill comprise groundwater extraction from the PDPS and from two wells (EW-2R and EW-3R) proximate to the perimeter of the Conventional Landfill. Corrective activities northeast of the landfill comprise groundwater extraction from four wells (EW-5R, EW-6R, EW-101, and

EW-102) proximate to the perimeter of the Conventional Landfill. These corrective activities and volumes of extracted groundwater are discussed in Section 2.3.

The 2021 pumping totals from the PTL groundwater extraction wells successfully maintained improved production compared to recent years prior to 2020. The greater extraction rates northeast and south of the Conventional Landfill during closure and early into the post-closure period compared to more recent years prior to 2020 appears to correlate with groundwater quality trends at some northeast and south PTL groundwater monitoring locations during these periods. Optimizing groundwater extraction from the northeast and south groundwater extraction wells (as well as at the PDPS) during the remainder of closure will play a key role in achieving the PTL on-site threshold criteria. Future optimization of groundwater extraction will serve to both: (1) accelerate capture of the finite influences on water quality from the Conventional Landfill; and (2) serve as a hydraulic barrier between the Conventional Landfill and groundwater further downgradient from it.

7.2 Recommendations

The 2021 water quality data show the continued influence of closure and the installed corrective actions at the PTL site, including landfill gas and groundwater extraction systems. SME recommends the continued operations of these corrective action systems. The vacuum applied to the gas extraction location for the Conventional Landfill should continue to be closely monitored and adjusted since historical monitoring data demonstrate that keeping a vacuum on these wells is having a beneficial effect on the water quality around the site. Optimizing groundwater extraction from the northeast and south groundwater extraction wells (as well as at the PDPS) during the remainder of closure will play a key role in achieving the PTL on-site threshold criteria. SME recommends continued operation of EW-2R, EW-3R, EW-5R, EW-6R, EW-101, and EW-102 at production rates similar to those achieved in the early 2010s.

SME recommends continued supplemental sampling at MW03-802B and MW03-803A to monitor water quality changes associated with the defects in the cover on the southwest side of the landfill identified and reported to MEDEP by NEWSME in June 2016 and repaired on July 10, 2016.

As discussed herein, a change from biannual to annual sampling for 2021 to 2040, in accordance with the EMP, was proposed to MEDEP in 2021 and approved with conditions. Annual site water quality samples will be collected during the late summer/early fall of 2022. Monitoring wells MW03-802B, MW03-802A, MW03-803A, MW97-123, and 509B will also be sampled during the spring of 2022, as recommended by MEDEP.

Based on the post-closure monitoring results from the site during the first eleven years of post-closure monitoring, SME recommends additional changes to the sample parameter list for two monitoring locations. SME proposes removal of the indicator parameter list and expanded parameter list for southeast monitoring locations 200 and MW-906B. With MEDEP approval, these southeast monitoring

locations will be monitored for field parameters to evaluate the on-site post-closure threshold criterion for specific conductance values under 500 µmhos/cm. The rationale for these changes are:

- The specific conductance values at MW-906B have been under the threshold value for on-site groundwater since July 2014. During the post-closure monitoring period, the specific conductance values at monitoring location 200 have periodically been under the threshold value for on-site groundwater since 2013 and were under the threshold during both April 2021 and October 2021.
- Multiple parameters at southeast monitoring locations 200 and MW-906B, as well as southeast monitoring location 641, have steadily decreased during the first eleven years of post-closure monitoring.
    - At monitoring location 200, the following parameters have lower annual mean values in 2021 compared to the start of post-closure monitoring in 2011: specific conductance (31 percent decrease), arsenic (23 percent decrease), sodium (56 percent decrease), total dissolved solids (26 percent decrease), magnesium (41 percent decrease), sulfate (81 percent decrease), bicarbonate (9 percent decrease), organic carbon (32 percent decrease), and chloride (73 percent decrease).
    - At monitoring location MW-906B, the following parameters have lower annual mean values in 2021 compared to the start of post-closure monitoring in 2011: specific conductance (45 percent decrease), arsenic (approximately 35 percent or more decrease), calcium (19 percent decrease), sodium (70 percent decrease), total dissolved solids (31 percent decrease), manganese (85 percent decrease), sulfate (approximately 24 percent or more decrease), and chloride (72 percent decrease).
- Similar improvements at southeast monitoring location 641 have been observed during the first eleven years of post-closure monitoring, but the 2021 mean specific conductance value at 641 of 762 µmhos/cm remains above those measured at MW-906B and 200. Southeast monitoring location 641 will still be monitored for field parameters, the indicator parameter list, the expanded parameter list, and dissolved methane.

APPENDIX A

2021 AND HISTORICAL WATER QUALITY DATA

SME
SEVEE & MAHER
ENGINEERS

REPORT PREPARED: 3/14/2022 07:21

FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(200) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
200													
4/30/2008	XX	GW200X700	LF	956	6.9	4.8	92.5	86.2	6.3	169	0.8		0.5
7/22/2008	XX	GW200X72B	LF	738	6.8	13	92.5	81.41	11.09	114	0.2		1.3
10/7/2008	XX	GW200X753	LF	586	6.8	12.3	92.5	84.5	8	81	0.2	20.21	1
4/21/2009	XX	GW200X77E	LF	645	7	5.1	92.5	84.08	8.42	63	0.3		0
7/22/2009	XX	GW200X7A3	LF	621	6.9	11.8	92.5	83.24	9.26	434	0.2		0.3
10/20/2009	XX	GW200X7EJ	LF	679	7.3	10.7	92.5	80.5	12	-9	0.2	20.2	0
3/31/2010	XX	GW200X7HB	LF	577	6.8	5.6	92.5	86.8	5.7	190	0.2		0.4
7/27/2010	XX	GW200X7JF	LF	643	6.9	11.7	92.5	80.52	11.98	101	0		0.8
10/5/2010	XX	GW200X823	LF	782	6.8	13.3	92.5	83.56	8.94	133	0.6	20.2	0
4/12/2011	XX	GW200X89B	LF	629	7.1	6.5	92.5	85.5	7	190	0.6		1.7
7/27/2011	XX	GW200X8D7	LF	517	6.2	12.8	92.5	80.8	11.7	105	0.4		0
10/17/2011	XX	GW200X8B9	LF	614	7.4	13.8	92.5	84.05	8.45	88	0.3	20.2	3.5
4/11/2012	XX	GW200X8HE	LF	659	7.3	5.7	92.5	83.08	9.42	107	0.3		4.5
7/11/2012	XX	GW200X8JH	LF	618	7.2	11.3	92.5	83.65	8.85	211	1		0
10/3/2012	XX	GW200X91J	LF	654	6.9	13.7	92.5	83.45	9.05	98	0.2	20.21	0
4/10/2013	XX	GW200X93J	LF	462	6.9	5.7	92.5	85.55	6.95	174	0.3		3.4
7/10/2013	XX	GW200X95J	LF	548	7.1	11	92.5	82.95	9.55	117	1		0.6
10/23/2013	XX	GW200X99I	LF	563	7.4	12.2	92.5	81.6	10.9	84	0.3	20.21	0.9
4/30/2014	XX	GW200X9C1	LF	472	7.1	5.2	92.5	85.44	7.06	212	0.3		2.5
7/16/2014	XX	GW200X9E3	LF	488	7.1	12	92.5	82.85	8.65	94	0.3		4.2
10/1/2014	XX	GW200X9G2	LF	475	7	12.3	92.5	80.46	12.04	99	0.2	20.2	2.2
4/15/2015	XX	GW200XA1G	LF	503	7.2	4.6	92.5	87.4	5.1	117	0.1		0.2
7/22/2015	XX	GW200XA40	LF	485	7.1	10.7	92.5	81.62	10.88	109	0.1		3.1
10/21/2015	XX	GW200XA66	LF	691	7.1	12	92.5	82.68	9.82	115	0.1 U	20.2	0.3
4/27/2016	XX	GW200XA87	LF	440	7.3	4.6	92.5	84.7	7.8	94	0.22		4.7
10/19/2016	XX	GW200XAC8	LF	633	7.2	12.2	92.5	79.1	13.4	88	0.1	20.2	0.3
4/26/2017	XX	GW200XAE8	LF	362	7.2	4.8	92.5	85.8	6.7	111	0.1		2.5
10/4/2017	XX	GW200XAG6	LF	518	7.6	11.2	92.5	79.88	12.62	96	0.1	20.2	0.4
4/11/2018	XX	GW200XAI4	LF	414	7.4	3.9	92.5	86.2	6.3	179	0.1		0.6
10/11/2018	XX	GW200XB04	LF	620	7.3	10.9	92.5	79.95	12.55	90	0.1	20.2	1.4
4/10/2019	XX	GW200XB22	LF	611	7.4	2.9	92.5	85.8	6.7	132	0.3		2.1
10/16/2019	XX	GW200XB45	LF	585	7.5	12.7	92.5	82.34	10.16	100	0.3	20.25	2.8
4/22/2020	XX	GW200XB63	LF	436	7.7	3.7	92.5	85.99	6.51	104	0.1		2.1
10/14/2020	XX	GW200XB85	LF	595	7.4	11.6	92.5	79.7	12.8	89	0.2	20.25	1.9
4/28/2021	XX	GW200XBA2	LF	347	7.2	6.3	92.5	83.56	8.94	105	0.2		2.5
10/27/2021	XX	GW200XBCC	LF	467	6.9	11.7	92.5	82.2	10.3	107	1	21.6	0.5
509A													
8/31/2010	XX	GW509A88E		1056	7.1	11.7	116.95	108.4	8.55				
4/11/2011	XX	GW509A8AC	LF	1012	6.9	7.4	116.95	109.75	7.2	4	0.2		1.8
7/27/2011	XX	GW509A8E6	LF	357	7	13.7	116.95	106.15	10.8	67	0.4		0
10/18/2011	XX	GW509A8CA	LF	1058	7.2	11.4	116.95	112.25	4.7	181	0.4	24.4	1.2
4/10/2012	XX	GW509A8IF	LF	890	7	6.6	116.95	109.07	7.88	-39	0.4		0
7/10/2012	XX	GW509A90H	LF	941	6.8	13	116.95	103.43	13.52	7	0.6		0
10/2/2012	XX	GW509A92H	LF	1208	6.8	12.4	116.95	109.09	7.86	-48	0.6	21.07	0
4/9/2013	XX	GW509A950	LF	860	6.8	5.4	116.95	109.53	7.42	149	0.6		0.1
7/9/2013	XX	GW509A96J	LF	923	6.6	11.6	116.95	108.6	8.35	13	0.4		1.3
10/22/2013	XX	GW509A9AG	LF	931	6.8	11.7	116.95	108.65	8.3	-25	0.4	24.32	0.2

SUMMARY REPORT
Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
(509A)													
4/29/2014	XX	GW509A9D2	LF	846	7.1	6.9	116.95	109.28	7.67	130	0.3		0.8
7/15/2014	XX	GW509A9F3	LF	1028	6.7	12.9	116.95	108.8	8.15	192	0.4		1.5
9/30/2014	XX	GW509A9H0	LF	1144	6.6	11.2	116.95	108.4	8.55	171	0.4	24.3	0.4
4/14/2015	XX	GW509AA2H	LF	891	6.8	6.5	116.95	109.85	7.1	133	1.1		0.5
7/21/2015	XX	GW509AA50	LF	1074	6.7	11.9	116.95	108.42	8.53	163	0.6		0.6
10/20/2015	XX	GW509AA74	LF	975	6.8	9.8	116.95	108.65	8.3	147	0.4	24.3	0.1
4/26/2016	XX	GW509AA95	LF	933	6.9	5.6	116.95	109.15	7.8	166	0.4		1
10/18/2016	XX	GW509AAD4	LF	1234	6.7	10.3	116.95	108.05	8.9	177	0.7	24.4	4.3
4/25/2017	XX	GW509AAF4	LF	869	6.8	6.6	116.95	109.25	7.7	158	0.7		1.7
10/3/2017	XX	GW509AAH2	LF	1117	6.9	10.2	116.95	108.25	8.7	178	2.2	24.4	1.1
4/10/2018	XX	GW509AAJ0	LF	988	6.9	3.5	116.95	109.4	7.55	153	0.3		2
10/11/2018	XX	GW509AB10	LF	1150	6.9	10.3	116.95	108.4	8.55	237	0.4	24.4	1.8
4/9/2019	XX	GW509AB2I	LF	800	7	4.5	116.95	109.06	7.89	186	0.6		2.8
10/16/2019	XX	GW509AB51	LF	1063	6.9	10	116.95	108.75	8.2	161	0.5	24.4	3.8
4/21/2020	XX	GW509AB6J	LF	820	6.2	5.3	116.95	108.85	8.1	154	0.2		3.4
10/14/2020	XX	GW509AB91	LF	1091	7.1	10.8	116.95	108.85	8.1	169	0.4	24.2	1.5
4/27/2021	XX	GW509ABAI	LF	739	7.4	7.5	116.95	109	7.95	158	0.2		3
10/26/2021	XX	GW509ABD8	LF	917	6.7	10.7	116.95	108.82	8.13	165	0.4	24.2	4.1
509B													
8/31/2010	XX	GW509B86F		1077	6.9	12.7	117.11	108.36	8.75				
4/11/2011	XX	GW509B899	LF	889	6.8	7.2	117.11	109.81	7.3	40	0.3		1.3
7/27/2011	XX	GW509B8D5	LF	580	6.8	11.6	117.11	105.91	11.2	187	1		0
10/18/2011	XX	GW509B8B7	LF	940	6.9	11.7	117.11	109.48	7.63	287	0.6	17.72	1.1
4/10/2012	XX	GW509B8HC	LF	782	6.9	6.2	117.11	109	8.11	34	0.3		0.6
7/10/2012	XX	GW509B8JF	LF	817	6.7	13.6	117.11	108.92	8.19	66	0.4		0
10/2/2012	XX	GW509B91H	LF	1136	6.6	13.1	117.11	109.03	8.08	295	0.4	17.68	0
4/9/2013	XX	GW509B93H	LF	756	6.7	4.4	117.11	109.31	7.8	238	0.3		0.3
7/9/2013	XX	GW509B95H	LF	775	6.6	12.8	117.11	108.84	8.27	227	0.8		1.7
10/22/2013	XX	GW509B99G	LF	786	6.7	12.6	117.11	108.61	8.5	13	0.4	17.71	0.2
4/29/2014	XX	GW509B9BJ	LF	827	7	5.1	117.11	109.21	7.9	245	0.3		0.8
7/15/2014	XX	GW509B9E1	LF	1039	6.6	12.4	117.11	108.86	8.28	319	0.4		1.2
9/30/2014	XX	GW509B9G0	LF	1120	6.6	11.9	117.11	108.31	8.8	232	0.4	17.65	0.5
4/14/2015	XX	GW509BA1E	LF	920	6.7	5.1	117.11	109.91	7.2	208	1.2		0.5
7/21/2015	XX	GW509BA3I	LF	1068	6.6	12.2	117.11	108.41	8.7	196	0.5		0.5
10/20/2015	XX	GW509BA64	LF	961	6.7	10	117.11	108.6	8.51	199	0.6	17.6	0.1
4/26/2016	XX	GW509BA85	LF	951	6.9	5.5	117.11	109.06	8.05	193	0.4		0.9
10/18/2016	XX	GW509BAC6	LF	1249	6.7	10.8	117.11	108.11	9	216	0.7	17.72	1.9
4/25/2017	XX	GW509BAE6	LF	889	6.8	4.8	117.11	109.31	7.8	174	0.6		1
10/3/2017	XX	GW509BAG4	LF	1119	6.8	10.8	117.11	108.19	8.92	193	2.9	17.72	0.7
4/10/2018	XX	GW509BAI2	LF	934	6.8	3.4	117.11	109.49	7.62	195	3.6		0.7
10/11/2018	XX	GW509BB02	LF	1134	6.8	11.3	117.11	110.51	6.6	351	0.1	17.72	2.1
4/9/2019	XX	GW509BB20	LF	789	6.9	3.4	117.11	109.02	8.09	209	0.7		2.2
10/16/2019	XX	GW509BB43	LF	1098	6.8	11.1	117.11	108.71	8.4	170	0.4	17.72	2.1
4/21/2020	XX	GW509BB61	LF	829	6.1	4.5	117.11	109.19	7.92	142	0.2		2.3
10/14/2020	XX	GW509BB83	LF	1093	7.1	11.4	117.11	108.71	8.4	149	0.2	17.75	0.8
4/27/2021	XX	GW509BBA0	LF	698	7.2	6.7	117.11	108.91	8.2	143	0.3		1.2
10/26/2021	XX	GW509BBCA	LF	853	6.6	11.3	117.11	108.68	8.43	147	0.2	17.72	1.8
516B-B													

SUMMARY REPORT

Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(516B-B) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
4/30/2008	XX	GW516B701	LF	1084	7.3	7.5			9.2	211	3		0.9
7/22/2008	XX	GW516B72C	LF	964	7.1	12.9			10.63	363	2		1.6
10/7/2008	XX	GW516B754	LF	792	7.3	14.1			9.5	320	4	43.8	0.9
4/22/2009	XX	GW516B77F	LF	1035	7	9.2			9.4	314	1		0
7/21/2009	XX	GW516B7A4	LF	1014	7.1	14.7			9.62	367	1		0.2
10/20/2009	XX	GW516B7F0	LF	945	7.5	8.3			9.9	49	0.4	43.8	0
3/31/2010	XX	GW516B7HC	LF	948	7	7.6			8.67	300	1		0
7/28/2010	XX	GW516B7JG	LF	1031	7	12.6			10.9	299	1		0.6
10/5/2010	XX	GW516B824	LF	1074	7.2	12			9.82	270	0.4	43.8	0
4/12/2011	XX	GW516B897	LF	1036	7.3	11.2			8.8	313	2		0.3
7/26/2011	XX	GW516B8D3	LF	967	7	13.5			11	340	0.8		0
10/17/2011	XX	GW516B8B5	LF	1012	7.6	12			8.9	424	0.4	43.82	2
4/11/2012	XX	GW516B8HA	LF	1025	7.4	8.4			9.64	250	2		0
7/11/2012	XX	GW516B8JD	LF	1032	7.3	13.2			9.92	329	0.6		0
10/2/2012	XX	GW516B91F	LF	1004	7.1	12.3			9.62	255	0.3	43.8	0
4/9/2013	XX	GW516B93F	LF	1001	7.5	7.8			9.7	456	2		1.1
7/9/2013	XX	GW516B95F	LF	1076	7.3	13.4			9.75	241	0.8		0.4
10/22/2013	XX	GW516B99E	LF	974	7.3	11.2			9.9	-19	0.4	43.8	0.2
4/30/2014	XX	GW516B9BH	LF	1074	7.5	7.7			9.2	1	0.4		.6
7/15/2014	XX	GW516B9DJ	LF	1048	7.1	13.9			9.6	111	0.3		1
9/30/2014	XX	GW516B9FI	LF	1019	7.2	10.4			11	151	0.4	43.8	0.3
4/14/2015	XX	GW516BA1C	LF	981	7.2	9.5			8.95	5	0.6		1.8
7/20/2015	XX	GW516BA3G	LF	1100	7.1	16.5			10.1	26	0.4		1.2
10/20/2015	XX	GW516BA62	LF	1030	7.1	10			9.9	54	0.4	43.8	1.1
4/26/2016	XX	GW516BA83	LF	1103	7.3	7.6			9.55	69	0.4		0.6
10/18/2016	XX	GW516BAC4	LF	1141	7.1	10.7			14	99	0.6	43.9	1.9
4/25/2017	XX	GW516BAE4	LF	1062	7.2	9.7			9.3	112	1.6		6.5
10/3/2017	XX	GW516BAG2	LF	1111	7.4	10.6			13.12	78	0.4	43.85	1.2
4/10/2018	XX	GW516BAJG	LF	1169	7.3	6.6			9.3	241	1.9		1
10/8/2018	XX	GW516BB00	LF	1109	7.3	10.1			11.2	66	0.5	43.85	2.1
4/9/2019	XX	GW516BB3E	LF	1050	7.3	6.5			9.27	182	0.4		1.5
10/16/2019	XX	GW516BB41	LF	1076	7.2	10.6			9.52	48	1.7	43.85	2.5
4/22/2020	XX	GW516BB7F	LF	1004	6.4	6.4			9	155	0.4		3.9
10/14/2020	XX	GW516BB81	LF	1080	7.4	11.4			11	85	0.3	44	1.3
4/27/2021	XX	GW516BBBD	LF	949	7.5	8.7			9.3	230	0.2		3.2
10/26/2021	XX	GW516BBC8	LF	1118	7	9.2			9.35	79	0.4	43.83	4.3
641													
4/29/2008	XX	GW641X708	LF	1941	6.5	8.9	107.47	86.74	20.73	208	1		1.6
7/21/2008	XX	GW641X72J	LF	1955	6.4	19.6	107.47	85.67	21.8	21	0.6		2.8
10/7/2008	XX	GW641X75B	LF	1773	6.5	13.2	107.47	87.45	20.02	39	0.6	34.31	0.9
4/20/2009	XX	GW641X782	LF	2860	6.7	13.2	107.47	87.57	19.9	46	0.8		1.9
7/20/2009	XX	GW641X7AB	LF	3290	6.5	17	107.47	87.05	20.42	-17	0.6		0.9
10/20/2009	XX	GW641X7F7	LF	3060	7.2	7.9	107.47	85.7	21.77	-42	0.6	34.3	0
3/29/2010	XX	GW641X7HJ	LF	2380	6.7	8.3	107.47	88.07	19.4	-38	0.6		0
7/27/2010	XX	GW641X803	LF	1707	6.3	18.6	107.47	84.73	22.74	25	0.6		1
10/5/2010	XX	GW641X82B	LF	1691	6.4	14.1	107.47	87.29	20.18	123	1	34.3	0
4/13/2011	XX	GW641X89C	LF	1877	6.7	8.9	107.47	87.47	20	101	0.6		1
7/26/2011	XX	GW641X8D8	LF	1519	6.9	16.6	107.47	84.59	22.88	126	1		0.8
10/19/2011	XX	GW641X8BA	LF	1618	6.8	11.4	107.47	87.77	19.7	-48	0.3	34.3	2.2

SUMMARY REPORT

Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(641) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
4/10/2012	XX	GW641X8HF	LF	1124	6.9	12	107.47	86.63	20.84	-23	0.4		0
7/10/2012	XX	GW641X8JI	LF	984	6.7	17.2	107.47	86.97	20.5	-22	0.4		0
10/1/2012	XX	GW641X920	LF	3860	6.6	13.3	107.47	87.22	20.25	-61	0.4	34.31	0
11/7/2012	XX	GW641X93E	LF	1540	6.7	10.6	107.47	88.37	19.1	-65	0.3	34.27	1.3
4/9/2013	XX	GW641X940	LF	1699	6.9	6.8	107.47	88.47	19	103	0.4		1.2
7/9/2013	XX	GW641X960	LF	815	6.6	16.6	107.47	86.4	21.07	11	0.6		2.4
10/21/2013	XX	GW641X99J	LF	1140	6.5	15.3	107.47	84.99	22.48	85	0.6	34.35	0.5
4/30/2014	XX	GW641X9C2	LF	1049	6.7	9	107.47	89.37	18.1	154	0.3		1
7/16/2014	XX	GW641X9E4	LF	1184	6.6	14.7	107.47	86.62	20.85	136	0.4		0.7
10/1/2014	XX	GW641X9G3	LF	922	6.7	12.6	107.47	84.72	22.75	66	0.4	34.32	0.2
4/15/2015	XX	GW641XA1H	LF	1368	6.9	10.3	107.47	90.53	16.94	127	0.6		0.2
7/22/2015	XX	GW641XA41	LF	1018	7	14.5	107.47	85.87	21.6	134	0.4		0.3
10/20/2015	XX	GW641XA67	LF	933	7	13.8	107.47	86.11	21.36	143	0.4	34.32	1.2
4/26/2016	XX	GW641XA88	LF	1301	7	7.6	107.47	87.57	19.9	110	0.5		0.9
10/19/2016	XX	GW641XAC9	LF	822	6.9	15.3	107.47	84.41	23.06	119	0.4	34.33	0.4
4/25/2017	XX	GW641XAE9	LF	1174	7	9	107.47	88.32	19.15	105	0.4		0.4
10/3/2017	XX	GW641XAG7	LF	874	7.1	17.3	107.47	84.07	23.4	94	1	34.35	0.8
4/10/2018	XX	GW641XAI5	LF	1250	7.1	8	107.47	89.06	18.41	157	1.4		0.3
10/8/2018	XX	GW641XB05	LF	972	7	11.9	107.47	84.27	23.2	120	1.1	34.35	1.6
4/9/2019	XX	GW641XB23	LF	815	7.2	6.3	107.47	88.91	18.56	125	0.7		1.1
10/16/2019	XX	GW641XB46	LF	780	7	12.6	107.47	85.5	21.97	97	0.6	34.35	3.3
4/22/2020	XX	GW641XB64	LF	912	7.4	4.9	107.47	89.43	18.04	87	0.7		1.3
10/14/2020	XX	GW641XB86	LF	983	7	14.2	107.47	84.49	22.98	146	2.5	34.25	1
4/27/2021	XX	GW641XBA3	LF	849	7.3	14.6	107.47	86.17	21.3	97	1		3.2
10/27/2021	XX	GW641XBCD	LF	675	6.9	11.4	107.47	84.38	23.09	132	0.4	34.24	0.6
MW01-602B													
4/28/2008	XX	GW602B707	LF	4220	6.9	12.4	131.11	112.61	18.5	75	1		0
9/8/2008	XX	GW602B72I	LF	3830	6.5	15.1	140.1	110.4	29.7	66	0.6	50.45	2.2
10/6/2008	XX	GW602B75A	LF	1122	6.8	11.3	140.1	113	27.1	50	0.6	50.45	5
4/22/2009	XX	GW602B781	LF	493	7.1	8.3	140.1	113.7	26.4	22	0.4		5.1
7/20/2009	XX	GW602B7AA	LF	661	6.7	16.2	140.1	113.05	27.05	107	0.4		5.3
10/19/2009	XX	GW602B7F6	LF	1930	6.9	10.6	140.1	110.3	29.8	144	0.2	50.45	0.2
3/29/2010	XX	GW602B7HI	LF	642	6.9	7.6	140.1	114.2	25.9	11	0.4		0
7/26/2010	XX	GW602B802	LF	2400	6.7	13.9	140.1	107	33.1	35	3		0
10/4/2010	XX	GW602B82A	LF	914	6.8	12.8	140.1	113.1	27	54	0.1	50.43	0
4/12/2011	XX	GW602B8AB	LF	550	7.2	8.3	140.1	115.15	24.95	143	2		0
7/25/2011	XX	GW602B8E7	LF	1043	6.7	13.3	140.1	108.95	31.15	89	1		2.1
4/9/2012	XX	GW602B8IE	LF	578	6.9	8.3	140.1	112.42	27.68	152	0.6		2.3
7/9/2012	XX	GW602B90G	LF	606	6.8	8.9	140.1	112.6	27.5	-15	0.2		1.7
4/9/2013	XX	GW602B94J	LF	401	6.8	6.7	140.1	114.3	25.8	-92	0.8		0.6
7/8/2013	XX	GW602B96I	LF	462	7.1	15.7	140.1	111.9	28.2	82	1		1.3
4/29/2014	XX	GW602B9D1	LF	259	7.3	6.9	140.1	114.24	25.86	172	0.3		2.1
7/14/2014	XX	GW602B9F2	LF	493	7.2	8.3	140.1	113.05	27.05	79	0.3		0.6
4/13/2015	XX	GW602BA2G	LF	441	7.2	6.5	140.1	115.69	24.41	148	0.1		0.5
7/20/2015	XX	GW602BA4J	LF	483	7.4	8.6	140.1	109.74	30.36	137	0.1 U		0.8
4/25/2016	XX	GW602BAA3	LF	520	7.4	5.7	140.1	113.83	26.27	114	0.1		0.6
10/18/2016	XX	GW602BADI	LF	660	6.8	9.5	140.1	107.63	32.47	105	0.1	50.45	0.3
4/24/2017	XX	GW602BAFI	LF	487	7.2	7.2	140.1	113.95	26.15	144	0.1		0.4
10/3/2017	XX	GW602BAHG	LF	679	7.5	10.4	140.1	108.6	31.5	132	0.1	50.45	0.5

SUMMARY REPORT
Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW01-602B) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
4/10/2018	XX	GW602BAJE	LF	424	7.4	5.5	140.1	114.91	25.19	267	1.8		0.3
10/9/2018	XX	GW602BB1E	LF	658	7.6	11.3	140.1	109.25	30.85	217	1	50.45	1.2
4/8/2019	XX	GW602BB3C	LF	389	7.3	5.4	140.1	114.8	25.3	148	0.1 U		1.5
10/15/2019	XX	GW602BB5F	LF	676	7.4	10.3	140.1	111.5	28.6	129	0.5	50.45	2.3
4/20/2020	XX	GW602BB7D	LF	459	7.4	5.9	140.1	114.95	25.15	171	0.1		0.5
10/14/2020	XX	GW602BB9F	LF	631	7.3	9.8	140.1	109.4	30.7	132	0.3	50.45	1.2
4/27/2021	XX	GW602BBBB	LF	368	7.1	7.4	140.1	112.18	27.92	114	0.1		0.1
10/27/2021	XX	GW602BBE2	LF	424	6.8	9.6	140.1	110.9	29.2	124	0.5	50.45	1.5
MW02-801A													
4/30/2008	XX	GW801A709	LF	4370	7.2	10.3	112.9	86.7	26.2	196	3		1.8
7/22/2008	XX	GW801A730	LF	4530	6.3	17.6	112.9	85.59	27.31	207	2		2.3
10/8/2008	XX	GW801A75C	LF	4090	6.3	17.1	112.9	86	26.9	261	2	60.8	18.6
4/22/2009	XX	GW801A783	LF	4080	6.7	10.7	112.9	86.48	26.42	43	2		10
7/22/2009	XX	GW801A7AC	LF	4450	6.7	13.2	112.9	86.35	26.55	229	1		11
10/21/2009	XX	GW801A7F8	LF	6490	6.6	15.3	112.9	85.35	27.55	207	2	60.88	3.2
3/30/2010	XX	GW801A7I0	LF	4170	6.4	7.7	112.9	86.8	26.1	287	2		4.1
7/28/2010	XX	GW801A804	LF	3850	6.4	18.5	112.9	85.25	27.65	111	2		0.2
10/4/2010	XX	GW801A82C	LF	4520	6.6	12	112.9	85.15	27.75	152	1	60.85	1.6
4/11/2011	XX	GW801A89F	LF	4240	7	7.9	112.9	86.95	25.95	134	5		2.5
7/25/2011	XX	GW801A8DB	LF	3610	6.8	15.3	112.9	85.6	27.3	108	3		2.1
10/17/2011	XX	GW801A8BD	LF	3880	7.2	13.2	112.9	86.05	26.85	151	0.4	60.88	0.6
4/9/2012	XX	GW801A8HI	LF	3730	6.6	11.9	112.9	86.2	26.7	354	1		2.4
7/9/2012	XX	GW801A901	LF	3630	6.7	14.6	112.9	86.5	26.4	97	1		2.2
10/3/2012	XX	GW801A923	LF	4020	6.7	11.8	112.9	85.67	27.23	34	0.6	60.76	0
4/9/2013	XX	GW801A943	LF	3520	6.4	9.4	112.9	86.85	26.05	234	1		4.4
7/8/2013	XX	GW801A963	LF	3600	6.7	16.1	112.9	86.25	26.65	111	1		1.5
10/21/2013	XX	GW801A9A2	LF	3390	7	15.6	112.9	85.6	27.3	135	3	60.88	1.2
4/28/2014	XX	GW801A9C5	LF	3530	6.5	10.7	112.9	87.5	25.4	188	3		1
7/14/2014	XX	GW801A9E7	LF	3410	6.7	15.8	112.9	86.24	26.66	142	1		2.2
9/29/2014	XX	GW801A9G6	LF	3330	7	16.8	112.9	85.15	27.75	95	1	60.88	5.4
4/13/2015	XX	GW801AA20	LF	3271	6.6	11.2	112.9	87.05	25.85	155	1.6		3.4
7/20/2015	XX	GW801AA44	LF	3044	6.8	11.3	112.9	85.65	27.25	168	0.1		0.8
10/19/2015	XX	GW801AA6A	LF	3027	6.6	11.2	112.9	85.35	27.55	337	0.5	60.78	1.2
4/25/2016	XX	GW801AA8B	LF	2776	6.8	11.3	112.9	86.98	25.92	145	0.1		1.3
10/17/2016	XX	GW801AACC	LF	2876	6.6	14	112.9	84.5	28.4	89	0.3	60.88	1.1
4/24/2017	XX	GW801AAEC	LF	2537	6.7	11.9	112.9	86.75	26.15	152	0.5		1.3
10/2/2017	XX	GW801AAGA	LF	2558	7.2	15.6	112.9	84.8	28.1	145	2.5	60.88	1.3
4/9/2018	XX	GW801AAI8	LF	2568	6.8	10.1	112.9	87.07	25.83	233	1.2		1.1
10/9/2018	XX	GW801AB08	LF	2870	7	14.1	112.9	84.7	28.2	229	0.4	60.88	1.4
4/8/2019	XX	GW801AB26	LF	2381	6.8	9.7	112.9	87.18	25.72	163	0.4		3.1
10/15/2019	XX	GW801AB49	LF	2551	7.1	11.6	112.9	85.8	27.1	164	1.9	60.87	3.4
4/20/2020	XX	GW801AB67	LF	2378	7	11.9	112.9	88.06	24.84	228	1.7		4.2
10/14/2020	XX	GW801AB89	LF	1932	7	14	112.9	84.89	28.01	189	1.7	60.82	2.4
4/26/2021	XX	GW801ABA6	LF	1896	6.8	11.6	112.9	86.15	26.75	118	0.5		2.1
10/27/2021	XX	GW801ABCG	LF	1942	6.9	11.5	112.9	85.75	27.15	144	0.2	60.85	1.1
MW02-801B													
4/30/2008	XX	GW801B70B	LF	1092	7	10.7	112.61	87.11	25.5	151	4		1.2
7/22/2008	XX	GW801B732	LF	4530	6.3	11.9	112.61	86.21	26.4	163	0.8		1

SUMMARY REPORT
Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Collection Method	Specific Conductance	pH	Temperature	Water Level Reference Point	Water Level Elevation	Water Level Depth	Eh	Dissolved Oxygen	Well Depth	Turbidity (field)
			-	µmhos/cm @25°C	STU	Deg C	Feet	Feet	Feet	mV	mg/L	Feet	NTU
(MW02-801B)													
10/8/2008	XX	GW801B75E	LF	950	6.6	12.9	112.61	86.01	26.6	385	0.8	32.98	10.1
4/22/2009	XX	GW801B785	LF	3260	6.7	10.4	112.61	87.01	25.6	262	3		12.1
7/22/2009	XX	GW801B7AE	LF	4340	6.4	12	112.61	86.86	25.75	216	1		7.6
10/21/2009	XX	GW801B7FA	LF	5850	6.7	11.8	112.61	85.61	27	247	1	33.01	6.6
3/30/2010	XX	GW801B7I2	LF	3660	6.3	9.5	112.61	87.51	25.1	167	1		1.9
7/28/2010	XX	GW801B806	LF	4210	6.5	18.3	112.61	85.66	26.95	205	2		8.2
10/4/2010	XX	GW801B82E	LF	4400	6.6	12.4	112.61	85.36	27.25	164	2	32.9	7.2
4/11/2011	XX	GW801B8B1	LF	2210	7	10.8	112.61	87.31	25.3	148	2		8.5
7/25/2011	XX	GW801B8EH	LF	2970	6.4	11.9	112.61	86.57	26.04	193	4		8.5
10/17/2011	XX	GW801B8CJ	LF	4110	6.9	11.9	112.61	86.11	26.5	171	1	32.9	0.5
4/9/2012	XX	GW801B8J4	LF	3520	6.5	10.5	112.61	86.81	25.8	222	0.6		7.6
7/9/2012	XX	GW801B916	LF	3470	6.7	11.5	112.61	87.22	25.39	-42	0.6		3.2
10/3/2012	XX	GW801B936	LF	3960	6.7	11.9	112.61	85.72	26.89	111	0.8	32.94	0
4/9/2013	XX	GW801B959	LF	3490	6.5	9.3	112.61	87.31	25.3	174	0.8		5.1
7/8/2013	XX	GW801B978	LF	3340	6.8	16.1	112.61	86.98	25.63	188	6		12.2
10/21/2013	XX	GW801B9B5	LF	3620	6.8	12.3	112.61	86.26	26.35	134	0.6	32.9	3.5
4/28/2014	XX	GW801B9DB	LF	3510	6.5	10.1	112.61	87.58	25.03	284	4		3.4
7/14/2014	XX	GW801B9FC	LF	3570	6.8	12.9	112.61	86.71	25.9	122	1		1.8
9/29/2014	XX	GW801B9H9	LF	3700	6.8	11.9	112.61	85.79	26.82	141	0.4	33.01	2.7
4/13/2015	XX	GW801BA35	LF	3320	6.7	11.4	112.61	87.1	25.51	152	3.9		8.5
7/20/2015	XX	GW801BA59	LF	2927	6.9	11.8	112.61	86.51	26.1	165	0.4		1.6
10/19/2015	XX	GW801BA7D	LF	2320	6.9	11.1	112.61	85.54	27.07	225	0.3	32.9	0.9
4/25/2016	XX	GW801BA9D	LF	2820	6.9	11.2	112.61	87.89	24.72	129	0.5		1.4
10/17/2016	XX	GW801BADC	LF	2732	6.7	12.8	112.61	84.91	27.7	149	0.5	32.9	1.3
4/24/2017	XX	GW801BAFC	LF	2097	6.8	11.2	112.61	87.11	25.5	139	0.5		1.5
10/2/2017	XX	GW801BAHA	LF	2307	6.9	12.4	112.61	85.46	27.15	239	0.5	32.9	1.5
4/9/2018	XX	GW801BAJ8	LF	1402	7.1	11.2	112.61	87.16	25.45	185	1.2		1.1
10/9/2018	XX	GW801BB18	LF	1686	7.1	14.3	112.61	85.17	27.44	320	3.3	32.9	3.5
4/8/2019	XX	GW801BB36	LF	1618	6.7	10.9	112.61	87.35	25.26	155	1.6		4.1
10/15/2019	XX	GW801BB59	LF	2429	7	11.6	112.61	86.31	26.3	127	0.7	32.9	1.5
4/20/2020	XX	GW801BB77	LF	2626	6.9	10.9	112.61	88.45	24.16	161	0.7		1.2
10/14/2020	XX	GW801BB99	LF	667	7.2	12.4	112.61	85.38	27.23	306	7.1	32.92	2.1
4/26/2021	XX	GW801BBB6	LF	1906	6.8	11.3	112.61	86.72	25.89	117	1		2.1
10/27/2021	XX	GW801BBDG	LF	1688	6.8	11.6	112.61	85.58	27.03	213	1.9	32.9	1.2
MW03-802A													
4/29/2008	XX	GW802A70A	LF	866	6.6	7.3	120.72	96.17	24.55	126	1		4.1
7/22/2008	XX	GW802A731	LF	870	6.6	13.9	120.72	95.22	25.5	144	1		2.4
10/6/2008	XX	GW802A75D	LF	821	6.7	8.4	120.72	95.4	25.32	135	1	54.53	2.8
4/21/2009	XX	GW802A784	LF	1017	6.7	6.5	120.72	96.02	24.7	190	1		3
7/21/2009	XX	GW802A7AD	LF	1014	6.5	13.7	120.72	95.82	24.9	117	1		3.2
10/19/2009	XX	GW802A7F9	LF	952	7.2	8.6	120.72	94.72	26	131	2	54.55	1.7
3/30/2010	XX	GW802A7I1	LF	890	6.5	7.8	120.72	96.22	24.5	128	1		0.4
7/26/2010	XX	GW802A805	LF	1042	6.4	18.4	120.72	94.72	26	25	0.8		2.4
10/4/2010	XX	GW802A82D	LF	1007	6.6	10.1	120.72	94.86	25.86	157	2	54.5	0
4/11/2011	XX	GW802A89G	LF	876	6.8	8.2	120.72	96.72	24	159	0.4		6
7/26/2011	XX	GW802A8DC	LF	987	6.8	11.6	120.72	95.07	25.65	155	1		1.6
10/17/2011	XX	GW802A8BE	LF	959	6.9	10.2	120.72	95.92	24.8	136	0.6	54.5	1.8
4/9/2012	XX	GW802A8HJ	LF	612	5.9	8.6	120.72	95.72	25	27	2		5
7/9/2012	XX	GW802A902	LF	859	6.3	13.7	120.72	95.73	24.99	-42	1		0

SUMMARY REPORT
Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW03-802A) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
10/1/2012	XX	GW802A924	LF	866	6.5	11.8	120.72	94.91	25.81	-27	1	54.43	0
4/8/2013	XX	GW802A944	LF	712	6.4	9.2	120.72	96.02	24.7	245	1		0.8
7/8/2013	XX	GW802A964	LF	886	6.5	12.9	120.72	95.62	25.1	46	0.8		0.5
10/21/2013	XX	GW802A9A3	LF	776	6.5	10.3	120.72	94.98	25.74	66	1	54.5	1.2
4/28/2014	XX	GW802A9C6	LF	773	6.5	9.2	120.72	96.22	24.5	80	2		1.2
7/14/2014	XX	GW802A9E8	LF	763	6.3	16	120.72	95.52	25.2	159	0.8		0.8
9/29/2014	XX	GW802A9G7	LF	837	6.5	11.7	120.72	94.72	26	124	0.8	54.5	0.4
4/13/2015	XX	GW802AA21	LF	611	6.8	11.8	120.72	96.12	24.6	217	3.6		1.3
7/20/2015	XX	GW802AA45	LF	689	6.7	15	120.72	95.32	25.4	225	1.4		0.8
10/20/2015	XX	GW802AA6B	LF	716	6.8	10.1	120.72	94.92	25.8	166	1.5	54.5	0.5
4/25/2016	XX	GW802AA8C	LF	470	7.4	9.8	120.72	95.92	24.8	266	3.6		1.7
10/17/2016	XX	GW802AACD	LF	491	7.3	13.4	120.72	93.92	26.8	233	0.6	54.5	3.7
4/24/2017	XX	GW802AAED	LF	762	6.9	12	120.72	96.12	24.6	166	1.1		0.5
10/2/2017	XX	GW802AAGB	LF	714	7.1	11.4	120.72	94.22	26.5	195	0.5	54.5	1.1
4/9/2018	XX	GW802AAI9	LF	540	7.3	7.4	120.72	96.52	24.2	268	7		1.2
10/9/2018	XX	GW802AB09	LF	525	6.6	16.6	120.72	94.52	26.2	258	2.3	54.49	5.2
4/9/2019	XX	GW802AB27	A	A	A	A	120.72		A	A	A		A
10/15/2019	XX	GW802AB4A	LF'	512	7.1	10.5	120.72	94.68	26.04	220	2.9	54.49	2
4/20/2020	XX	GW802AB68	LF	845	6.5	9.6	120.72	95.79	24.93	243	8.5		5.4
10/13/2020	XX	GW802AB8A	LF	842	7.1	9.9	120.72	94.12	26.6	207	0.4	54.5	1.5
4/26/2021	XX	GW802ABA7	LF	823	6.7	9.2	120.72	96.22	24.5	234	7.6		2.3
10/25/2021	XX	GW802ABCH	LF	604	6.9	10.6	120.72	95.02	25.7	190	3.1	54.5	1.6
MW03-802B													
4/29/2008	XX	GW802B6JD	LF	1026	6.2	7.4	122.01	94.11	27.9	248	1		2.1
7/22/2008	XX	GW802B725	LF	1022	6	12.4	122.01	93.61	28.4	227	1		2.8
10/6/2008	XX	GW802B74G	LF	961	6	9.1	122.01	93.71	28.3	201	1	34.9	0.7
4/21/2009	XX	GW802B777	LF	1112	6.2	6.1	122.01	94.16	27.85	183	1		1
7/21/2009	XX	GW802B79H	LF	1050	6.2	13.7	122.01	93.91	28.1	242	1		2
10/19/2009	XX	GW802B7EC	LF	880	6.3	7.9	122.01	93.66	28.35	97	2	34.88	2.9
3/30/2010	XX	GW802B7H4	LF	910	6.1	6.9	122.01	94.01	28	206	1		0
7/26/2010	XX	GW802B7J9	LF	1130	6.1	15.2	122.01	93.71	28.3	157	2		7.3
10/4/2010	XX	GW802B81G	LF	927	5.8	9.7	122.01	93.49	28.52	264	2	34.8	0
4/11/2011	XX	GW802B8AE	LF	958	6.2	8.3	122.01	94.51	27.5	193	0.4		0
7/26/2011	XX	GW802B8EA	LF	1114	6.1	13.6	122.01	93.96	28.05	258	1		1
10/17/2011	XX	GW802B8CC	LF	990	6.3	10	122.01	94.16	27.85	87	0.4	34.82	1.6
4/9/2012	XX	GW802B8IH	LF	1101	6.1	8.6	122.01	93.89	28.12	202	1		5.6
7/9/2012	XX	GW802B90J	LF	1086	6.3	13.9	122.01	94.08	27.93	215	0.6		2.7
10/1/2012	XX	GW802B92J	LF	1228	5.9	11.5	122.01	93.8	28.21	-11	1	34.75	0
4/8/2013	XX	GW802B952	LF	1053	6.5	9.2	122.01	94.06	27.95	175	0.4		0.6
7/8/2013	XX	GW802B971	LF	1173	6.1	11.2	122.01	94.01	28	204	0.4		2.6
10/21/2013	XX	GW802B9AI	LF	1198	6.2	10.3	122.01	93.81	28.2	66	1	34.82	0.6
4/28/2014	XX	GW802B9D4	LF	1077	6.6	9	122.01	99.19	27.82	57	0.4		0.9
7/14/2014	XX	GW802B9F5	LF	1175	6.5	14	122.01	94.01	28	184	0.4		0.9
9/29/2014	XX	GW802B9H2	LF	1256	6.1	12.2	122.01	93.81	28.2	141	0.6	34.85	1
4/13/2015	XX	GW802BA2J	LF	1220	6.6	10.9	122.01	94.01	28	178	1.6		0.7
7/20/2015	XX	GW802BA52	LF	1323	6.4	13.2	122.01	94.01	28	161	1.4		0.8
10/20/2015	XX	GW802BA76	LF	1286	6.3	10	122.01	93.89	28.12	144	0.7	34.85	0.2
4/25/2016	XX	GW802BA97	LF	1135	6.6	10.1	122.01	94.31	27.7	114	0.7		0.4
10/17/2016	XX	GW802BAD6	LF	1587	6.2	12.5	122.01	93.71	28.3	151	3.6	34.85	6.1

SUMMARY REPORT
Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW03-802B) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
4/24/2017	XX	GW802BAF6	LF	1241	6.6	12.4	122.01	94.15	27.8	183	3.2		2
10/2/2017	XX	GW802BAH4	LF	1176	6.3	11.8	122.01	93.61	28.4	181	5.4	34.84	2.9
4/9/2018	XX	GW802BAJ2	LF	1131	6.8	7.4	122.01	94.31	27.7	223	4.2		3
10/9/2018	XX	GW802BB12	LF	1500	6.5	15.4	122.01	93.86	28.15	160	2.7	34.84	3.7
4/8/2019	XX	GW802BB30	LF	1004	6.5	8.2	122.01	94.17	27.84	143	0.3		13.7
10/15/2019	XX	GW802BB53	LF	1154	6.5	10.5	122.01	93.83	28.18	135	0.5	38.84	2.8
4/20/2020	XX	GW802BB71	LF	804	5.7	9.9	122.01	94.29	27.72	96	1.1		2.8
10/13/2020	XX	GW802BB93	LF	1242	6.6	10.5	122.01	93.71	28.3	130	0.6	34.87	1.4
4/26/2021	XX	GW802BBB0	LF	845	6.7	9.2	122.01	94.01	28	131	0.7		4.5
10/25/2021	XX	GW802BBDA	LF	1132	6.3	10.2	122.01	94.21	27.8	97	1	34.82	2.3
MW03-803A													
4/29/2008	XX	GW803A6JE	LF	1010	6.7	7.5	125.76	104.78	20.98	161	3		2.4
7/22/2008	XX	GW803A726	LF	1095	6.5	12.5	125.76	103.81	21.95	149	0.8		1.7
10/6/2008	XX	GW803A74H	LF	1005	6.4	9.6	125.76	104.86	20.9	36	0.6	43.92	0.5
4/21/2009	XX	GW803A778	LF	1245	6.5	6.7	125.76	104.86	20.9	281	0.8		4.9
7/21/2009	XX	GW803A79I	LF	973	6.6	11.4	125.76	104.66	21.1	268	0.8		1.2
10/19/2009	XX	GW803A7ED	LF	1155	6.4	6.1	125.76	103.76	22	145	1	43.89	0.2
3/30/2010	XX	GW803A7H5	LF	781	6.7	7.2	125.76	105.46	20.3	242	1		0
7/26/2010	XX	GW803A7JA	LF	1305	6.2	12.9	125.76	103.51	22.25	194	0.8		0.6
10/4/2010	XX	GW803A81H	LF	1131	6.4	10.7	125.76	104.01	21.75	301	1	43.9	0
4/11/2011	XX	GW803A8AF	LF	809	7	8.6	125.76	105.71	20.05	244	0.6		1.3
7/26/2011	XX	GW803A8EB	LF	1200	6.4	12.7	125.76	103.97	21.79	339	1		0.5
10/17/2011	XX	GW803A8CD	LF	1222	6.8	11.2	125.76	104.86	20.9	196	0.6	43.89	1.2
4/9/2012	XX	GW803A8II	LF	1093	6.3	8.9	125.76	104.53	21.23	276	0.6		0
7/9/2012	XX	GW803A910	LF	1177	6.6	11.4	125.76	104.62	21.14	289	0.4		0
10/1/2012	XX	GW803A930	LF	1299	6.4	11.2	125.76	104.05	21.71	273	0.6	42.9	0
4/8/2013	XX	GW803A953	LF	1019	6.7	9.6	125.76	105.06	20.7	271	0.6		0.4
7/8/2013	XX	GW803A972	LF	1186	6.1	11.4	125.76	104.46	21.3	308	0.6		0.2
10/21/2013	XX	GW803A9AJ	LF	1149	6.6	10.8	125.76	103.91	21.85	238	0.6	43.9	2.5
4/28/2014	XX	GW803A9D5	LF	1312	6.8	9.3	125.76	105.11	20.65	326	0.6		2.2
7/14/2014	XX	GW803A9F6	LF	1264	6.5	12.4	125.76	104.66	21.1	221	0.6		0.5
9/29/2014	XX	GW803A9H3	LF	1342	6.5	12.4	125.76	103.56	22.2	350	0.6	43.95	0.1
4/13/2015	XX	GW803AA30	LF	1268	6.7	8.9	125.76	105.41	20.35	281	1.2		1.2
7/20/2015	XX	GW803AA53	LF	1343	6.5	12.1	125.76	104.11	21.65	292	2.7		0.2
10/19/2015	XX	GW803AA77	LF	1343	6.4	9.3	125.76	104.11	21.65	266	2.5	43.95	1
4/25/2016	XX	GW803AA98	LF	1341	6.5	9.2	125.76	106.06	19.7	319	0.7		2.5
7/27/2016	XX	GW803AABB	LF	1440	6.5	12.2	125.76	103.76	22	273	1.8		3.5
10/17/2016	XX	GW803AAD7	LF	1455	6.4	10.6	125.76	102.66	23.1	355	1.8	43.89	3.9
4/24/2017	XX	GW803AAF7	LF	1691	6.7	9.7	125.76	105.31	20.45	229	4.2		0.3
10/2/2017	XX	GW803AAH5	LF	1527	6.7	10.1	125.76	102.76	23	341	3.3	43.89	1.1
4/9/2018	XX	GW803AAJ3	LF	1867	6.8	7.4	125.76	105.56	20.2	218	2.8		0.3
10/9/2018	XX	GW803AB13	LF	1700	6.7	11.9	125.76	103.08	22.68	290	1.2	43.9	2.3
4/8/2019	XX	GW803AB31	LF	1759	6.8	7.3	125.76	105.21	20.55	285	1		2.5
10/15/2019	XX	GW803AB54	LF	1526	6.6	10.8	125.76	104.12	21.64	318	0.6	43.9	2.1
4/20/2020	XX	GW803AB72	LF	1764	6	9.5	125.76	105.36	20.4	260	0.9		2
10/13/2020	XX	GW803AB94	LF	1600	6.7	9.5	125.76	102.76	23	311	1.7	43.94	1.6
4/26/2021	XX	GW803ABB1	LF	1680	6.8	9.1	125.76	104.61	21.15	253	0.6		2.1
10/25/2021	XX	GW803ABDB	LF	1699	6.5	10.4	125.76	103.96	21.8	228	1	43.93	1.5

SUMMARY REPORT

Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW03-803B) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU				
MW03-803B																	
4/29/2008	XX	GW803B6JF	LF	1158	6.3	7.6	125.41	102.81	22.6	250	1		0.5				
7/22/2008	XX	GW803B727	LF	1183	6.2	11.7	125.41	102.21	23.2	172	0.6		0.7				
10/6/2008	XX	GW803B74I	LF	1013	6.1	10	125.41	103.21	22.2	129	0.4	30.02	0.4				
4/21/2009	XX	GW803B779	LF	1315	6.2	6.6	125.41	102.96	22.45	177	0.6		0.8				
7/21/2009	XX	GW803B79J	LF	1300	6.1	11.4	125.41	102.76	22.65	152	0.6		0.7				
10/19/2009	XX	GW803B7EE	LF	1175	6.1	7.3	125.41	102.21	23.2	159	2	30	1				
3/30/2010	XX	GW803B7H6	LF	996	6.2	7.3	125.41	104.13	21.28	30	1		1.2				
7/26/2010	XX	GW803B7JB	LF	1443	6.1	12.4	125.41	101.91	23.5	136	0.6		0.5				
10/4/2010	XX	GW803B81I	LF	1437	6.2	10.8	125.41	102.23	23.18	190	2	30	0				
4/11/2011	XX	GW803B89H	LF	1242	6.3	8.9	125.41	103.86	21.55	-29	0.3		0.4				
7/26/2011	XX	GW803B8DD	LF	1403	6.1	11.4	125.41	102.14	23.27	249	1		0.4				
10/17/2011	XX	GW803B8BF	LF	1367	6.4	10.9	125.41	103.01	22.4	101	0.3	30	1.2				
4/9/2012	XX	GW803B8I0	LF	1269	6.1	9	125.41	102.6	22.81	-25	0.4		0				
7/9/2012	XX	GW803B903	LF	1391	6.2	10.7	125.41	102.69	22.72	27	0.4		0				
10/1/2012	XX	GW803B925	LF	1415	6.3	11.2	125.41	102.22	23.19	225	0.6	30.08	0				
4/8/2013	XX	GW803B945	LF	1348	6.3	9.4	125.41	103.43	21.98	191	0.4		3.1				
7/8/2013	XX	GW803B965	LF	1377	5.8	10.6	125.41	102.51	22.9	115	0.8		0.4				
10/21/2013	XX	GW803B9A4	LF	1335	6.4	10.6	125.41	102.06	23.35	92	0.6	30.06	0.3				
4/28/2014	XX	GW803B9C7	LF	1316	6.4	9.3	125.41	103.51	21.9	46	0.4		2.9				
7/14/2014	XX	GW803B9E9	LF	1383	6.1	11.3	125.41	102.71	22.7	156	0.3		0.7				
9/29/2014	XX	GW803B9G8	LF	1423	6.2	10.7	125.41	101.81	23.6	183	0.6	30.08	0.2				
4/13/2015	XX	GW803BA22	LF	1157	6.3	8.6	125.41	104.03	21.38	107	2.9		3.3				
7/20/2015	XX	GW803BA46	LF	1352	6.3	11.8	125.41	102.18	23.23	194	1.7		0.7				
10/19/2015	XX	GW803BA6C	LF	1352	6.3	9.8	125.41	102.51	22.9	186	3.3	30.08	1				
4/25/2016	XX	GW803BA8D	LF	1390	6.4	9.1	125.41	103.33	22.08	155	0.9		0.6				
7/27/2016	XX	GW803BAAI	LF	1480	6.3	12.1	125.41	102.09	23.32	199	2.9		5.7				
10/17/2016	XX	GW803BACE	LF	1497	6.3	11.2	125.41	101.21	24.2	204	2.1	30	5.2				
4/24/2017	XX	GW803BAEE	LF	1358	6.3	9.4	125.41	103.81	21.6	134	1.9		0.7				
10/2/2017	XX	GW803BAGC	LF	1465	6.5	10.7	125.41	101.28	24.13	213	4.3	30	0.9				
4/9/2018	XX	GW803BAIA	LF	1502	6.4	8.6	125.41	103.96	21.45	9	3.6		0.9				
10/9/2018	XX	GW803BB0A	LF	1507	6.5	11.6	125.41	101.76	23.65	228	3	30.09	2.1				
4/8/2019	XX	GW803BB28	LF	1462	6.5	6.7	125.41	103.87	21.54	111	2.1		2.9				
10/15/2019	XX	GW803BB4B	LF	1469	6.4	10.9	125.41	102.48	22.93	137	3.9	30.09	2.4				
4/20/2020	XX	GW803BB69	LF	1535	5.7	8.7	125.41	103.84	21.57	105	0.5		2.6				
10/13/2020	XX	GW803BB8B	LF	1591	6.6	8.4	125.41	101.36	24.05	226	1.9	30.08	5.3				
4/26/2021	XX	GW803BBA8	LF	1352	6.6	9.1	125.41	103.06	22.35	139	0.7		5.5				
10/25/2021	XX	GW803BBCI	LF	1613	6.2	10.5	125.41	102.01	23.4	157	1.3	30.06	1.7				
MW03-804A																	
4/29/2008	XX	GW804A6JG	LF	808	6.5	7.7	137.51	118.51	19	328	1		0.5				
7/22/2008	XX	GW804A728	LF	786	6.5	15.3	137.51	117.23	20.28	361	0.8		0.2				
10/7/2008	XX	GW804A74J	LF	643	6.5	12.4	137.51	118.51	19	334	1	54.42	0.6				
4/21/2009	XX	GW804A77A	LF	823	6.7	6.7	137.51	118.51	19	348	0.6		0				
7/21/2009	XX	GW804A7A0	LF	790	6.7	13.7	137.51	119.01	18.5	385	0.6		0				
10/19/2009	XX	GW804A7EF	LF	770	6.4	8.2	137.51	117.56	19.95	291	0.4	54.42	0.8				
3/30/2010	XX	GW804A7H7	LF	699	6.4	7	137.51	119.33	18.18	256	0.4		0				
7/26/2010	XX	GW804A7JC	LF	786	6.4	14.1	137.51	117.48	20.03	263	0.4		0.6				
10/4/2010	XX	GW804A81J	LF	797	6.6	12.7	137.51	119.78	17.73	362	1	54.4	0				

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(MW03-804A) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
4/11/2011	XX	GW804A8AG	LF	693	6.7	9.3	137.51	120.81	16.7	298	0.4		0.5
7/25/2011	XX	GW804A8EC	LF	760	6.5	14.4	137.51	117.65	19.86	314	0.6		2
10/17/2011	XX	GW804A8CE	LF	723	7.3	12.3	137.51	119.91	17.6	405	0.8	54.45	1.3
4/9/2012	XX	GW804A8IJ	LF	597	6.3	8.8	137.51	118.71	18.8	318	1		0.7
7/9/2012	XX	GW804A911	LF	737	6.6	13.2	137.51	120.14	17.37	265	0.4		0
10/1/2012	XX	GW804A931	LF	739	6.5	12.9	137.51	118.15	19.36	245	0.4	54.41	0
4/8/2013	XX	GW804A954	LF	674	6.7	9.9	137.51	119.41	18.1	344	1		0.5
7/8/2013	XX	GW804A973	LF	712	6.5	14.1	137.51	120.29	17.22	336	0.8		1.2
10/21/2013	XX	GW804A9B0	LF	683	6.7	12.9	137.51	118.81	18.7	315	0.6	55.44	0.3
4/28/2014	XX	GW804A9D6	LF	682	6.9	8.9	137.51	120.31	17.2	419	1		0.4
7/14/2014	XX	GW804A9F7	LF	699	6.7	14.8	137.51	120.39	17.12	414	0.6		0.9
9/29/2014	XX	GW804A9H4	LF	781	6.7	11.6	137.51	118.01	19.5	334	0.4	54.44	0
4/13/2015	XX	GW804AA31	LF	697	6.7	12.5	137.51	119.96	17.55	272	1.3		0.7
7/20/2015	XX	GW804AA54	LF	845	6.6	14.6	137.51	119.31	18.2	292	1.3		0.1
10/19/2015	XX	GW804AA78	LF	792	6.6	10.1	137.51	118.81	18.7	255	0.9	54.44	0.05 U
4/25/2016	XX	GW804AA99	LF	854	6.7	11	137.51	121.31	16.2	311	0.8		0.3
10/17/2016	XX	GW804AAD8	LF	1070	6.6	14	137.51	116.61	20.9	261	0.9	54.47	1.4
4/24/2017	XX	GW804AAF8	LF	805	6.6	10.6	137.51	121.01	16.5	236	1.6		0.4
10/2/2017	XX	GW804AAH6	LF	1036	6.8	13.5	137.51	117.01	20.5	245	3.3	54.45	0.7
4/9/2018	XX	GW804AAJ4	LF	900	6.7	7.6	137.51	121.36	16.15	317	3.3		0.3
10/9/2018	XX	GW804AB14	LF	896	6.8	14.5	137.51	118.21	19.3	258	1.2	54.43	4.8
4/9/2019	XX	GW804AB32	LF	823	6.8	8.3	137.51	119.38	18.13	243	1.1		1.4
10/17/2019	XX	GW804AB55	LF	832	6.7	10.9	137.51	121.06	16.45	332	2.3	54.45	1.4
4/21/2020	XX	GW804AB73	LF	773	6	9.5	137.51	122.11	15.4	264	0.8		4.9
10/13/2020	XX	GW804AB95	LF	925	6.9	9.5	137.51	117.41	20.1	265	1	54.52	1
4/26/2021	XX	GW804ABB2	LF	791	6.9	8.5	137.51	120.71	16.8	262	0.5		2.2
10/25/2021	XX	GW804ABDC	LF	916	6.5	10.9	137.51	120.41	17.1	217	1	54.54	1.9
MW-906B													
4/29/2008	XX	GW906B70D	LF	576	6.9	8.7	125	94.4	30.6	273	1		0.5
7/22/2008	XX	GW906B734	LF	600	6.8	9.4	125	91.2	33.8	290	3		0
10/6/2008	XX	GW906B75G	LF	513	6.8	10.1	125	92	33	251	1	40.3	2.6
4/20/2009	XX	GW906B787	LF	554	6.8	10.1	125	93.8	31.2	291	0.6		1.9
7/22/2009	XX	GW906B7AG	LF	593	6.8	10.9	125	94.3	30.7	378	0.8		5.5
10/19/2009	XX	GW906B7FC	LF	968	7.4	9.6	125	92.1	32.9	278	2	40.28	0.4
3/29/2010	XX	GW906B7I4	LF	645	6.7	8.3	125	93.9	31.1	117	2		2.5
7/26/2010	XX	GW906B808	LF	608	6.8	10.1	125	91.5	33.5	274	0.8		2.5
10/4/2010	XX	GW906B82G	LF	697	6.6	9.8	125	91.4	33.6	327	0.8	40.25	0
4/11/2011	XX	GW906B89J	LF	568	6.8	9.3	125	91.9	33.1	250	0.4		4.8
7/25/2011	XX	GW906B8DF	LF	529	6.5	10.8	125	92.3	32.7	288	1		1.1
10/17/2011	XX	GW906B8BH	LF	621	7.9	9.6	125	93.2	31.8	282	2	40.25	1.3
4/9/2012	XX	GW906B8I2	LF	507	6.6	9.3	125	93.85	31.15	328	1		2.8
7/9/2012	XX	GW906B905	LF	515	6.6	11	125	94	31	-58	0.4		6.5
10/2/2012	XX	GW906B927	LF	550	6.6	10	125	91.75	33.25	441	0.6	40.25	3.6
4/8/2013	XX	GW906B947	LF	512	6.8	9.7	125	92.4	32.6	-46	0.3		1
7/9/2013	XX	GW906B967	LF	500	6.6	11.1	125	93.55	31.45	212	1		2.8
10/22/2013	XX	GW906B9A6	LF	466	6.9	10.2	125	92.1	32.9	156	2	40.25	6.9
4/28/2014	XX	GW906B9C9	LF	513	6.3	9.5	125	93.9	31.1	329	1		2.1
7/15/2014	XX	GW906B9EB	LF	465	7	10.5	125	93.36	31.64	296	1		1.2
9/30/2014	XX	GW906B9GA	LF	481	6.9	9.8	125	91.95	33.05	399	3	40.3	0.5

SUMMARY REPORT

Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Collection Method	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
(MW-906B)													
4/14/2015	XX	GW906BA24	LF	474	6.9	9.8	125	93.65	31.35	380	1.8		0.5
7/21/2015	XX	GW906BA48	LF	457	7	9.8	125	92.79	32.21	364	0.2		0.3
10/19/2015	XX	GW906BA6E	LF	451	7	9.4	125	91.84	33.16	269	0.2	40.3	0.4
4/25/2016	XX	GW906BA8F	LF	427	7.2	9.5	125	94.03	30.97	283	0.4		0.6
10/17/2016	XX	GW906BACG	LF	469	7	10.2	125	91.3	33.7	306	0.3	40.25	0.3
4/25/2017	XX	GW906BAEG	LF	382	7	9.6	125	92.87	32.13	307	0.2		0.6
10/2/2017	XX	GW906BAGE	LF	418	7.4	10.2	125	91.45	33.55	341	1.4	40.25	0.5
4/9/2018	XX	GW906BAIC	LF	382	7.1	9.4	125	92.8	32.2	273	2		0.3
10/9/2018	XX	GW906BB0C	LF	455	7	10.5	125	91.3	33.7	405	1.1	40.25	2.3
4/9/2019	XX	GW906BB2A	LF	364	7.1	9.2	125	92.44	32.56	311	1.1		2.1
10/15/2019	XX	GW906BB4D	LF	381	7.4	11.1	125	92.9	32.1	230	0.6	40.25	4.1
4/20/2020	XX	GW906BB6B	LF	423	7.4	9.3	125	94.81	30.19	253	0.1		0.9
10/15/2020	XX	GW906BB8D	LF	373	7.4	9.2	125	91.55	33.45	316	2.4	40.3	3.1
4/26/2021	XX	GW906BBAA	LF	338	7.1	9.3	125	93	32	275	0.5		1.2
10/27/2021	XX	GW906BBD0	LF	293	7.1	9.8	125	88.2	36.8	174	1.9	40.25	0.5
MW-916													
4/30/2008	XX	GW916X70H	LF	1160	6.7	7.6	138.96	100.31	38.65	110	0.4		0.8
7/21/2008	XX	GW916X738	LF	1398	6.3	9.3	138.96	100.31	38.65	-12	1		0
10/7/2008	XX	GW916X760	LF	646	6	12.2	138.96	100.11	38.85	242	1	45.42	4.2
4/20/2009	XX	GW916X78B	LF	948	6	8.5	138.96	101.08	37.88	36	0.4		2.2
7/21/2009	XX	GW916X7B0	LF	672	6.6	10.4	138.96	99.46	39.5	389	6		8.9
10/20/2009	XX	GW916X7FG	LF	1626	6.5	8.6	138.96	100.86	38.1	157	0.5	45.44	2.3
3/31/2010	XX	GW916X7I8	LF	225	7.8	7.2	138.96	101.11	37.85	191	5		2.1
7/27/2010	XX	GW916X80C	LF	612	5.8	13.8	138.96	99.26	39.7	189	2		6.1
10/5/2010	XX	GW916X830	LF	1297	6.8	9.6	138.96	99.16	39.8	-16	1	45.44	6.3
4/12/2011	XX	GW916X89A	LF	763	6.9	9.2	138.96	100.97	37.99	225	1		5.1
7/26/2011	XX	GW916X8D6	LF	511	6.4	9.8	138.96	101.46	37.5	349	2		0
10/18/2011	XX	GW916X8B8	LF	335	7.2	9.3	138.96	101.21	37.75	326	1	45.44	2.6
4/10/2012	XX	GW916X8HD	LF	883	6.8	8.4	138.96	101.61	37.35	186	0.8		4.9
7/10/2012	XX	GW916X8JG	LF	500	6.9	11.3	138.96	101.96	37	213	1		5.4
10/2/2012	XX	GW916X91I	LF	716	6.8	10	138.96	100.66	38.3	190	2	45.45	7.4
4/8/2013	XX	GW916X93I	LF	870	6.6	9.3	138.96	101.56	37.4	239	1		3.5
7/9/2013	XX	GW916X95I	LF	780	6.9	9.1	138.96	101.37	37.59	184	1		10.1
10/22/2013	XX	GW916X99H	LF	480	7.5	10	138.96	101.61	37.35	237	3	45.44	3.2
4/29/2014	XX	GW916X9C0	LF	450	6.2	9.7	138.96	101.36	37.6	317	1		2.6
7/15/2014	XX	GW916X9E2	LF	432	7.2	10.5	138.96	101.6	37.36	271	2		3.1
9/30/2014	XX	GW916X9G1	LF	616	7.3	9.7	138.96	101.15	37.81	233	0.6	45.38	4.2
4/29/2015	XX	GW916XA1F	LF	335	8	9.1	138.96	101.51	37.45	325	10		1.6
7/21/2015	XX	GW916XA3J	LF	415	7.5	10.4	138.96	101.71	37.25	202	0.9		0.4
10/20/2015	XX	GW916XA65	LF	257	7.4	9.5	138.96	100.61	38.35	207	0.4	45.44	0.8
4/26/2016	XX	GW916XA86	LF	386	7.8	8.5	138.96	102.05	36.91	233	3.1		0.4
10/18/2016	XX	GW916XAC7	LF	883	7	9.2	138.96	99.06	39.9	148	0.2	45.44	1.1
4/25/2017	XX	GW916XAE7	LF	571	7.2	9.1	138.96	100.48	38.48	263	0.2		0.2
10/3/2017	XX	GW916XAG5	LF	722	7.3	10.6	138.96	99.01	39.95	111	0.2	45.44	1.2
4/10/2018	XX	GW916XAI3	LF	769	7	8.7	138.96	100.56	38.4	206	2.1		0.8
10/10/2018	XX	GW916XB03	LF	1160	7.2	11	138.96	102.55	36.41	103	0.4	45.39	1.8
4/9/2019	XX	GW916XB21	LF	750	7.8	5.9	138.96	101.06	37.9	244	10.2		3.5
10/16/2019	XX	GW916XB44	LF	854	7.3	9.6	138.96	101.41	37.55	113	0.5	45.4	2.5
4/21/2020	XX	GW916XB62	LF	617	7.7	8.8	138.96	102.41	36.55	155	6		1.2

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(MW-916) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
10/14/2020	XX	GW916XB84	LF	607	7.8	10.7	138.96	100.43	38.53	265	3.3	45.32	2.1
4/27/2021	XX	GW916XBA1	LF	766	7.4	10	138.96	101.6	37.36	245	1.3		4.6
10/26/2021	XX	GW916XBCB	LF	495	7.5	9.1	138.96	100.94	38.02	193	0.5	45.44	1.5
MW-917													
4/30/2008	XX	GW917X70I	LF	1473	6.8	7.8	137.99	100.57	37.42	-72	0.3		1.2
7/21/2008	XX	GW917X739	LF	1372	6.6	9.4	137.99	100.54	37.45	110	1		0
10/7/2008	XX	GW917X761	LF	1192	6.6	10.8	137.99	99.89	38.1	342	2	63.75	2
4/20/2009	XX	GW917X78C	LF	1282	6.7	8.6	137.99	101.29	36.7	27	0.6		0
7/21/2009	XX	GW917X7B1	LF	1103	6.5	9.2	137.99	100.24	37.75	132	3		7.3
10/20/2009	XX	GW917X7FH	LF	1815	6.8	8.8	137.99	100.09	37.9	139	1	63.73	0
3/31/2010	XX	GW917X7I9	LF	1298	7	6.7	137.99	101.09	36.9	146	4		1.6
7/27/2010	XX	GW917X80D	LF	1120	6.6	9.6	137.99	99.49	38.5	98	1		0
10/5/2010	XX	GW917X831	LF	1219	7	9	137.99	98.89	39.1	-33	0.2	63.68	0
4/12/2011	XX	GW917X89I	LF	1111	7	8.7	137.99	101.01	36.98	137	0.2		0
7/26/2011	XX	GW917X8DE	LF	1045	6.1	9.8	137.99	101.51	36.48	109	1		0
10/18/2011	XX	GW917X8BG	LF	389	7.4	9.1	137.99	101.19	36.8	170	0.2	63.7	0
4/10/2012	XX	GW917X8I1	LF	1067	6.9	8.4	137.99	101.67	36.32	102	0.2		1.6
7/10/2012	XX	GW917X904	LF	990	6.8	9.7	137.99	101.99	36	-183	0.2		1.4
10/2/2012	XX	GW917X926	LF	1116	6.9	9	137.99	100.62	37.37	-55	0.2	63.7	2.4
4/8/2013	XX	GW917X946	LF	1071	6.8	8.9	137.99	101.59	36.4	-187	0.2		0.9
7/9/2013	XX	GW917X966	LF	1017	6.8	9.4	137.99	101.45	36.54	-13	0.2		0.7
10/22/2013	XX	GW917X9A5	LF	960	7.2	8.9	137.99	101.92	36.07	16	0.2	63.7	0.4
4/29/2014	XX	GW917X9C8	LF	1007	6.6	9.3	137.99	101.69	36.3	127	0.2		4.5
7/15/2014	XX	GW917X9EA	LF	962	7	9.9	137.99	101.99	36	40	0.2		0.2
9/30/2014	XX	GW917X9G9	LF	938	7.3	9.3	137.99	101.43	36.56	100	0.2	63.72	0.4
4/14/2015	XX	GW917XA23	LF	956	6.9	9.2	137.99	101.89	36.1	110	3.6		0.3
7/21/2015	XX	GW917XA47	LF	912	7.1	9.1	137.99	102.09	35.9	112	0.1		0.5
10/20/2015	XX	GW917XA6D	LF	354	7.1	8.9	137.99	101.01	36.98	119	0.1	63.7	0.2
4/26/2016	XX	GW917XA8E	LF	867	7.2	8.5	137.99	102.44	35.55	92	0.1		0.2
10/18/2016	XX	GW917XACF	LF	906	7	9.1	137.99	100.49	37.5	107	0.1	63.7	0.2
4/25/2017	XX	GW917XAEF	LF	792	7	8.8	137.99	100.87	37.12	305	0.1		0.2
10/3/2017	XX	GW917XAGD	LF	889	7.1	10.4	137.99	100.49	37.5	116	0.1	63.7	0.1
4/10/2018	XX	GW917XAIB	LF	903	7.2	8.7	137.99	100.95	37.04	126	0.6		0.3
10/10/2018	XX	GW917XB0B	LF	1042	7.2	10.3	137.99	100.1	37.89	114	0.1 U	63.7	0.7
4/9/2019	XX	GW917XB29	LF	872	7.2	8.5	137.99	100.81	37.18	109	0.2		2.1
10/16/2019	XX	GW917XB4C	LF	916	7.5	9.9	137.99	101.79	36.2	96	0.3	63.7	1.4
4/21/2020	XX	GW917XB6A	LF	948	7.4	8.7	137.99	102.76	35.23	54	0.2		1.3
10/14/2020	XX	GW917XB8C	LF	772	7.1	9.5	137.99	100.79	37.2	123	1.1	63.7	1.2
4/27/2021	XX	GW917XBA9	LF	752	7.1	9.1	137.99	101.89	36.1	76	0.1		0.4
10/26/2021	XX	GW917XBCJ	LF	756	7	8.8	137.99	101.74	36.25	110	0.1	63.7	0.5
MW97-123													
4/28/2008	XX	GW123X6JJ	LF	1343	7.2	8.6	125.72	110.52	15.2	71	0.6		2
7/21/2008	XX	GW123X72A	LF	1162	7.1	11.3	125.72	106.94	18.78	82	0.4		0.6
10/6/2008	XX	GW123X752	LF	1007	7	9.9	125.72	110.22	15.5	108	0.4	76.05	0.5
4/20/2009	XX	GW123X77D	LF	1508	7.2	10.1	125.72	110.72	15	20	0.6		2.1
7/20/2009	XX	GW123X7A2	LF	1542	7	15.3	125.72	110.56	15.16	121	0.4		0.3
10/19/2009	XX	GW123X7EI	LF	849	7.5	10.4	125.72	108.99	16.73	65	0.4	76.08	0
3/31/2010	XX	GW123X7HA	LF	1477	6.9	7.1	125.72	111.48	14.24	195	1		0.4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW97-123) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
7/27/2010	XX	GW123X7JE	LF	923	6.9	11.3	125.72	107.91	17.81	56	0.3		1.3
10/5/2010	XX	GW123X822	LF	1553	6.9	8.8	125.72	109.38	16.34	200	1	76.1	0
4/12/2011	XX	GW123X898	LF	1826	7.1	7.5	125.72	111.12	14.6	196	0.3		4.2
7/26/2011	XX	GW123X8D4	LF	1777	7.2	10.8	125.72	108.45	17.27	154	0.3		0.5
10/18/2011	XX	GW123X886	LF	1697	7.4	10.6	125.72	110.42	15.3	70	0.4	76.08	1.3
4/10/2012	XX	GW123X8HB	LF	1691	7.2	7.2	125.72	110.11	15.61	-7	1		2.7
7/11/2012	XX	GW123X8JE	LF	1671	7.1	9.8	125.72	109.98	15.74	277	0.2		0
10/2/2012	XX	GW123X91G	LF	1581	7	10.9	125.72	109.52	16.2	15	0.2	76.08	0
4/10/2013	XX	GW123X93G	LF	1509	6.8	8.3	125.72	110.71	15.01	142	0.3		7.7
7/9/2013	XX	GW123X95G	LF	1592	6.8	9.9	125.72	109.85	15.87	7	0.4		2.5
10/23/2013	XX	GW123X99F	LF	1350	7.4	9.1	125.72	109.17	16.55	94	1	178.6	1
4/30/2014	XX	GW123X9BI	LF	1414	7	6.3	125.72	110.82	14.9	238	1		4.8
7/16/2014	XX	GW123X9E0	LF	1356	7.1	10.4	125.72	110.32	15.4	88	0.4		2.2
10/1/2014	XX	GW123X9FJ	LF	1350	7.3	9.3	125.72	108.6	17.12	124	0.3	178.6	2.5
4/15/2015	XX	GW123XA1D	LF	867	7.9	7.4	125.72	111.37	14.35	-27	0.1		2.1
7/22/2015	XX	GW123XA3H	LF	886	7.7	9.5	125.72	109.1	16.62	-62	0.1 U		4.8
10/21/2015	XX	GW123XA63	LF	1190	7.3	9.2	125.72	109.87	15.85	195	0.3	178.6	1.2
4/27/2016	XX	GW123XA84	LF	1382	7.2	5.5	125.72	110.77	14.95	155	0.4		5.3
10/19/2016	XX	GW123XAC5	LF	780	7.2	11.5	125.72	107.82	17.9	113	0.3	178.6	0.2
4/26/2017	XX	GW123XAE5	LF	1226	7.1	7.6	125.72	110.92	14.8	157	0.6		0.2
10/4/2017	XX	GW123XAG3	LF	949	7.3	8.9	125.72	108.07	17.65	134	0.2	178.6	0.3
4/11/2018	XX	GW123XAJH	LF	1363	7.3	6.9	125.72	111.22	14.5	176	1.4		0.3
10/8/2018	XX	GW123XB01	LF	969	7.3	7.9	125.72	108.32	17.4	124	0.3	178.57	2.4
4/10/2019	XX	GW123XB3F	LF	1350	7.3	6.2	125.72	111.01	14.71	135	0.3		6.6
10/16/2019	XX	GW123XB42	LF	1347	7.3	8.1	125.72	110.03	15.69	132	0.4	178.57	2.5
4/22/2020	XX	GW123XB7G	LF	1425	7.4	6.5	125.72	111.17	14.55	89	0.2		1.3
10/14/2020	XX	GW123XB82	LF	932	7.4	9.7	125.72	108.77	16.95	110	0.8		2.2
4/28/2021	XX	GW123XBBE	LF	1119	7.2	8.1	125.72	110.41	15.31	154	0.3		0.6
10/27/2021	XX	GW123XBC9	LF	1085	7.1	8.8	125.72	110.01	15.71	143	0.3	178.6	0.3
MW98-601A													
4/28/2008	XX	GW601A702	LF	2300	6.5	9.5	118.81	112.48	6.33	253	3		0
7/21/2008	XX	GW601A72D	LF	2490	6.3	14.5	118.81	110.18	8.63	284	0.4		0
10/6/2008	XX	GW601A755	LF	1817	6.3	13.4	118.81	111.5	7.31	178	0.4	28.55	0.2
4/20/2009	XX	GW601A77G	LF	2740	6.5	9.9	118.81	112.66	6.15	299	0.8		0.5
7/20/2009	XX	GW601A7A5	LF	2780	6.3	15.4	118.81	112.41	6.4	317	0.4		0.2
10/19/2009	XX	GW601A7F1	LF	2590	6.9	11.9	118.81	110.16	8.65	221	0.4	28.58	0
3/29/2010	XX	GW601A7HD	LF	2430	6.4	8.7	118.81	112.49	6.32	227	0.6		0.2
7/27/2010	XX	GW601A7JH	LF	2420	6.3	18.8	118.81	108.37	10.44	351	0.6		0.3
8/31/2010	XX	GW601A86B	LF	2410	6.3	14.8	118.81	107.78	11.03				
10/5/2010	XX	GW601A825	LF	2370	6.4	13.6	118.81	110.7	8.11	301	0.8	28.49	0
4/12/2011	XX	GW601A8A9	LF	2490	6.6	10.4	118.81	112.84	5.97	228	0.6		0.2
7/25/2011	XX	GW601A8E5	LF	2620	6.4	16	118.81	109.11	9.7	318	0.4		0.4
4/10/2012	XX	GW601A8IC	LF	2400	6.6	10.4	118.81	111.75	7.06	268	0.6		0
7/10/2012	XX	GW601A90E	LF	2510	6.5	13.2	118.81	111.84	6.97	284	0.3		0
4/8/2013	XX	GW601A94H	LF	2460	6.6	11.1	118.81	112.51	6.3	273	0.4		0.5
7/9/2013	XX	GW601A96G	LF	2880	6.4	15.2	118.81	111.21	7.6	280	0.6		0.3
4/28/2014	XX	GW601A9CJ	LF	2290	6.8	9.7	118.81	112.76	6.05	275	0.8		1.3
7/15/2014	XX	GW601A9F0	LF	2270	6.5	16.3	118.81	111.91	6.9	171	0.3		0.7
4/14/2015	XX	GW601AA2E	LF	2225	6.5	12.3	118.81	113.01	5.8	246	3.8		1

SUMMARY REPORT

Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW98-601A) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
7/21/2015	XX	GW601AA4H	LF	2518	6.5	14	118.81	110.01	8.8	222	4.1		0.9
4/26/2016	XX	GW601AAA4	LF	2330	6.6	8.8	118.81	112.66	6.15	232	1.4		1
10/18/2016	XX	GW601AADJ	LF	2371	6.5	13.5	118.81	108.53	10.28	231	2.9	28.58	4
4/25/2017	XX	GW601AAFJ	LF	2158	6.6	11	118.81	112.81	6	234	2.6		0.7
10/3/2017	XX	GW601AAHH	LF	2303	6.7	15.7	118.81	109.04	9.77	227	4.6	28.58	0.8
4/10/2018	XX	GW601AAJF	LF	2174	6.6	8.6	118.81	112.96	5.85	266	5.1		0.5
10/8/2018	XX	GW601AB1F	LF	2248	6.7	12.9	118.81	109.36	9.45	211	2.6	28.59	1.9
4/9/2019	XX	GW601AB3D	LF	1969	6.7	9.5	118.81	112.78	6.03	264	1.7		2.1
10/16/2019	XX	GW601AB5G	LF	2069	6.6	13.5	118.81	111.6	7.21	193	0.5	28.59	2.3
4/21/2020	XX	GW601AB7E	LF	1789	6	9.5	118.81	112.81	6	194	0.9		1.2
10/14/2020	XX	GW601AB9G	LF	1882	6.9	15.9	118.81	109.41	9.4	173	3.6	28.58	2
4/27/2021	XX	GW601ABBC	LF	1672	6.9	12.6	118.81	112.26	6.55	189	0.5		2.2
10/25/2021	XX	GW601ABE3	LF	1973	6.3	13.3	118.81	111.46	7.35	177	0.9	28.58	2.1
MW98-601B													
4/28/2008	XX	GW601B703	LF	1374	6.5	9	118.79	112.47	6.32	85	0.4		0
7/21/2008	XX	GW601B72E	LF	1490	6.2	15.5	118.79	110.1	8.69	70	0.3		0.7
10/6/2008	XX	GW601B756	LF	1151	6.1	15	118.79	111.5	7.29	61	0.3	15.02	0.3
4/20/2009	XX	GW601B77H	LF	1583	6.5	9.6	118.79	112.64	6.15	64	0.2		1.8
7/20/2009	XX	GW601B7A6	LF	1730	6.4	15.7	118.79	112.44	6.35	60	0.3		0.8
10/19/2009	XX	GW601B7F2	LF	1557	6.7	12.7	118.79	110.09	8.7	28	0.3	15	0
3/29/2010	XX	GW601B7HE	LF	1264	6.5	8	118.79	112.49	6.3	-38	0.3		0.3
7/27/2010	XX	GW601B7JI	LF	1779	6.3	19	118.79	108.35	10.44	158	0.3		0.2
8/31/2010	XX	GW601B86C	LF	1485	6.2	17.4	118.79	107.82	10.97				
10/5/2010	XX	GW601B826	LF	1645	6.1	15.4	118.79	110.79	8	251	1	15	0
4/12/2011	XX	GW601B8AA	LF	1591	6.6	9.3	118.79	112.84	5.95	103	0.2		0.5
7/25/2011	XX	GW601B8E6	LF	1814	6.4	17.8	118.79	109.03	9.76	159	0.3		1.1
4/10/2012	XX	GW601B8ID	LF	1761	6.6	9.7	118.79	111.77	7.02	65	0		0.5
7/10/2012	XX	GW601B90F	LF	1506	6.4	14.5	118.79	111.82	6.97	31	0.3		0
4/8/2013	XX	GW601B94I	LF	1667	6.5	11	118.79	112.59	6.2	117	0.2		2.6
7/9/2013	XX	GW601B96H	LF	1843	6.3	17.2	118.79	111.36	7.43	400	0.2		0.4
4/28/2014	XX	GW601B9D0	LF	1488	6.2	9	118.79	112.84	5.95	123	1		0.9
7/15/2014	XX	GW601B9F1	LF	1333	6.4	17	118.79	111.97	6.82	109	0.2		0.8
4/14/2015	XX	GW601BA2F	LF	1176	6.5	11	118.79	113.19	5.6	109	3.7		0.4
7/21/2015	XX	GW601BA4I	LF	1730	6.4	15.9	118.79	110.19	8.6	114	4		0.3
4/26/2016	XX	GW601BAA2	LF	1354	6.5	8.2	118.79	112.79	6	108	2.4		0.5
10/18/2016	XX	GW601BADH	LF	1696	6.4	14.7	118.79	108.54	10.25	170	3.1	15.07	3.8
4/25/2017	XX	GW601BAFH	LF	1419	6.4	11.1	118.79	112.89	5.9	99	4.5		0.8
10/3/2017	XX	GW601BAHF	LF	1487	6.6	16.5	118.79	108.97	9.82	154	5.5	15.07	0.7
4/10/2018	XX	GW601BAJD	LF	1500	6.5	8.3	118.79	113.14	5.65	134	6.3		1.6
10/8/2018	XX	GW601BB1D	LF	1369	6.4	14.3	118.79	109.29	9.5	262	2.9	15.09	1.6
4/9/2019	XX	GW601BB3B	LF	1283	6.6	8.7	118.79	112.9	5.89	117	3		2.3
10/16/2019	XX	GW601BB5E	LF	1144	6.5	14.5	118.79	111.56	7.23	119	0.3	15.09	2.9
4/21/2020	XX	GW601BB7C	LF	1117	5.8	9.8	118.79	113.04	5.75	93	1.1		2.6
10/14/2020	XX	GW601BB9E	LF	1497	6.7	16.5	118.79	109.49	9.3	127	4	15.1	1.7
4/27/2021	XX	GW601BBBA	LF	1434	6.7	14	118.79	112.39	6.4	106	0.7		3
10/25/2021	XX	GW601BBE1	LF	1510	6.2	13.8	118.79	111.59	7.2	108	2	15.08	1.6
P-911B													
8/31/2010	XX	GW911B865		1249	7.1	10.2	105.67						

SUMMARY REPORT

Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(P-911B) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
4/12/2011	XX	GW911B8AD	LF	1207	6.9	8.9	105.67	103.64	2.03	96	0.3		2.4
7/27/2011	XX	GW911B8E9	LF	1042	6.5	13.1	105.67	100.89	4.78	130	0.6		0.8
10/19/2011	XX	GW911B8CB	LF	1174	6.7	11.9	105.67	100.77	4.9	104	0.6	22.51	2.8
4/10/2012	XX	GW911B8IG	LF	1098	6.9	7.4	105.67	102.83	2.84	117	0.3		9.6
7/10/2012	XX	GW911B90I	LF	1097	6.9	11.1	105.67	102.16	3.51	182	0.2		0
10/2/2012	XX	GW911B92I	LF	1048	6.8	11.9	105.67	101.7	3.97	73	0.3	22.44	0
4/8/2013	XX	GW911B951	LF	993	6.8	7.7	105.67	103.02	2.65	196	0.3		12.2
7/8/2013	XX	GW911B970	LF	1070	6.6	12.5	105.67	102.47	3.2	106	0.4		6.1
10/23/2013	XX	GW911B9AH	LF	1086	7.5	9.6	105.67	101.79	3.88	91	0.3	22.53	4.2
4/30/2014	XX	GW911B9D3	LF	768	7.3	7.1	105.67	103.09	2.58	126	0.4		6.2
7/16/2014	XX	GW911B9F4	LF	944	6.8	10.4	105.67	102.42	3.25	129	0.3		11.4
10/1/2014	XX	GW911B9H1	LF	904	7.2	10	105.67	100.87	4.8	157	0.2	22.52	4.1
4/15/2015	XX	GW911BA2I	LF	959	6.8	7.6	105.67	103.79	1.88	137	0.1		1.1
7/22/2015	XX	GW911BA51	LF	911	6.9	10.1	105.67	101.58	4.09	118	0.1		8.1
10/21/2015	XX	GW911BA75	LF	861	7.4	9.2	105.67	101.77	3.9	161	0.6	22.53	2.1
4/26/2016	XX	GW911BA96	LF	941	7	6.7	105.67	102.74	2.93	129	0.5		2.5
10/19/2016	XX	GW911BAD5	LF	918	6.8	11.1	105.67	99.85	5.82	127	0.2	22.48	1.5
4/24/2017	XX	GW911BAF5	LF	884	6.9	7.9	105.67	103.24	2.43	143	0.1		1.2
10/4/2017	XX	GW911BAH3	LF	887	7.2	10.4	105.67	100.02	5.65	150	0.2	22.48	1.3
4/11/2018	XX	GW911BAJ1	LF	933	7.1	7	105.67	100.24	5.43	188	2.2		1.5
10/11/2018	XX	GW911BB11	LF	935	7.1	9.6	105.67	100.59	5.08	301	0.1	22.48	2.1
4/9/2019	XX	GW911BB2J	LF	854	7	5.1	105.67	103.19	2.48	157	0.1		2.1
10/15/2019	XX	GW911BB52	LF	938	7.1	10.2	105.67	100.52	5.15	152	0.7	22.49	2.6
4/22/2020	XX	GW911BB70	LF	855	7.3	5.9	105.67	103.44	2.23	144	0.4		3.1
10/14/2020	XX	GW911BB92	LF	702	7.1	11.4	105.67	100.86	4.81	177	1.8	22.54	3.6
4/28/2021	XX	GW911BBAJ	LF	691	7	8.8	105.67	101.34	4.33	138	0.6		1.5
10/26/2021	XX	GW911BBD9	LF	670	7	10.8	105.67	102.36	3.31	126	1.9	22.55	2.3
P-914A													
4/28/2008	XX	GW914A70F	LF	775	6.7	9.2	122.51	115.27	7.24	-13	0.8		0
7/21/2008	XX	GW914A736	LF	750	6.5	11	122.51	114.01	8.5	-64	0.4		0.4
10/7/2008	XX	GW914A75I	LF	683	6.6	9	122.51	115.13	7.38	-10	0.4	42	0.5
4/20/2009	XX	GW914A789	LF	819	6.8	9.2	122.51	115.16	7.35	-79	0.8		0.5
7/20/2009	XX	GW914A7AI	LF	806	6.7	13.1	122.51	115.01	7.5	-70	0.8		0.9
10/19/2009	XX	GW914A7FE	LF	715	7.3	10.1	122.51	113.66	8.85	-48	0.4	42	0
3/29/2010	XX	GW914A7I6	LF	689	6.7	8.1	122.51	115.51	7	-48	0.6		0
7/28/2010	XX	GW914A80A	LF	750	6.8	10.7	122.51	112.96	9.55	-35	0.4		0
10/5/2010	XX	GW914A82I	LF	728	6.7	11.9	122.51	113.89	8.62	136	0.8	41.95	0
4/13/2011	XX	GW914A8A0	LF	745	6.7	7.3	122.51	115.58	6.93	49	0.4		0
7/26/2011	XX	GW914A8DG	LF	726	6.8	10.4	122.51	113.75	8.76	72	0.3		0.2
10/18/2011	XX	GW914A8BI	LF	730	7	11.1	122.51	115.01	7.5	-39	0.3	42	1.4
4/11/2012	XX	GW914A8I3	LF	737	6.9	7.6	122.51	115.2	7.31	-102	0.4		0
7/10/2012	XX	GW914A906	LF	769	6.8	9.9	122.51	114.72	7.79	-59	0.3		0
10/2/2012	XX	GW914A928	LF	722	6.6	9.9	122.51	114.24	8.27	-105	0.4	11.02 M	0
4/10/2013	XX	GW914A948	LF	730	6.6	8	122.51	115.48	7.03	54	0.3		0.3
7/8/2013	XX	GW914A968	LF	791	6.6	11.3	122.51	114.88	7.63	-23	0.6		0
10/22/2013	XX	GW914A9A7	LF	691	6.8	10.5	122.51	114.46	8.05	-49	0.6	12.98	0.1
4/28/2014	XX	GW914A9CA	LF	747	7.1	7.4	122.51	115.59	6.92	-29	0.4		0.5
7/14/2014	XX	GW914A9EC	LF	770	6.9	10.7	122.51	115.01	7.5	65	0.3		0.3
9/29/2014	XX	GW914A9GB	LF	769	6.9	10.9	122.51	113.51	9	45	0.4	13.21	0

SUMMARY REPORT

Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Collection Method	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
(P-914A)													
4/13/2015	XX	GW914AA25	LF	683	6.9	10.3	122.51	115.79	6.72	105	0.7		0.7
7/20/2015	XX	GW914AA49	LF	783	6.8	11.5	122.51	113.85	8.66	169	0.3		0.6
10/19/2015	XX	GW914AA6F	LF	735	6.8	9.3	122.51	114.23	8.28	167	0.7	13.25	0.05 U
4/25/2016	XX	GW914AA8G	LF	828	6.9	8	122.51	115.38	7.13	128	0.4		0.1
10/17/2016	XX	GW914AACH	LF	847	6.8	11	122.51	112.51	10	138	0.4	Q	2.7
4/24/2017	XX	GW914AAEH	LF	850	6.8	7.9	122.51	115.73	6.78	119	1.2		0.4
10/2/2017	XX	GW914AAGF	LF	816	6.9	10.4	122.51	112.46	10.05	128	1.8	42.5	5.5
4/9/2018	XX	GW914AAID	LF	949	6.9	6.1	122.51	115.86	6.65	122	2.9		0.6
10/11/2018	XX	GW914AB0D	LF	925	6.9	9.3	122.51	113.69	8.82	301	0.1	42.5	0.6
4/8/2019	XX	GW914AB2B	LF	877	6.3	6.7	122.51	115.43	7.08	266	0.8		0.5
10/15/2019	XX	GW914AB4E	LF	934	6.9	9.7	122.51	115.36	7.15	105	0.5	42	2.5
4/20/2020	XX	GW914AB6C	LF	895	6.1	7.3	122.51	116.04	6.47	160	0.4		1
10/13/2020	XX	GW914AB8E	LF	976	7.1	8.7	122.51	113.51	9	215	0.3	42.08	1.6
4/26/2021	XX	GW914ABAB	LF	913	7.2	7.6	122.51	115.51	7	217	0.3		1.5
10/25/2021	XX	GW914ABD1	LF	1063	6.6	9.6	122.51	114.61	7.9	183	0.3	42	1.7
P-914B													
4/28/2008	XX	GW914B70G	LF	669	6.8	9.9	122.55	115.04	7.51	59	1		3.2
7/21/2008	XX	GW914B737	LF	599	6.5	14.1	122.55	114.42	8.13	118	1		5.4
10/7/2008	XX	GW914B75J	LF	584	6.5	9.6	122.55	115.02	7.53	91	1	18.28	4.4
4/20/2009	XX	GW914B78A	LF	698	6.6	9.6	122.55	115.03	7.52	187	1		3.7
7/20/2009	XX	GW914B7AJ	LF	655	6.5	11.6	122.55	114.95	7.6	39	1		3.8
10/19/2009	XX	GW914B7FF	LF	575	7.2	10.8	122.55	113.89	8.66	98	1	18.3	7.4
3/29/2010	XX	GW914B7I7	LF	572	6.5	7.8	122.55	115.25	7.3	171	1		6.1
7/28/2010	XX	GW914B80B	LF	616	6.7	13.9	122.55	113.35	9.2	214	1		8.7
10/5/2010	XX	GW914B82J	LF	622	6.7	11.8	122.55	114.5	8.05	240	1	18.3	26
4/13/2011	XX	GW914B8AH	LF	599	6.6	6.6	122.55	115.17	7.38	150	1		1.5
7/26/2011	XX	GW914B8ED	LF	579	6.6	11.1	122.55	113.15	9.4	145	1		1.2
10/18/2011	XX	GW914B8CF	LF	604	7	12.5	122.55	114.55	8	315	1	18.3	6
4/11/2012	XX	GW914B8J0	LF	599	6.6	7.3	122.55	114.98	7.57	-41	1		0
7/10/2012	XX	GW914B912	LF	652	6.7	11.4	122.55	114.81	7.74	291	0.3		1.4
10/2/2012	XX	GW914B932	LF	606	6.3	10.3	122.55	114.71	7.84	220	0.8	18.29	0
4/10/2013	XX	GW914B955	LF	595	6.4	9.3	122.55	115.2	7.35	15	2		2.6
7/8/2013	XX	GW914B974	LF	674	6.3	10.9	122.55	114.84	7.71	109	0.8		0.5
10/22/2013	XX	GW914B9B1	LF	594	6.7	11.3	122.55	114.68	7.87	93	0.8	18.3	0.9
4/28/2014	XX	GW914B9D7	LF	633	6.7	6.9	122.55	115.25	7.3	171	0.6		0.6
7/14/2014	XX	GW914B9F8	LF	654	6.6	10.9	122.55	114.85	7.7	293	0.6		1
9/29/2014	XX	GW914B9H5	LF	637	6.6	12.2	122.55	114.05	8.5	314	0.6	18.3	2.5
4/13/2015	XX	GW914BA32	LF	589	6.5	9.2	122.55	115.45	7.1	200	0.7		1.6
7/20/2015	XX	GW914BA55	LF	691	6.8	12.3	122.55	114.67	7.88	218	0.8		2.1
10/19/2015	XX	GW914BA79	LF	646	6.6	9.6	122.55	114.62	7.93	226	0.6	18.3	3
4/25/2016	XX	GW914BA9A	LF	747	6.7	8	122.55	115.11	7.44	211	1		1.4
10/17/2016	XX	GW914BAD9	LF	772	6.6	11.9	122.55	113.4	9.15	233	0.6	18.3	5.4
4/24/2017	XX	GW914BAF9	LF	776	6.5	7.6	122.55	115.35	7.2	315	0.5		1.7
10/2/2017	XX	GW914BAH7	LF	750	6.7	11.5	122.55	113.2	9.35	270	0.7	18.3	1.7
4/9/2018	XX	GW914BAJ5	LF	918	6.6	5.8	122.55	116.32	6.23	260	3.2		1.4
10/11/2018	XX	GW914BB15	LF	880	6.9	10.3	122.55	113.91	8.64	447	0.7	18.3	3.5
4/8/2019	XX	GW914BB33	LF	824	6.7	5.4	122.55	114.63	7.92	284	0.6		6.6
10/15/2019	XX	GW914BB56	LF	920	6.7	10.3	122.55	115.34	7.21	169	1.4	18.3	4.9
4/20/2020	XX	GW914BB74	LF	884	5.9	6.5	122.55	115.75	6.8	203	0.7		2.3

SUMMARY REPORT

Groundwater Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(P-914B) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Well Depth Feet	Turbidity (field) NTU
10/13/2020	XX	GW914BB96	LF	963	7	9.9	122.55	114.35	8.2	266	1.4	18.1	1.5
4/28/2021	XX	GW914BBB3	LF	897	7	7.3	122.55	115.55	7	246	1.8		8.2
10/26/2021	XX	GW914BBDD	LF	1080	6.4	10.4	122.55	114.75	7.8	227	0.6	18.3	3.1

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

A - The sampling location was Inaccessible
M - Results are missing or not reliable due to a meter malfunction.
Q - An obstruction prevented the collection of data.
U - Not Detected above the laboratory reporting limit.

Sample collection notes:

LF - Low flow sample method used to collect the sample.

REPORT PREPARED: 2/23/2022 13:52

FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(200) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
200							
4/30/2008	XX	GW200X700		96.2	236	3.8	122
4/30/2008	XD	GWDP1X6J0		99.7	234	3.3	126
7/22/2008	XX	GW200X72B		85.6	205	3.9	60.3
7/22/2008	XD	GWDP1X71C		88.5	206	4.3	62
10/7/2008	XX	GW200X753		70.8	220	5.6	44
10/7/2008	XD	GWDP1X743		74.2	223	2.9	46.3
4/21/2009	XX	GW200X77E		32.2	271	2.5	23.2
4/21/2009	XD	GWDP1X76E		29.6	275	2.8	22.5
7/22/2009	XX	GW200X7A3		40	280	3.8	15.2
7/22/2009	XD	GWDP1X794		41.8	280	3.7	16.6
10/20/2009	XX	GW200X7EJ		48.2	277	4.2	39.6
10/20/2009	XD	GWDP1X7DJ		46.6	275	4.4	40.5
3/31/2010	XX	GW200X7HB		36.7	260	4	11.1
3/31/2010	XD	GWDP1X7GB		37.5	259	3.8	11.1
7/27/2010	XX	GW200X7JF		41.5	226	4.3	19.8
7/27/2010	XD	GWDP1X7IG		42.3	229	4.3	18.3
10/5/2010	XX	GW200X823		62.3	272	4.4	27.4
10/5/2010	XD	GWDP1X813		58.3	274	4.4	28
4/12/2011	XX	GW200X89B	364	22.1	259	2.7	8.6
7/27/2011	XX	GW200X8D7	339	27.2	232	4	23.1
10/17/2011	XX	GW200X8B9	386	32.6	251	5.4	20
10/17/2011	XD	GWDP1X8BB	400	33.6	251	5.5	20.4
4/11/2012	XX	GW200X8HE	408	68.7	212	5.7	35.8
7/11/2012	XX	GW200X8JH	370	36.6	253	4.4	12.3
10/3/2012	XX	GW200X91J	407	38.3	257	6.2	23.9
10/3/2012	XD	GWDP1X921	406	32.6	256	6	30.6
4/10/2013	XX	GW200X93J	284	27.8	203	3.2	4.1
7/10/2013	XX	GW200X95J	317	26.8	243	4	3.3
10/23/2013	XX	GW200X99I	304	19.6	237	4.7	3.1
10/23/2013	XD	GWDP1X9A0	309	18.2	239	4.8	3.7
4/30/2014	XX	GW200X9C1	236	17.3	186	2.5	6.3
4/30/2014	XD	GWDP4X9DE	233	22.3	184	2.5	8.6
7/16/2014	XX	GW200X9E3	296	18.9	225	3.7	6.8
10/1/2014	XX	GW200X9G2	292	15.4	238	3.9	8.4
10/1/2014	XD	GWDP1X9G4	294	15	235	4	8.2
4/15/2015	XX	GW200XA1G	283	14.3	221	2.7	11.1
4/15/2015	XD	GWDP4XA38	296	12.4	223	2.9	11
7/22/2015	XX	GW200XA40	295	17.4	235	3.2	9.1
10/21/2015	XX	GW200XA66	454	32.5	302	3.9	37.5
10/21/2015	XD	GWDP1XA68	450	32.7	305	4.1	38.3
4/27/2016	XD	GWDP1XA89	258	12.4	200	2.7	9.4
4/27/2016	XX	GW200XA87	259	12.5	196	2.4	9.3
10/19/2016	XX	GW200XAC8	506	20.7	257	4.5	25.2
4/26/2017	XD	GWDP1XAEA	229	8.3	190	2.3	7.1
4/26/2017	XX	GW200XAE8	231	8.4	190	2.5	6.9
10/4/2017	XX	GW200XAG6	323	17	220	3.7	17
4/11/2018	XD	GWDP1XAI6	232	8.4	190	2.7	6.3
4/11/2018	XX	GW200XAI4	225	8.3	190	2.6	6.2

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(200) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
10/11/2018	XX	GW200XB04	355	20	260	4	19
4/10/2019	XD	GWDP1XB24	354	6.3	240	7.9	30
4/10/2019	XX	GW200XB22	360	6.2	230	7.9	30
10/16/2019	XX	GW200XB45	334	11	270	5.1	12
4/22/2020	XD	GWDP1XB65	240	4.9	190	2.3	14
4/22/2020	XX	GW200XB63	236	5.3	190	2.5	14
10/14/2020	XX	GW200XB85	350	19	270	8.4 M10	23
4/28/2021	XD	GWDP1XBA4	219	5.7	180	2.2	5.1
4/28/2021	XX	GW200XBA2	224	5.9	190	2.2	5.1
10/27/2021	XX	GW200XBCC	316	4.7	260	3.3	4.2
509B							
8/31/2010	XX	GW509B86F			285		124
4/11/2011	XX	GW509B899	554	58.2	282	3.9	82.4
7/27/2011	XX	GW509B8D5	396	30.4	253	0.7 U	13.1
10/18/2011	XX	GW509B8B7	568	41.6	314	4.6	84.9
4/10/2012	XX	GW509B8HC	452	41.1	247	3.2	81.2
7/10/2012	XX	GW509B8JF	468	5	272	3.6	13.8
10/2/2012	XX	GW509B91H	700	18.6	312	4	172
4/9/2013	XX	GW509B93H	437	18.3	257	3.3	79.8
7/9/2013	XX	GW509B95H	435	14	278	3.9	61
10/22/2013	XX	GW509B99G	516	10.8	297	4.3	68.1
4/29/2014	XX	GW509B9BJ	482	25	255	2.7	93
7/15/2014	XX	GW509B9E1	618	16.2	324	3.8	122
9/30/2014	XX	GW509B9G0	684	11.8	355	3.8	127
4/14/2015	XX	GW509BA1E	601	23.3	337	3.1	104
7/21/2015	XX	GW509BA3I	640	15.1	318	3.6	134
10/20/2015	XX	GW509BA64	601	18.1	317	3.3	121
4/26/2016	XX	GW509BA85	531	12.9	307	3.4	123
10/18/2016	XX	GW509BAC6	709	15.8	292	2.5	171
4/25/2017	XX	GW509BAE6	523	13	310	3.3	110
10/3/2017	XX	GW509BAG4	632	13	330	3.1	120
4/10/2018	XX	GW509BAI2	491	6 U	290	3.4	79
10/11/2018	XX	GW509BB02	682	17	290	2.5	160
4/9/2019	XX	GW509BB20	473	11	270	2.4	49
10/16/2019	XX	GW509BB43	671	10	340	4	110
4/21/2020	XX	GW509BB61	517	10	290	3.2	99
10/14/2020	XX	GW509BB83	745	26	260	5.8 M10	130
4/27/2021	XX	GW509BBA0	454	9.9	260	2.7	78
10/26/2021	XX	GW509BBCA	481	7.9	280	3.5	76
516B-B							
4/30/2008	XX	GW516B701		35.8	292	2.6	188
7/22/2008	XX	GW516B72C		28.3	298	3	145
10/7/2008	XX	GW516B754		28.6	282	1.4 J	152
4/22/2009	XX	GW516B77F		42.8	278	1.6 J	135
7/21/2009	XX	GW516B7A4		46.7	275	2.5	153
10/20/2009	XX	GW516B7F0		31.6	280	1.9 J	156
3/31/2010	XX	GW516B7HC		32.7	288	2.3	146
7/28/2010	XX	GW516B7JG		18.9	290	1.6 J	127

SUMMARY REPORT

Groundwater Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(516B-B) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
10/5/2010	XX	GW516B824		18.4	287	1.2 J	143
4/12/2011	XX	GW516B897	599	12.5	291	1.4 J	137
7/26/2011	XX	GW516B8D3	606	28.6	285	1.2 J	152
10/17/2011	XX	GW516B8B5	591	15.9	292	1.8 J	125
4/11/2012	XX	GW516B8HA	587	30.7	289	1.5 J	126
7/11/2012	XX	GW516B8JD	639	23.6	285	2 U	157
10/2/2012	XX	GW516B91F	600	5.3	292	2 U	24.5
4/9/2013	XX	GW516B93F	604	21.7	290	2 U	141
7/9/2013	XX	GW516B95F	617	24.1	291	2 U	135
10/22/2013	XX	GW516B99E	608	21.1	298	2 U	128
4/30/2014	XX	GW516B9BH	588	22.1	326	2 U	144
7/15/2014	XX	GW516B9DJ	641	20	304	2 U	136
9/30/2014	XX	GW516B9FI	612	15.9	310	2 U	138
4/14/2015	XX	GW516BA1C	640	13.7	337	12.3	152
7/20/2015	XX	GW516BA3G	624	6.7	332	2.3	137
10/20/2015	XX	GW516BA62	615	9.8	324	2 U	171
4/26/2016	XX	GW516BA83	602	14	316	2 U	168
10/18/2016	XX	GW516BAC4	607	17.4	305	2 U	140
4/25/2017	XX	GW516BAE4	617	24	320	2 U	170
10/3/2017	XX	GW516BAG2	617	25	290	2 U	170
4/10/2018	XX	GW516BAJG	601	10 U	300	2 U	140
10/8/2018	XX	GW516BB00	617	25	310	2 U	150
4/9/2019	XX	GW516BB3E	632	30	310	2 U	140
10/16/2019	XX	GW516BB41	626	17	330	2 U	140
4/22/2020	XX	GW516BB7F	608	27	320	2 U	140
10/14/2020	XX	GW516BB81	600	38	320	4 M10	190
4/27/2021	XX	GW516BBBD	599	25	310	2 U	130
10/26/2021	XX	GW516BBC8	610	20	310	2 U	130
641							
4/29/2008	XX	GW641X708	1140	129	541	13.4	225
7/21/2008	XX	GW641X72J	1316	108	662	22.6	262
10/7/2008	XX	GW641X75B	1219	98.5	680	32.9	273
4/20/2009	XX	GW641X782	1793	181	551	36.8	581
7/20/2009	XX	GW641X7AB	1680	213	445	26	604
10/20/2009	XX	GW641X7F7	1603	103	723	50.9	540
3/29/2010	XX	GW641X7HJ	1215	100	584	29.4	368
7/27/2010	XX	GW641X803	925	53.7	560	8.8	144
10/5/2010	XX	GW641X82B	926	65	523	8.3	154
4/13/2011	XX	GW641X89C	1018	73.3	610	15.8	211
7/26/2011	XX	GW641X8D8	912	73.8	516	6	172
10/19/2011	XX	GW641X8BA	840	60.3	482	9.3	158
4/10/2012	XX	GW641X8HF	611	73.4	346	7.5	97.8
7/10/2012	XX	GW641X8JI	529	57.6	306	5.7	62.2
10/1/2012	XX	GW641X920	2113	26.7	1240	121	502
11/7/2012	XX	GW641X93E	952	46.3	560	22.8	189
4/9/2013	XX	GW641X940	714	52.8	403	12.6	137
7/9/2013	XX	GW641X960	458	39.8	313	5	38.3
10/21/2013	XX	GW641X99J	723	33.1	520	7.7	42
4/30/2014	XX	GW641X9C2	675	27.2	464	13.6	85.5

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(641) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
7/16/2014	XX	GW641X9E4	581	22.5	426	8.1	48.6
10/1/2014	XX	GW641X9G3	537	38.4	379	5.4	46.6
4/15/2015	XX	GW641XA1H	660	44.4	402	6.4	112
7/22/2015	XX	GW641XA41	534	30.6	323	9.8	76.2
10/20/2015	XX	GW641XA67	510	46.3	306	6.1	85
4/26/2016	XX	GW641XA88	475	33.5	305	6.1	73
10/19/2016	XX	GW641XAC9	477	41.5	290	4	70.8
4/25/2017	XX	GW641XAE9	451	34	310	5.4	64
10/3/2017	XX	GW641XAG7	496	43	290	3.8	63
4/10/2018	XX	GW641XAI5	572	33	390	6.2	67
10/8/2018	XX	GW641XB05	571	42	390	3.3	60
4/9/2019	XX	GW641XB23	425	23	260	4.7	36
10/16/2019	XX	GW641XB46	472	33	330	3.3	37
4/22/2020	XX	GW641XB64	483	34	330	4.6	65
10/14/2020	XX	GW641XB86	575	43	420	11 M10	44
4/27/2021	XX	GW641XBA3	501	31	370	4	50
10/27/2021	XX	GW641XBCD	415	16	310	2.8	20
MW02-801A							
4/30/2008	XX	GW801A709	2455	16 J	1050	82.8	1420
4/30/2008	XD	GWDP4X6JI	2507	15.5 J	1047	54.3	1414
7/22/2008	XX	GW801A730	2645	24.4 J	1090	58.9	1360
7/22/2008	XD	GWDP2X71D	2513	24.7 J	1050	60.4	1340
10/8/2008	XX	GW801A75C	2659	11.9 J	1120	66.3	996
10/8/2008	XD	GWDP4X751	2653	12.1 J	1090	70.5	993
4/22/2009	XX	GW801A783	2570	9.8 J	1068	58.4	972
4/22/2009	XD	GWDP4X77C	2559	9.1	1060	58.4	1030
7/22/2009	XX	GW801A7AC	2572	17.9 J	1091	64.2	1270
7/22/2009	XD	GWDP2X795	2615	17.9 J	1098	64.9	1270
10/21/2009	XX	GW801A7F8	2542	21 J	1060	50.1	1210
10/21/2009	XD	GWDP4X7EH	2582	20.4 J	1056	48.9	1220
3/30/2010	XX	GW801A7I0	2354	11.5 J	1060	56.9	1010
3/30/2010	XD	GWDP4X7H9	2362	10.8 J	1074	57.8	1030
7/28/2010	XX	GW801A804	2326	6 U	1094	64.5	1020
7/28/2010	XD	GWDP2X7IH	2368	6 U	1071	64.5	1180
10/4/2010	XX	GW801A82C	2465	9 U	1072	52.6	1060
10/4/2010	XD	GWDP4X821	2387	9 U	1053	52	1060
4/11/2011	XX	GW801A89F	2168	15.9 J	1036	60.1	1060
7/25/2011	XX	GW801A8DB	1898	8.8 J	890	33.5	511
10/17/2011	XX	GW801A8BD	2004	6.8 J	966	51.7	809
4/9/2012	XX	GW801A8HI	1985	6.7	970	57.8	785
7/9/2012	XX	GW801A901	2050	14.4	931	46.8	648
10/3/2012	XX	GW801A923	2054	33.1	925	51.5	880
4/9/2013	XX	GW801A943	1877	15.6	884	45.5	694
7/8/2013	XX	GW801A963	1933	20 U	914	46.2	633
10/21/2013	XX	GW801A9A2	1835	10.1	927	46.5	595
4/28/2014	XX	GW801A9C5	1780	20 U	918	42.5	605
7/14/2014	XX	GW801A9E7	1827	30 U	920	45.2	557
9/29/2014	XX	GW801A9G6	1783	20 U	946	46.5	590
4/13/2015	XX	GW801AA20	1633	138	888	37.2	454

SUMMARY REPORT

Groundwater Inorganics

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CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
(MW02-801A)							
7/20/2015	XX	GW801AA44	1609	11.6	854	33.6	475
10/19/2015	XX	GW801AA6A	1648	40 U	899	36.3	552
4/25/2016	XX	GW801AA8B	1287	20 U	790	27.7	461
10/17/2016	XX	GW801AACC	1475	20 U	790	29.4	437
4/24/2017	XX	GW801AAEC	1369	40 U	840	29	400
10/2/2017	XX	GW801AAGA	1419	20 U	820	28	470
4/9/2018	XX	GW801AAI8	1268	20 U	800	22	300
10/9/2018	XX	GW801AB08	1379	20 U	820	28	380
4/8/2019	XX	GW801AB26	1251	20 U	770	24	320
10/15/2019	XX	GW801AB49	1350	40 U	550	26	350
4/20/2020	XX	GW801AB67	1172	40 U	650	18	320
10/14/2020	XX	GW801AB89	1201	30 U	680	30 M10	420
4/26/2021	XX	GW801ABA6	1162	10 U	760	19	240
10/27/2021	XX	GW801ABCG	1140	10 U	750	22	240
MW03-802A							
4/29/2008	XX	GW802A70A		18.7	405	4.3	66.7
7/22/2008	XX	GW802A731		15.6	434	2.7	56.8
10/6/2008	XX	GW802A75D		14.7	419	3.2	58.1
4/21/2009	XX	GW802A784		14.4	449	2	50.7
7/21/2009	XX	GW802A7AD		20.3	462	3.8	68.9
10/19/2009	XX	GW802A7F9		13.8	447	2	57.1
3/30/2010	XX	GW802A711		16.2	438	4	56.6
7/26/2010	XX	GW802A805		12.4	439	1.8 J	50.4
10/4/2010	XX	GW802A82D		11	433	2	47.8
4/11/2011	XX	GW802A89G	447	20.8	361	7.5	24.9
4/11/2011	XD	GWDP1X89D	362	21.1	284	7.6	12.1
7/26/2011	XX	GW802A8DC	529	20.7	410	2.7	32.8
10/17/2011	XX	GW802A8BE	519	15.7	417	2.5	29.9
4/9/2012	XX	GW802A8HJ	422	15.5	332	2.4	22.1
4/9/2012	XD	GWDP1X8HG	492	20.7	385	2.3	33.9
7/9/2012	XX	GW802A902	496	11.7	412	4.2	16.1
10/1/2012	XX	GW802A924	502	5.3	407	3.7	24.5
4/8/2013	XX	GW802A944	482	8.4	387	2.9	14
4/8/2013	XD	GWDP1X941	426	16.3	326	3.4	20.8
7/8/2013	XX	GW802A964	488	11.2	362	2.6	34.8
7/8/2013	XD	GWDP4X97B	477	11.3	366	2.6	34.5
10/21/2013	XX	GW802A9A3	474	8	362	2.5	27.2
4/28/2014	XX	GW802A9C6	330	12.4	278	2.4	9.9
4/28/2014	XD	GWDP1X9C3	323	11.8	262	2.5	7.2
7/14/2014	XX	GW802A9E8	454	9.8	373	2.6	11.5
7/14/2014	XD	GWDP4X9FF	472	10.6	379	2.4	11.7
9/29/2014	XX	GW802A9G7	479	8.1	394	2.6	24.7
4/13/2015	XX	GW802AA21	409	12.6	301	3.9	38.1
4/13/2015	XD	GWDP1XA1I	398	14	267	3.8	41
7/20/2015	XX	GW802AA45	411	10.3	310	3.2	41
7/20/2015	XD	GWDP4XA5C	384	11.9	274	3.4	32.3
10/20/2015	XX	GW802AA6B	443	14	335	2.6	40.1
4/25/2016	XX	GW802AA8C	268	13.2	196	3.2	14.4
10/17/2016	XX	GW802AACD	254	10.2	182	2.8	13

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(MW03-802A) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
4/24/2017	XX	GW802AAED	422	16	350	3.5	33
10/2/2017	XX	GW802AAGB	400	15	310	3.9	35
4/9/2018	XX	GW802AAI9	270	52	220	3.4	17
10/9/2018	XX	GW802AB09	302	7.8	240	3.9	11
4/9/2019	XX	GW802AB27	A	A	A	A	A
10/15/2019	XX	GW802AB4A	315	5.5	270	4.9	3.8
4/20/2020	XX	GW802AB68	598	10 U	180	2.2	160
10/13/2020	XX	GW802AB8A	729	6.7	200	40 M10	59
4/26/2021	XX	GW802ABA7	314	4.7	190	2.7	40
10/25/2021	XX	GW802ABCH	335	3.4	250	3.6	25
MW03-802B							
4/29/2008	XX	GW802B6JD		18	454	4.3	87.3
7/22/2008	XX	GW802B725		16.2	548	2	62.7
10/6/2008	XX	GW802B74G		13.1	610	0.9 J	41.8
4/21/2009	XX	GW802B777		15.6	439	0.9 J	86.5
7/21/2009	XX	GW802B79H		17.7	405	1.6 J	101
10/19/2009	XX	GW802B7EC		10.2	452	1.3 J	39.5
3/30/2010	XX	GW802B7H4		19.6	415	2.1	78.9
7/26/2010	XX	GW802B7J9		11.5	573	1.2 J	28.6
10/4/2010	XX	GW802B81G		15	417	3.4	31.5
4/25/2016	XX	GW802BA97	670	21.2	467	2.2	77.2
10/17/2016	XX	GW802BAD6	877	5.6	575	8.7	113
4/24/2017	XX	GW802BAF6	693	22	440	2.3	140
10/2/2017	XX	GW802BAH4	779	5.9	520	6.4	92
10/9/2018	XX	GW802BB12	822	20 U	540	7.4	130
10/15/2019	XX	GW802BB53	659	13	480	2.7	14
10/13/2020	XX	GW802BB93	733	6 U	530	110 M10	93
10/25/2021	XX	GW802BBDA	627	6.2	490	4.2	22
MW03-803A							
4/29/2008	XX	GW803A6JE		17.6	462	2.5	75.3
7/22/2008	XX	GW803A726		12.6	380	1.5 J	31.6
10/6/2008	XX	GW803A74H		13.1	359	3.5	32.4
4/21/2009	XX	GW803A778		11	333	1.3 J	40.6
7/21/2009	XX	GW803A79I		13.2	325	1.9 J	45.4
10/19/2009	XX	GW803A7ED		17	630	3.1	64.7
3/30/2010	XX	GW803A7H5		11.1	280	1.5 J	71.5
7/26/2010	XX	GW803A7JA		11.1	485	2	40.7
10/4/2010	XX	GW803A81H		9.9	443	0.8 J	51.5
4/25/2016	XX	GW803AA98	950	20 U	254	2 U	365
7/27/2016	XX	GW803AABB	839	14.5	491	2 U	177
10/17/2016	XX	GW803AAD7	936	20 U	472	2 U	224
4/24/2017	XX	GW803AAF7	1178	12	250	2 U	450
10/2/2017	XX	GW803AAH5	1079	12	460	2 U	240
10/9/2018	XX	GW803AB13	939	20 U	470	2 U	280
10/15/2019	XX	GW803AB54	1139	14	490	2 U	260
10/13/2020	XX	GW803AB94	1007	11	610	94 M10	1 U
10/25/2021	XX	GW803ABDB	1103	12	530	2 U	200
MW03-803B							

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(MW03-803B) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
4/29/2008	XX	GW803B6JF		26.9	580	4	60.9
7/22/2008	XX	GW803B727		18.7	705	3.3	49.4
10/6/2008	XX	GW803B74I		20.1	618	5	56.1
10/6/2008	XD	GWDP2X744		20.1	615	4.1	55.8
4/21/2009	XX	GW803B779		18	621	2.3	54.3
7/21/2009	XX	GW803B79J		25.3	640	3.6	57.8
10/19/2009	XX	GW803B7EE		18.7	637	2.2	44.5
3/30/2010	XX	GW803B7H6		20.3	490	3.2	31.8
7/26/2010	XX	GW803B7JB		14.7	736	2.1	44.1
10/4/2010	XX	GW803B81I		12.6	666	2.9	39.1
4/11/2011	XX	GW803B89H	801	15.8	618	2.5	50.5
7/26/2011	XX	GW803B8DD	868	3.5	690	2	61
10/17/2011	XX	GW803B8BF	881	11.9	703	3.9	44.2
4/9/2012	XX	GW803B8I0	834	18.8	650	2.7	61.5
7/9/2012	XX	GW803B903	858	22.8	660	3	62.6
10/1/2012	XX	GW803B925	927	10.2	691	2.2	63.9
4/8/2013	XX	GW803B945	912	13.6	682	2.9	44.8
7/8/2013	XX	GW803B965	830	6.1	640	3.7	42.7
10/21/2013	XX	GW803B9A4	922	13	683	2.2	59.7
4/28/2014	XX	GW803B9C7	867	19.8	644	3.2	46.3
7/14/2014	XX	GW803B9E9	877	21.5	639	3.1	54.2
9/29/2014	XX	GW803B9G8	917	15.9	668	2.1	60.3
4/13/2015	XX	GW803BA22	788	18.3	564	2.3	91.7
7/20/2015	XX	GW803BA46	834	15.7	583	2.6	76.8
10/19/2015	XX	GW803BA6C	871	18.3	631	2 U	22.5
4/25/2016	XX	GW803BA8D	908	16.6	536	2.1	130
7/27/2016	XX	GW803BAAI	839	14.9	614	2.8	94.5
10/17/2016	XD	GWDP1XACA	855	13.7	629	2 U	84.4
10/17/2016	XX	GW803BACE	858	13.6	628	2 U	87.9
4/24/2017	XX	GW803BAEE	825	14	590	2.9	120
10/2/2017	XD	GWDP1XAG8	917	16	620	2 U	110
10/2/2017	XX	GW803BAGC	907	4 U	620	2	88
4/9/2018	XX	GW803BAIA	821	10	530	2.3	84
10/9/2018	XD	GWDP1XB06	907	13	650	2 U	100
10/9/2018	XX	GW803BB0A	894	15	650	2.2	41
4/8/2019	XX	GW803BB28	960	68	480	2	210
10/15/2019	XD	GWDP1XB47	854	10	550	4.8	110
10/15/2019	XX	GW803BB4B	904	11	570	3.6	120
4/20/2020	XX	GW803BB69	1051	20 U	440	2 U	260
10/13/2020	XD	GWDP1XB87	920	11	650	150 M10	54
10/13/2020	XX	GW803BB8B	939	9.2	650	170 M10	120
4/26/2021	XX	GW803BBA8	898	11	580	3.2	52
10/25/2021	XD	GWDP1XBCE	898	8.7	590	2.3	100
10/25/2021	XX	GW803BBCI	931	9.6	610	2.3	120
MW-906B							
4/29/2008	XX	GW906B70D	316	41.2	149	2.6	92.1
7/22/2008	XX	GW906B734	346	20.9	148	3	83.3
10/6/2008	XX	GW906B75G	295	19.6	140	5.9	75.3
4/20/2009	XX	GW906B787	360	17.2	150	1.9 J	102

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(MW-906B) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
7/22/2009	XX	GW906B7AG	363	22	154	2	101
10/19/2009	XX	GW906B7FC	365	19	148	3	118
3/29/2010	XX	GW906B7I4	353	16.3	161	2.6	92.1
7/26/2010	XX	GW906B808	395	17.2	147	1.4 J	11.3
10/4/2010	XX	GW906B82G	366	16	132	1.5 J	105
4/11/2011	XX	GW906B89J	317	12	164	1.7 J	74.8
7/25/2011	XX	GW906B8DF	326	16.8	151	1.4 J	76.6
10/17/2011	XX	GW906B8BH	298	10.7	161	1.9 J	48.9
4/9/2012	XX	GW906B8I2	300	13.9	162	1.2 J	64.4
7/9/2012	XX	GW906B905	303	12.1	153	2 U	61.5
10/2/2012	XX	GW906B927	312	11.4	139	2 U	73.2
4/8/2013	XX	GW906B947	300	11.3	164	2 U	60.2
7/9/2013	XX	GW906B967	281	9.7	161	2 U	51.5
10/22/2013	XX	GW906B9A6	290	9.9	160	2 U	48.7
4/28/2014	XX	GW906B9C9	286	11.6	167	2 U	56
7/15/2014	XX	GW906B9EB	270	29.5	154	2.2	72.8
9/30/2014	XX	GW906B9GA	290	10.2	141	2 U	62
4/14/2015	XX	GW906BA24	281	13.6	160	2 U	41.9
7/21/2015	XX	GW906BA48	261	9	150	2 U	45.1
10/19/2015	XX	GW906BA6E	275	13.4	146	2 U	58.3
4/25/2016	XX	GW906BA8F	238	9.3	152	2 U	41.4
10/17/2016	XX	GW906BACG	270	11.1	143	2 U	50.8
4/25/2017	XX	GW906BAEG	223	8.7	150	2.1	42
10/2/2017	XX	GW906BAGE	241	9.5	140	2 U	52
4/9/2018	XX	GW906BAIC	211	4 U	140	2.3	27
10/9/2018	XX	GW906BB0C	231	11	140	2 U	51
4/9/2019	XX	GW906BB2A	217	12	140	2 U	21
10/15/2019	XX	GW906BB4D	217	12	150	2 U	25
4/20/2020	XX	GW906BB6B	240	11	160	2	29
10/15/2020	XX	GW906BB8D	210	9.8	140	3.9 M10	31
4/26/2021	XX	GW906BBAA	229	10	150	2 U	11
10/27/2021	XX	GW906BBD0	205	10 U	120	2 U	27
MW-916							
4/30/2008	XX	GW916X70H		17.5	719	11.2	3.6
7/21/2008	XX	GW916X738		17.4	868	2.9	7.9
10/7/2008	XX	GW916X760		17.2	390	7.8	2.1
4/20/2009	XX	GW916X78B		12.2	604	2.3	2
7/21/2009	XX	GW916X7B0		9.5	358	7.8	0.9 J
10/20/2009	XX	GW916X7FG		8.7	583	5.8	1.8
3/31/2010	XX	GW916X7I8		3.6	121	6.3	0.9 J
3/31/2010	XD	GWDP2X7GC		3.8	138	5.9	0.9 J
7/27/2010	XX	GW916X80C		10.6	500	3.9	4
10/5/2010	XX	GW916X830		9.7	665	1.6 J	4.1
4/12/2011	XX	GW916X89A	537	14	487	3	1.9
7/26/2011	XX	GW916X8D6	533	12.5	487	4	2.6
10/18/2011	XX	GW916X8B8	387	9.1	335	4.8	0.7 J
4/10/2012	XX	GW916X8HD	600	24.9	548	2.7	3
7/10/2012	XX	GW916X8JG	419	14.9	385	3.5	2.4
10/2/2012	XX	GW916X91I	521	22.8	446	4.8	3

SUMMARY REPORT
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Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
(MW-916)							
4/8/2013	XX	GW916X93I	563	39.1	498	2.1	3.1
7/9/2013	XX	GW916X95I	551	51.2	464	2.2	2.7
10/22/2013	XX	GW916X99H	484	36.5	394	2.8	2.6
4/29/2014	XX	GW916X9C0	539	45.7	455	3.2	3.7
7/15/2014	XX	GW916X9E2	463	27.5	394	3.3	3.3
9/30/2014	XX	GW916X9G1	560	30.6	477	2.2	3.3
4/29/2015	XX	GW916XA1F	215	7.1	188	5.1	2.4
7/21/2015	XX	GW916XA3J	478	39	391	2.4	2.5
10/20/2015	XX	GW916XA65	439	44.7	331	4.7	5.9
4/26/2016	XX	GW916XA86	366	27.5	308	3.2	5.9
10/18/2016	XX	GW916XAC7	283	24.9	229	2.2	2.3
4/25/2017	XX	GW916XAE7	320	12	300	2.9	1.8
10/3/2017	XX	GW916XAG5	408	17	350	2.1	2.5
4/10/2018	XX	GW916XAJ3	155	17	130	9.6	1 U
10/10/2018	XX	GW916XB03	381	72	350	5.6	8.3
4/9/2019	XX	GW916XB21	219	7.8	160	7.8	1.5
10/16/2019	XX	GW916XB44	535	37	450	2.8	2.2
4/21/2020	XX	GW916XB62	370	33	300	3.1	1 U
10/14/2020	XX	GW916XB84	359	41	300	8.2 M10	8.2
4/27/2021	XX	GW916XBA1	451	38	320	2 U	1 U
10/26/2021	XX	GW916XBCB	317	15	160	3.4	2
MW-917							
4/30/2008	XX	GW917X70I	902	21.4	905	14.2	4.4
7/21/2008	XX	GW917X739	799	12.8	852	2.4	5.6
10/7/2008	XX	GW917X761	805	12.4	783	3.4	5.2
4/20/2009	XX	GW917X78C	814	9.7	810	0.7 U	3.7
7/21/2009	XX	GW917X7B1	715	11	692	2.1	4.3
10/20/2009	XX	GW917X7FH	742	19.9	725	0.9 J	6
3/31/2010	XX	GW917X7I9	697	9.3	672	2.2	5
7/27/2010	XX	GW917X80D	642	5.8	635	0.7 U	5.9
10/5/2010	XX	GW917X831	631	6.4	617	0.7 U	4.7
4/12/2011	XX	GW917X89I	641	14	635	0.7 U	5.2
7/26/2011	XX	GW917X8DE	674	34.9	601	0.7 U	6.7
10/18/2011	XX	GW917X8BG	716	33.2	637	0.9 J	4.3
4/10/2012	XX	GW917X8I1	688	45.9	604	0.8 J	5.8
7/10/2012	XX	GW917X904	655	25.8	584	2 U	6.4
10/2/2012	XX	GW917X926	685	42.4	591	2 U	5.7
4/8/2013	XX	GW917X946	669	41.5	591	2 U	5.1
7/9/2013	XX	GW917X966	606	37.3	535	2 U	4.8
10/22/2013	XX	GW917X9A5	629	35.4	534	2 U	4.9
4/29/2014	XX	GW917X9C8	607	47.3	519	2 U	5.7
7/15/2014	XX	GW917X9EA	589	34.1	504	2 U	5.8
9/30/2014	XX	GW917X9G9	570	33.8	504	2 U	6.1
4/14/2015	XX	GW917XA23	554	39.1	491	2 U	9.6
7/21/2015	XX	GW917XA47	555	35.9	485	2 U	8.5
10/20/2015	XX	GW917XA6D	529	36	466	2 U	8.9
4/26/2016	XX	GW917XA8E	498	31.9	432	2 U	9.5
10/18/2016	XX	GW917XACF	542	38.5	442	2 U	8.6
4/25/2017	XX	GW917XAEF	488	33	440	2 U	11

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(MW-917) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
10/3/2017	XX	GW917XAGD	559	58	430	2 U	8.9
4/10/2018	XX	GW917XAIB	513	11	450	2 U	6.1
10/10/2018	XX	GW917XB0B	583	71	470	2 U	5.1
4/9/2019	XX	GW917XB29	554	58	430	2 U	1.8
10/16/2019	XX	GW917XB4C	542	59	450	2 U	5
4/21/2020	XX	GW917XB6A	556	66	440	2 U	4.7
10/14/2020	XX	GW917XB8C	530	82	440	6.9 M10	2.8
4/27/2021	XX	GW917XBA9	516	57	430	2 U	1.5
10/26/2021	XX	GW917XBCJ	533	44	430	2 U	5.9
MW97-123							
4/28/2008	XX	GW123X6JJ	885	281	383	5.5	478
7/21/2008	XX	GW123X72A	814	99.6	366	5.4	149
10/6/2008	XX	GW123X752	792	112	348	9.7	157
4/20/2009	XX	GW123X77D	933	121	398	4.8	226
7/20/2009	XX	GW123X7A2	989	144	409	6.3	255
10/19/2009	XX	GW123X7EI	555	62.1	305	3.1	81
3/31/2010	XX	GW123X7HA	1033	134	428	6.1	257
7/27/2010	XX	GW123X7JE	591	65	285	4.2	75.9
10/5/2010	XX	GW123X822	889	89.3	380	4.3	192
4/12/2011	XX	GW123X898	1070	105	437	6.2	280
7/26/2011	XX	GW123X8D4	1083	163	458	5.7	311
7/26/2011	XD	GWDP1X8D9	1129	157	465	5.7	301
10/18/2011	XX	GW123X8B6	1037	73.3	450	6.3	169
4/10/2012	XX	GW123X8HB	1016	135	448	6.3	255
7/11/2012	XX	GW123X8JE	1030	138	440	5.7	242
7/11/2012	XD	GWDP1X8JJ	1025	133	437	5.7	246
10/2/2012	XX	GW123X91G	1030	98.9	427	5.6	220
4/10/2013	XX	GW123X93G	966	132	424	5.8	160
7/9/2013	XX	GW123X95G	929	119	427	5.7	175
7/9/2013	XD	GWDP1X961	915	119	421	5.8	175
10/23/2013	XX	GW123X99F	924	131	425	5.5	167
4/30/2014	XX	GW123X9BI	883	129	411	5.6	195
7/16/2014	XX	GW123X9E0	889	115	404	5.5	153
7/16/2014	XD	GWDP1X9E5	897	113	400	5.3	138
10/1/2014	XX	GW123X9FJ	884	76.2	409	5.2	157
4/15/2015	XX	GW123XA1D	449	10 U	100	3.1	203
7/22/2015	XX	GW123XA3H	488	10 U	128	4	205
7/22/2015	XD	GWDP1XA42	471	10 U	126	3.9	238
10/21/2015	XX	GW123XA63	796	102	375	4.7	169
4/27/2016	XX	GW123XA84	814	84.5	390	5	189
10/19/2016	XX	GW123XAC5	471	27.4	265	3.3	75.7
4/26/2017	XX	GW123XAE5	823	72	400	5.3	210
10/4/2017	XX	GW123XAG3	593	42	300	3.8	120
4/11/2018	XX	GW123XAJH	793	67	390	5.6	170
10/8/2018	XX	GW123XB01	553	41	320	3.9	96
4/10/2019	XX	GW123XB3F	845	66	380	5.1	70
10/16/2019	XX	GW123XB42	846	57	390	5.5	180
4/22/2020	XX	GW123XB7G	816	58	410	5.4	180
10/14/2020	XX	GW123XB82	543	36	350	7.6 M10	98

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(MW97-123) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
4/28/2021	XX	GW123XBBE	791	55	400	4.9	170
10/27/2021	XX	GW123XBC9	799	44	380	4.6	150
P-914A							
4/28/2008	XX	GW914A70F	466	33.2	313	1.4 J	71.6
7/21/2008	XX	GW914A736	463	28	299	1.8 J	66.4
10/7/2008	XX	GW914A75I	488	30.5	296	2	70.8
4/20/2009	XX	GW914A789	464	25.9	297	0.9 J	58.2
7/20/2009	XX	GW914A7AI	469	31.5	307	3.3	58.9
10/19/2009	XX	GW914A7FE	419	26.2	272	0.7 J	62
3/29/2010	XX	GW914A7I6	453	29	288	2.3	53
7/28/2010	XX	GW914A80A	433	17.1	265	0.8 J	49.4
10/5/2010	XX	GW914A82I	417	21.9	242	0.7 U	47.7
4/13/2011	XX	GW914A8A0	429	27.4	280	0.7 U	49.2
7/26/2011	XX	GW914A8DG	433	36.2	270	0.7 U	55.5
10/18/2011	XX	GW914A8BI	437	25.8	272	0.8 J	44.4
4/11/2012	XX	GW914A8I3	441	37.2	268	0.8 J	49.7
7/10/2012	XX	GW914A906	429	34.5	275	2 U	59.6
10/2/2012	XX	GW914A928	450	38.7	244	2 U	57.6
4/10/2013	XX	GW914A948	448	41.2	265	2 U	57.7
7/8/2013	XX	GW914A968	439	40.6	267	2 U	53.6
10/22/2013	XX	GW914A9A7	444	46.2	259	2 U	47.8
4/28/2014	XX	GW914A9CA	436	51.6	260	2 U	57.1
7/14/2014	XX	GW914A9EC	460	45.5	260	2 U	54.1
9/29/2014	XX	GW914A9GB	440	37.1	254	2.2	58
4/13/2015	XX	GW914AA25	447	62.5	258	2 U	52.1
7/20/2015	XX	GW914AA49	462	55	252	2 U	68.7
10/19/2015	XX	GW914AA6F	452	60.9	233	2 U	66.3
4/25/2016	XX	GW914AA8G	495	61	259	2 U	84.5
10/17/2016	XX	GW914AACH	463	67.5	210	2 U	81
4/24/2017	XX	GW914AAEH	503	69	260	2 U	90
10/2/2017	XX	GW914AAGF	497	74	210	2 U	88
4/9/2018	XX	GW914AAID	498	130	260	2 U	72
10/11/2018	XX	GW914AB0D	521	77	200	2 U	110
4/8/2019	XX	GW914AB2B	542	57	240	2 U	110
10/15/2019	XX	GW914AB4E	577	73	260	2 U	110
4/20/2020	XX	GW914AB6C	591	71	260	2 U	97
10/13/2020	XX	GW914AB8E	598	79	220	26 M10	120
4/26/2021	XX	GW914ABAB	591	81	240	2 U	47
10/25/2021	XX	GW914ABD1	636	59	230	2 U	130

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(P-914A)			Total Dissolved Solids	Sulfate	Bicarbonate Alkalinity (CaCO3)	Organic Carbon	Chloride
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

A - The sampling location was Inaccessible

J - Analyte was positively identified/Associated value is an estimate.

M10 - Due to a identified laboratory instrumentation malfunction, this analytical result is likely elevated--the laboratory has fixed the issue.

U - Not Detected above the laboratory reporting limit.

REPORT PREPARED: 2/23/2022 13:55

FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(200) Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
200													
4/30/2008	XX	GW200X700	UF LF		105.8		3.45		21.3	2.8		6.8	57.4
4/30/2008	XD	GWDP1X6J0	UF LF		106		4.05		22	2.93		7.4	61.4
7/22/2008	XX	GW200X72B	UF LF	0.023	82.9		6.11	0.009	13.9	2.2		7.7	49.2
7/22/2008	XD	GWDP1X71C	UF LF	0.024	83.9		6.21	0.01	14.3	2.21		7.8	49.2
10/7/2008	XX	GW200X753	UF LF		80.9		4.23		14.3	1.79		7.3	35.9
10/7/2008	XD	GWDP1X743	UF LF		83.6		4.36		14.5	1.8		7.6	36.2
4/21/2009	XX	GW200X77E	UF LF		91.3		3.14		16.4	2.15		4	15.2
4/21/2009	XD	GWDP1X76E	UF LF		87.3		2.67		16.3	1.85		3.9	14.1
7/22/2009	XX	GW200X7A3	UF LF	0.031	90.1		3.71	0.002 J	14.4	2.26		4.6	15.8
7/22/2009	XD	GWDP1X794	UF LF	0.028	86.3		3.8	0.001 U	13.8	2.22		4.5	15.1
10/20/2009	XX	GW200X7EJ	UF LF		109		4.26		17.1	2.48		5.9	23
10/20/2009	XD	GWDP1X7DJ	UF LF		105		3.97		16.1	2.36		5.5	22
3/31/2010	XX	GW200X7HB	UF LF		85.9		1.15		14.3	2.3		3	11.8
3/31/2010	XD	GWDP1X7GB	UF LF		86.1		1.12		14.3	2.32		3.1	11.9
7/27/2010	XX	GW200X7JF	UF LF	0.039	82.7		4.75	0.001 U	13.6	2.18		4.6	18.2
7/27/2010	XD	GWDP1X7IG	UF LF	0.041	79.9		5.67	0.001 U	13.5	2.16		4.7	18.1
10/5/2010	XX	GW200X823	UF LF		97.1		4.52		15.5	1.63		4.8	20.9
10/5/2010	XD	GWDP1X813	UF LF		94.9		4.44		15	1.57		4.6	20.2
4/12/2011	XX	GW200X89B	UF LF		83.5		0.53		14.9			3.1	10.3
7/27/2011	XX	GW200X8D7	UF LF	0.048	73.2		5.75	0.002 J	12.5	1.81	0.002 U	4.5	13
10/17/2011	XX	GW200X8FG	UF LF			0.003 U							
10/17/2011	XX	GW200X8B9	UF LF	0.045	86		4.92		12.9			4.5	14.7
10/17/2011	XD	GWDP1X8BB	UF LF	0.046	87.6		5.14		12.5			4.7	15.1
10/17/2011	XD	GWDP1X8FI	UF LF			0.003 U							
4/11/2012	XX	GW200X8HE	UF LF	0.028	83.8		3.81		13.9			3.6	20.9
7/11/2012	XX	GW200X8JH	UF LF	0.027	92.8	0.01 U	2.7	0.003 U	14	1.41	0.005 U	3.6	19.6
10/3/2012	XX	GW200X91J	UF LF	0.041	96.7		4.91		14			4.4	20.9
10/3/2012	XD	GWDP1X921	UF LF	0.047	97.6		4.67		14.1			4.4	20.7
4/10/2013	XX	GW200X93J	UF LF	0.033	69.2		3.12		11.4			3.7	9.9
7/10/2013	XX	GW200X95J	UF LF	0.043	73.1	0.01 U	4.18	0.003 U	13	1.99	0.005 U	4.3	10.2
10/23/2013	XX	GW200X99I	UF LF	0.052	73.8		4.8		12.3			4.7	9.9
10/23/2013	XD	GWDP1X9A0	UF LF	0.05	76		4.87		12.5			4.4	10.8
4/30/2014	XX	GW200X9C1	UF LF	0.038	60.9		5.26		8.2			3.1	5
4/30/2014	XD	GWDP4X9DE	UF LF	0.037	63.8		5.48		8.6			3.3	5.5
7/16/2014	XX	GW200X9E3	UF LF	0.061	70.8	0.01 U	7.29	0.004	10.3	1.46	0.005 U	4.3	9.9
10/1/2014	XX	GW200X9G2	UF LF	0.058	77.3		6.18		10.2			4.1	7.8
10/1/2014	XD	GWDP1X9G4	UF LF	0.061	78.3		6.47		10.2			4	7.9
4/15/2015	XX	GW200XA1G	UF LF	0.05	71.7		9.46		9.4			3.3	9.3
4/15/2015	XD	GWDP4XA38	UF LF	0.053	71.3		9.24		9.2			3.3	9.2
7/22/2015	XX	GW200XA40	UF LF	0.042	78.3	0.01 U	5.7	0.003 U	9.3	1.54	0.005 U	3.7	8.5
10/21/2015	XX	GW200XA66	UF LF	0.061	120		7.84		13			4.5	13.8
10/21/2015	XD	GWDP1XA68	UF LF	0.061	112		7.77		13			4.5	14
4/27/2016	XD	GWDP1XA89	UF LF	0.056	63.6		5.22		7.7			3.2	9.6
4/27/2016	XX	GW200XA87	UF LF	0.057	61		4.93		7.8			3.1	9.6
10/19/2016	XX	GW200XAC8	UF LF	0.035	90.1	0.01 U	6.96	0.003 U	11.4	1.5	0.005 U	4.7	18.1
4/26/2017	XD	GWDP1XAEA	UF LF	0.029	52		6.3		7.2			3	5.8
4/26/2017	XX	GW200XAE8	UF LF	0.025	54		5.2		7.3			3	6
10/4/2017	XX	GW200XAG6	UF LF	0.043	82	0.01 U	6.6	0.003 U	9.2	1.5	0.005 U	3.9	9

SUMMARY REPORT

Groundwater Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(200) Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
4/11/2018	XD	GWDP1XAI6	UF LF	0.032	70		7.1		7.1			3.2	5.7
4/11/2018	XX	GW200XAI4	UF LF	0.029	66		8		6.5			3.6	6.1
10/11/2018	XX	GW200XB04	UF LF	0.043	85	0.01 U	6	0.003 U	8.8	1.5	0.005 U	4.2	9.2
4/10/2019	XD	GWDP1XB24	UF LF	0.032	53		6.6		5.7			5.1	65
4/10/2019	XX	GW200XB22	UF LF	0.032	53		6.6		5.5			4.8	64
10/16/2019	XX	GW200XB45	UF LF	0.036	74	0.01 U	4.2	0.003 U	7.6	1.2	0.005 U	12	17
4/22/2020	XD	GWDP1XB65	UF LF	0.029	59		4.7		7			5.6	6.5
4/22/2020	XX	GW200XB63	UF LF	0.029	62		4.7		7.1			5.7	6.6
10/14/2020	XX	GW200XB85	UF LF	0.033	95	0.01 U	5	0.003	9.5	1.6	0.005 U	7.7	11
4/28/2021	XD	GWDP1XBA4	UF LF	0.034	65		6.9		6.3			4.2	4.1
4/28/2021	XX	GW200XBA2	UF LF	0.03	65		7.1		6.7			4.3	4.3
10/27/2021	XX	GW200XBCC	UF LF	0.042	95	0.01 U	7.3	0.003 U	9.1	2.4	0.005 U	6.2	6.9
509B													
4/11/2011	XX	GW509B899	UF LF		102		0.08		21.2			5.9	38.8
7/27/2011	XX	GW509B8D5	UF LF	0.021	82.3		0.09	0.001 U	11.3	0.02 U	0.002 U	1.7	22.9
10/18/2011	XX	GW509B8B7	UF LF	0.024	114		0.04 J		21.3			6.5	40.4
10/18/2011	XX	GW509B8FE	UF LF			0.008 J							
4/10/2012	XX	GW509B8HC	UF LF	0.013	81.7		0.04 J		18.6			4.9	35.1
7/10/2012	XX	GW509B8JF	UF LF	0.009	84.5	0.01 U	0.05 U	0.003 U	21.9	6.5	0.005 U	6.7	41
10/2/2012	XX	GW509B91H	UF LF	0.013	141		0.06		27.2			7.1	52.8
4/9/2013	XX	GW509B93H	UF LF	0.013	79.2		0.09		20.7			5.3	43.3
7/9/2013	XX	GW509B95H	UF LF	0.02	80.6	0.01 U	0.18	0.003 U	20.6	6.19	0.005 U	5.7	37.7
10/22/2013	XX	GW509B99G	UF LF	0.022	99.6		0.11		22.5			6	43.4
4/29/2014	XX	GW509B9BJ	UF LF	0.021	91.2		0.17		19.8			4.4	38.7
7/15/2014	XX	GW509B9E1	UF LF	0.023	114	0.01 U	0.28	0.006	23.9	8.45	0.005 U	5.9	53.1
9/30/2014	XX	GW509B9G0	UF LF	0.031	125		0.22		26.3			6.5	59.7
4/14/2015	XX	GW509BA1E	UF LF	0.025	110		0.48		25			5.2	53.2
7/21/2015	XX	GW509BA3I	UF LF	0.033	123	0.01 U	0.43	0.003 U	27.3	8.97	0.005 U	6.4	62.3
10/20/2015	XX	GW509BA64	UF LF	0.029	94.8		0.2		22.5			5.7	55.6
4/26/2016	XX	GW509BA85	UF LF	0.063	100		0.85		23.5			4.8	44.4
10/18/2016	XX	GW509BAC6	UF LF	0.005 U	139	0.01 U	0.58	0.003 U	30.9	10.8	0.005 U	6.7	58.1
4/25/2017	XX	GW509BAE6	UF LF	0.006	100		1.1		25			4.6	44
10/3/2017	XX	GW509BAG4	UF LF	0.006	120	0.01 U	0.91	0.003 U	27	10	0.005 U	5.1	44
4/10/2018	XX	GW509BAI2	UF LF	0.005	99		1.6		22			4.3	43
10/11/2018	XX	GW509BB02	UF LF	0.005	110	0.01 U	2.2	0.003 U	26	10	0.005 U	4.8	40
4/9/2019	XX	GW509BB20	UF LF	0.005 U	89		4		21			3.7	33
10/16/2019	XX	GW509BB43	UF LF	0.005	120	0.01 U	5.1	0.004	27	9.9	0.005 U	5.6	49
4/21/2020	XX	GW509BB61	UF LF	0.005 U	92		5.1		22			4	42
10/14/2020	XX	GW509BB83	UF LF	0.005	120	0.01 U	4.3	0.003 U	27	8.3	0.005 U	4.8	43
4/27/2021	XX	GW509BBA0	UF LF	0.006	92		5.1		21			3.7	33
10/26/2021	XX	GW509BBCA	UF LF	0.005	95	0.01 U	4.7	0.004	20	7.1	0.005 U	4.4	33
516B-B													
4/30/2008	XX	GW516B701	UF LF		128.6		0.1		24.5	0.44		3.9	73.3
7/22/2008	XX	GW516B72C	UF LF	0.002 U	122.9		0.03 J	0.002 J	22.6	0.03 J		2.7	59.1
10/7/2008	XX	GW516B754	UF LF		119.1		0.07		22.9	0.08		2.4	60.7
4/22/2009	XX	GW516B77F	UF LF		106.8		0.02 J		22.3	0.45		2.3	65.5
7/21/2009	XX	GW516B7A4	UF LF	0.004 J	114.3		0.07	0.003	23.1	0.22		2.3	70.6
10/20/2009	XX	GW516B7F0	UF LF		116		0.03 J		21.7	0.25		2.4	64.9

SUMMARY REPORT

Groundwater Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
(516B-B)													
3/31/2010	XX	GW516B7HC	UF LF		114		0.02 U		20.7	0.26		2.3	59.7
7/28/2010	XX	GW516B7JG	UF LF	0.019	108		0.02 U	0.001 U	20.1	0.03 J		2.4	55.5
10/5/2010	XX	GW516B824	UF LF		108		0.02 U		21.3	0.1		2.2	50.4
4/12/2011	XX	GW516B897	UF LF		112		0.02 J		22.1			2.5	56.3
7/26/2011	XX	GW516B8D3	UF LF	0.025	136		0.02 U	0.001 U	27.1	0.06	0.002 U	3	69.1
10/17/2011	XX	GW516B8B5	UF LF	0.019	115		0.05		20.4			2.4	52.1
10/17/2011	XX	GW516B8FC	UF LF			0.003 U							
4/11/2012	XX	GW516B8HA	UF LF	0.012	110		0.05 U		21.5			2.6	59.4
7/11/2012	XX	GW516B8JD	UF LF	0.008	119	0.01 U	0.05 U	0.003 U	23.8	0.05	0.005 U	2.5	57.6
10/2/2012	XX	GW516B91F	UF LF	0.01	125		0.05 U		22.6			2.3	56.7
4/9/2013	XX	GW516B93F	UF LF	0.008	109		0.09		24.3			3	65.5
7/9/2013	XX	GW516B95F	UF LF	0.024	112	0.01 U	0.53	0.003 U	24.2	0.61	0.005	2.9	62.5
10/22/2013	XX	GW516B99E	UF LF	0.021	125		0.33		23.5			2.5	56.8
4/30/2014	XX	GW516B9BH	UF LF	0.031	122		1.09		21.7			2.7	84.2
7/15/2014	XX	GW516B9DJ	UF LF	0.033	118	0.01 U	1.11	0.003 U	21.2	2.16	0.005 U	2.5	61.9
9/30/2014	XX	GW516B9FI	UF LF	0.033	120		1.21		21.8			2.4	58.1
4/14/2015	XX	GW516BA1C	UF LF	0.038	125		1.66		22.7			3.1	63.2
7/20/2015	XX	GW516BA3G	UF LF	0.035	131	0.01 U	0.56	0.003 U	25	2.49	0.005 U	3.2	77.2
10/20/2015	XX	GW516BA62	UF LF	0.037	126		1.16		21.1			2.6	56.1
4/26/2016	XX	GW516BA83	UF LF	0.062	122		1.18		22.3			2.7	62.8
10/18/2016	XX	GW516BAC4	UF LF	0.015	125	0.01 U	1.83	0.003 U	23.5	1.94	0.005 U	3	70.8
4/25/2017	XX	GW516BAE4	UF LF	0.016	120		2		24			2.6	66
10/3/2017	XX	GW516BAG2	UF LF	0.01	110	0.01 U	2.9	0.003 U	21	1.4	0.005 U	2.2	66
4/10/2018	XX	GW516BAJG	UF LF	0.005 U	130		0.51		22			2.8	73
10/8/2018	XX	GW516BB00	UF LF	0.011	120	0.01 U	3.1	0.003 U	22	1.7	0.005 U	2.4	71
4/9/2019	XX	GW516BB3E	UF LF	0.005 U	110		0.58		22			2.4	69
10/16/2019	XX	GW516BB41	UF LF	0.009	110	0.01 U	1.2	0.003 U	21	1.4	0.005 U	2.4	66
4/22/2020	XX	GW516BB7F	UF LF	0.008	110		1.1		23			2.6	73
10/14/2020	XX	GW516BB81	UF LF	0.011	110	0.01 U	2.4	0.003 U	22	1.4	0.005 U	2.3	78
4/27/2021	XX	GW516BBBD	UF LF	0.005 U	110		0.44		21			2.4	73
10/26/2021	XX	GW516BBC6	UF LF	0.007	120	0.01 U	2.3	0.003 U	21	1.3	0.005 U	2.2	67
641													
4/29/2008	XX	GW641X708	UF LF	0.005 J	181.4	0.119	1.71		46.5	8.46	0.153	41	146.8
7/21/2008	XX	GW641X72J	UF LF	0.05	186.8	0.066	11.28	0.003 J	46.8	7.57	0.095	36.4	149.9
10/7/2008	XX	GW641X75B	UF LF	0.049	167	0.006 J	22.56		44	4.7	0.03	44.6	171
4/20/2009	XX	GW641X782	UF LF	0.103	217	0.007 J	21.51		49.8	4.17	0.03	40.3	213
7/20/2009	XX	GW641X7AB	UF LF	0.031	234	0.015	21.65	0.003	52.5	4.67	0.032	39	214
10/20/2009	XX	GW641X7F7	UF LF	0.082	251	0.01	17.3		55.7	3.76	0.055	57.5	336
3/29/2010	XX	GW641X7HJ	UF LF	0.041	148	0.005 J	12.5		52.7	2.62	0.036	39.2	184
7/27/2010	XX	GW641X803	UF LF	0.056	155	0.011	9.72	0.001 U	39.7	4.81	0.016	25.6	86.1
10/5/2010	XX	GW641X82B	UF LF	0.077	175	0.017	11.5		37.1	4.97	0.02	24.5	77.2
4/13/2011	XX	GW641X89C	UF LF		128		14.3		48.3			34.6	132
7/26/2011	XX	GW641X8D8	UF LF	0.026	179		15.8	0.001 J	43.9	5.74	0.013	21.9	71.8
10/19/2011	XX	GW641X8BA	UF LF	0.102	147		13.2		34.2			20.4	62.8
10/19/2011	XX	GW641X8FH	UF LF			0.006 J							
4/10/2012	XX	GW641X8HF	UF LF	0.022	106		3.19		29.5			16.5	56.2
7/10/2012	XX	GW641X8JI	UF LF	0.038	89.2	0.01 U	4.58	0.003 U	28.2	1.94	0.005 U	17.1	51.7
10/1/2012	XX	GW641X920	UF LF	0.052	218		17.8		57.4			61.5	402
11/7/2012	XX	GW641X93E	UF LF	0.062	126		10.8		48.6			32.3	164

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(641) Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
4/9/2013	XX	GW641X940	UF LF	0.053	92.2		10.7		60.1			32.5	159
7/9/2013	XX	GW641X960	UF LF	0.044	82.5	0.019	2.16	0.003 U	22.7	2.41	0.012	13.3	37
10/21/2013	XX	GW641X99J	UF LF	0.07	161		13.4		34.3			16.1	51.2
4/30/2014	XX	GW641X9C2	UF LF	0.032	141		5.45		26.2			10.7	61.5
7/16/2014	XX	GW641X9E4	UF LF	0.062	114	0.01 U	7.83	0.004	23.2	3.93	0.005 U	12.3	45.7
10/1/2014	XX	GW641X9G3	UF LF	0.072	113		9.61		22			10	36
4/15/2015	XX	GW641XA1H	UF LF	0.054	86.4		5.19		30			14.9	67.5
7/22/2015	XX	GW641XA41	UF LF	0.036	94.9	0.013	1.59	0.003 U	18.5	1.38	0.019	11	56.3
10/20/2015	XX	GW641XA67	UF LF	0.043	91.3		2.34		16.8			11.9	53.7
4/26/2016	XX	GW641XA88	UF LF	0.067	89		3.11		26.2			12.9	53.1
10/19/2016	XX	GW641XAC9	UF LF	0.013	101	0.01 U	5.42	0.003 U	18.4	1.74	0.005 U	8.7	32.5
4/25/2017	XX	GW641XAE9	UF LF	0.021	85		3.6		28			12	46
10/3/2017	XX	GW641XAG7	UF LF	0.013	110	0.01 U	5.4	0.003 U	18	1.9	0.005 U	7.2	27
4/10/2018	XX	GW641XAJ5	UF LF	0.035	99		6.1		36			16	70
10/8/2018	XX	GW641XB05	UF LF	0.013	140	0.01 U	5	0.003 U	22	2.6	0.005 U	7.8	35
4/9/2019	XX	GW641XB23	UF LF	0.012	75		2.5		19			8.2	37
10/16/2019	XX	GW641XB46	UF LF	0.015	110	0.01 U	2.8	0.003	17	1.9	0.005 U	6.6	26
4/22/2020	XX	GW641XB64	UF LF	0.027	74		3.1		28			11	45
10/14/2020	XX	GW641XB86	UF LF	0.009	140	0.014	3.5	0.003 U	22	4.2	0.008	6.9	29
4/27/2021	XX	GW641XBA3	UF LF	0.034	88		5.3		30			11	43
10/27/2021	XX	GW641XBCD	UF LF	0.03	110	0.01 U	7.1	0.003 U	19	2.5	0.005 U	6.4	21
MW02-801A													
4/30/2008	XX	GW801A709	UF LF	0.06	252	0.028	11.4		133	9.7	0.185	98	464
4/30/2008	XD	GWDP4X6JI	UF LF	0.056	238	0.027	10.7		126	9.2	0.177	90.3	438
7/22/2008	XX	GW801A730	UF LF	0.053	240	0.03	10.3	0.024	128.8	8.44	0.194	92.8	409
7/22/2008	XD	GWDP2X71D	UF LF	0.064	222	0.029	11.26	0.025	132.1	7.55	0.211	99.5	427
10/8/2008	XX	GW801A75C	UF LF	0.051	206	0.021	9.9		127	7.2	0.198	94	450
10/8/2008	XD	GWDP4X751	UF LF	0.054	232	0.023	9.3		128.9	7.3	0.201	89	434
4/22/2009	XX	GW801A783	UF LF	0.063	263	0.023	9.83		120.9	7.5	0.183	90.3	546
4/22/2009	XD	GWDP4X77C	UF LF	0.064	240	0.022	10.25		121.4	6.55	0.185	96.3	571
7/22/2009	XX	GW801A7AC	UF LF	0.073	191	0.02	7.21	0.002 J	110.1	6.87	0.183	82.6	321
7/22/2009	XD	GWDP2X795	UF LF	0.078	199	0.02	7.73	0.001 J	115.3	7.11	0.181	88.9	332
10/21/2009	XX	GW801A7F8	UF LF	0.105	238	0.025	11.2		130	7.12	0.203	106	515
10/21/2009	XD	GWDP4X7EH	UF LF	0.108	257	0.026	10.7		125	7.72	0.192	95.1	500
3/30/2010	XX	GW801A7I0	UF LF	0.133	172	0.021	6.31		101	5.83	0.183	78.7	360
3/30/2010	XD	GWDP4X7H9	UF LF	0.13	172	0.021	8.71		105	5.94	0.184	83.6	366
7/28/2010	XX	GW801A804	UF LF	0.118	163	0.022	6.43	0.005	97.9	4.96	0.192	80.3	366
7/28/2010	XD	GWDP2X7IH	UF LF	0.12	172	0.023	6.81	0.004	104	5.44	0.194	83.9	365
10/4/2010	XX	GW801A82C	UF LF	0.174	179	0.024	12.5		119	5.82	0.21	99.1	412
10/4/2010	XD	GWDP4X821	UF LF	0.168	178	0.022	12.9		124	6.68	0.198	97.1	387
4/11/2011	XX	GW801A89F	UF LF		152		4.17		96			87.4	399
7/25/2011	XX	GW801A8DB	UF LF	0.052	133		6.61	0.008	89.7	3.93	0.152	90.2	300
10/17/2011	XX	GW801A8G0	UF LF			0.016							
10/17/2011	XX	GW801A8BD	UF LF	0.154	135		11.2		88			91.9	361
4/9/2012	XX	GW801A8HI	UF LF	0.069	126		7.69		94.2			97.4	379
7/9/2012	XX	GW801A901	UF LF	0.082	122	0.05 U	8.6	0.015 U	100	3.3	0.153	97	443
10/3/2012	XX	GW801A923	UF LF	0.122	151		8.74		98.2			97.5	385
4/9/2013	XX	GW801A943	UF LF	0.076	146		8.53		114			124	453
7/8/2013	XX	GW801A963	UF LF	0.141	123	0.018	4.76	0.016	90.9	3.65	0.149	91	366

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(MW02-801A)			Filtration	Arsenic	Calcium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Sodium
			-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date	Type	Sample ID											
10/21/2013	XX	GW801A9A2	UF LF	0.126	126		5.37		94.9			98.5	380
4/28/2014	XX	GW801A9C5	UF LF	0.089	133		7.61		81.4			82.6	345
7/14/2014	XX	GW801A9E7	UF LF	0.164	113	0.015	8.66	0.019	70.8	2.9	0.161	81	353
9/29/2014	XX	GW801A9G6	UF LF	0.205	103		8.56		74.6			80.2	351
4/13/2015	XX	GW801AA20	UF LF	0.17	107		7.71		64			77.8	350
7/20/2015	XX	GW801AA44	UF LF	0.183	119	0.011	9.58	0.004	77	2.86	0.119	89.9	304
10/19/2015	XX	GW801AA6A	UF LF	0.159	101		7.69		68.4			73.2	290
4/25/2016	XX	GW801AA8B	UF LF	0.256	96.4		8.44		62.2			72.6	237
10/17/2016	XX	GW801AACC	UF LF	0.034	108	0.01 U	5.15	0.003 U	71.8	2.59	0.114	77.1	265
4/24/2017	XX	GW801AAEC	UF LF	0.11	97		8		72			86	270
10/2/2017	XX	GW801AAGA	UF LF	0.075	100	0.01 U	7.8	0.003 U	70	2.6	0.11	78	240
4/9/2018	XX	GW801AAI8	UF LF	0.088	99		8		64			68	250
10/9/2018	XX	GW801AB08	UF LF	0.055	100	0.01 U	8.3	0.003 U	65	2.3	0.1	68	220
4/8/2019	XX	GW801AB26	UF LF	0.12	98		9.8		62			68	210
10/15/2019	XX	GW801AB49	UF LF	0.076	98	0.01 U	5.7	0.003	61	2.3	0.092	58	200
4/20/2020	XX	GW801AB67	UF LF	0.026	100		1.6		57			53	180
10/14/2020	XX	GW801AB89	UF LF	0.078	110	0.01 U	4.5	0.003 U	61	2.3	0.073	55	190
4/26/2021	XX	GW801ABA6	UF LF	0.079	100		6.8		60			60	180
10/27/2021	XX	GW801ABCG	UF LF	0.062	110	0.01 U	7.8	0.003	60	2.5	0.079	60	190
MW03-802A													
4/29/2008	XX	GW802A70A	UF LF		87.6		8.8		50.8	1.25		4.3	38.2
7/22/2008	XX	GW802A731	UF LF	0.013	93.7		8.88	0.013	50.5	1.23		4.6	37.4
10/6/2008	XX	GW802A75D	UF LF		93.9		7.3		54.5	1.06		4.7	38
4/21/2009	XX	GW802A784	UF LF		94.4		7.08		56.9	1.43		4	34.9
7/21/2009	XX	GW802A7AD	UF LF	0.002 U	102.4		9.51	0.003	49.9	1.6		4.6	40.9
10/19/2009	XX	GW802A7F9	UF LF		102		8.4		53	1.45		5.1	38.5
3/30/2010	XX	GW802A7I1	UF LF		93.2		5.91		52.8	1.31		4.2	31.7
7/26/2010	XX	GW802A805	UF LF	0.042	90.7		6.09	0.003	54	1.34		4.2	32.3
10/4/2010	XX	GW802A82D	UF LF		99		7.7		56.6	1.33		5	36.1
4/11/2011	XX	GW802A89G	UF LF		82.1		7.91		48.6			4.2	28.6
4/11/2011	XD	GWDP1X89D	UF LF		81.6		9.12		39.5			4.1	23
7/26/2011	XX	GW802A8DC	UF LF		105		5.2		40.9			3.8	23.6
10/17/2011	XX	GW802A8BE	UF LF	0.033	101		3.39		38.1			3.3	24.2
4/9/2012	XX	GW802A8HJ	UF LF	0.029	84.5		4.26		42.8			3.9	26.5
4/9/2012	XD	GWDP1X8HG	UF LF	0.03	83.8		4.28		43			3.9	26.2
7/9/2012	XX	GW802A902	UF LF	0.029	102		8.41		42.5			4.5	24.5
10/1/2012	XX	GW802A924	UF LF	0.031	106		12		34.9			3.9	19.8
4/8/2013	XX	GW802A944	UF LF	0.03	73.9		18.4		27.3			3	24.7
4/8/2013	XD	GWDP1X941	UF LF	0.03	82.4		17.7		29.8			3	27.4
7/8/2013	XX	GW802A964	UF LF	0.061	85.9		14.7		40.3			3.4	30.8
7/8/2013	XD	GWDP4X97B	UF LF	0.065	89.4		16.4		35			3.8	27
10/21/2013	XX	GW802A9A3	UF LF	0.046	90.6		12.1		42.2			3.4	28.9
4/28/2014	XX	GW802A9C6	UF LF	0.05	90.6		12.3		28.7			2.9	21.6
4/28/2014	XD	GWDP1X9C3	UF LF	0.051	91.8		10.4		26.3			2.9	19.5
7/14/2014	XX	GW802A9E8	UF LF	0.042	105		7.93		21.5			1.9	15.3
7/14/2014	XD	GWDP4X9FF	UF LF	0.038	107		7.89		21.8			2	15.1
9/29/2014	XX	GW802A9G7	UF LF	0.056	104		9.74		29.9			2.8	21.3
4/13/2015	XX	GW802AA21	UF LF	0.024	97.9		0.4		14.5			1.3	10.5
4/13/2015	XD	GWDP1XA1I	UF LF	0.023	105		0.44		14.2			1.3	10

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(MW03-802A)			Filtration	Arsenic	Calcium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Sodium
			-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date	Type	Sample ID											
7/20/2015	XX	GW802AA45	UF LF	0.034	104		0.62		17.1			1.7	11.5
7/20/2015	XD	GWDP4XA5C	UF LF	0.033	121		1.29		20.6			2.1	13.5
10/20/2015	XX	GW802AA6B	UF LF	0.038	108		2.25		22			1.9	15
4/25/2016	XX	GW802AA8C	UF LF	0.034	69.8		0.05		10.7			1.2	10.8
10/17/2016	XX	GW802AACD	UF LF	0.005 U	66.9	0.01 U	0.05 U	0.003 U	9.2	0.05 U	0.005 U	0.9	12.3
4/24/2017	XX	GW802AAED	UF LF	0.01	99		0.46		25			2.8	25
10/2/2017	XX	GW802AAGB	UF LF	0.01	90	0.01 U	1.4	0.003 U	24	0.66	0.005 U	2.6	24
4/9/2018	XX	GW802AAI9	UF LF	0.005 U	72		0.05 U		9			0.6	11
10/9/2018	XX	GW802AB09	UF LF	0.005 U	81	0.01 U	0.24	0.003 U	13	0.32	0.005 U	2	12
4/9/2019	XX	GW802AB27	UF LF	A	A		A		A			A	A
10/15/2019	XX	GW802AB4A	UF LF	0.005 U	78	0.01 U	0.21	0.003 U	8.4	0.05 U	0.005 U	0.9	14
4/20/2020	XX	GW802AB68	UF LF	0.005 U	120		0.06		13			1.1	17
10/13/2020	XX	GW802AB8A	UF LF	0.005 U	120	0.01 U	0.71	0.003 U	17	0.28	0.005 U	2.7	18
4/26/2021	XX	GW802ABA7	UF LF	0.005 U	77		0.05 U		8.5			0.9	19
10/25/2021	XX	GW802ABCH	UF LF	0.005 U	84	0.01 U	0.05 U	0.003 U	8.8	0.05 U	0.005 U	1.3	22
MW03-802B													
4/29/2008	XX	GW802B6JD	UF LF		149		2.28		43.8	27.2		2.2	23.9
7/22/2008	XX	GW802B725	UF LF	0.006	189.4		4.29	0.008	41.7	35.68		2.1	24
10/6/2008	XX	GW802B74G	UF LF		171.7		3.24		40.3	27.93		1.8	15.4
4/21/2009	XX	GW802B777	UF LF		134		1.67		44.6	23.75		1.9	22.2
7/21/2009	XX	GW802B79H	UF LF	0.002 U	118		1.54	0.003	48.6	14.2		2.1	21.3
10/19/2009	XX	GW802B7EC	UF LF		120		4.88		31.1	47.1		1.9	22
3/30/2010	XX	GW802B7H4	UF LF		103		1.62		42.9	14.5		1.9	21.2
7/26/2010	XX	GW802B7J9	UF LF	0.058	149		9.28	0.009	36.7	36.3		6	21.7
10/4/2010	XX	GW802B81G	UF LF		107		5.79		34	39.1		1.9	30.3
7/14/2014	XX	GW802B9F5	UF LF										
4/25/2016	XX	GW802BA97	UF LF	0.146	111	0.023	25.1	0.009	48.7	22.3	0.005 U	2	23
10/17/2016	XX	GW802BAD6	UF LF	0.058	138	0.01 U	23.6	0.003 U	51.1	8.87	0.029	13.1	71.3
4/24/2017	XX	GW802BAF6	UF LF	0.006	140	0.019	1.7	0.003 U	57	5	0.005 U	3.1	41
10/2/2017	XX	GW802BAH4	UF LF	0.029	130	0.01 U	26	0.003 U	45	8.2	0.005 U	9	55
10/9/2018	XX	GW802BB12	UF LF	0.057	130	0.01 U	32	0.003 U	47	7.2	0.019	11	65
10/15/2019	XX	GW802BB53	UF LF	0.027	94	0.029	79	0.003 U	45	15	0.005 U	1.8	19
10/13/2020	XX	GW802BB93	UF LF	0.05	110	0.01 U	25	0.003	43	5.7	0.006	9.4	50
10/25/2021	XX	GW802BBDA	UF LF	0.031	120	0.013	55	0.007	48	8.9	0.005 U	2.4	19
MW03-803A													
4/29/2008	XX	GW803A6JE	UF LF		149.2		0.18		37.5	6.4		2.5	12.8
7/22/2008	XX	GW803A726	UF LF	0.009	113.4		0.03 J	0.001 U	29	1.4		2	9.2
10/6/2008	XX	GW803A74H	UF LF		136.2		0.09		32.8	6.58		2.3	11.5
4/21/2009	XX	GW803A778	UF LF		151.4		0.13		38.3	9.5		2	12.2
7/21/2009	XX	GW803A79I	UF LF	0.002 U	102.6		0.08	0.003	32.3	2.05		1.8	10.1
10/19/2009	XX	GW803A7ED	UF LF		225		0.05		50.7	21.1		2.9	18.1
3/30/2010	XX	GW803A7H5	UF LF		97		0.02 U		28.8	2.4		1.9	10.4
7/26/2010	XX	GW803A7JA	UF LF	0.047	169		0.03 J	0.002 J	36.2	6.15		2	11.7
10/4/2010	XX	GW803A81H	UF LF		174		0.02 U		40.5	4.72		2.2	13.3
4/25/2016	XX	GW803AA98	UF LF	0.031	151	0.014	0.05	0.003 U	60.8	1.65	0.017	2.9	29.7
7/27/2016	XX	GW803AABB	UF LF	0.048	172	0.025	0.05 U	0.003 U	49.8	3.13	0.009	2.5	19.2
10/17/2016	XX	GW803AAD7	UF LF	0.009	222	0.011	0.05 U	0.003 U	58.1	2.29	0.009	2.7	22
4/24/2017	XX	GW803AAF7	UF LF	0.011	180	0.02	0.05 U	0.003 U	75	2	0.02	3.3	42

SUMMARY REPORT

Groundwater Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
(MW03-803A)													
10/2/2017	XX	GW803AAH5	UF LF	0.005 U	200	0.017	0.05 U	0.003 U	59	2.7	0.005 U	2.5	24
10/9/2018	XX	GW803AB13	UF LF	0.005 U	200	0.01 U	0.13	0.003 U	62	1.4	0.007	2.9	29
10/15/2019	XX	GW803AB54	UF LF	0.007	190	0.028	0.15	0.003 U	63	2.9	0.012	2.7	33
10/13/2020	XX	GW803AB94	UF LF	0.005	190	0.018	0.05 U	0.003 U	59	3.4	0.01	2.6	26
10/25/2021	XX	GW803ABDB	UF LF	0.005 U	200	0.032	0.06	0.003 U	61	4.9	0.018	2.6	30
MW03-803B													
4/29/2008	XX	GW803B6JF	UF LF		206		1.17		27.6	31		1.6	24.6
7/22/2008	XX	GW803B727	UF LF	0.002 U	230		0.38	0.004	35.7	28.42		1.8	18.7
10/6/2008	XX	GW803B74I	UF LF		195.5		3.71		27.7	37.34		1.6	23.1
10/6/2008	XD	GWDP2X744	UF LF		196.7		3.65		27.2	36.5		1.5	22.5
4/21/2009	XX	GW803B779	UF LF		264		0.48		28.4	48.4		1.2	22.6
7/21/2009	XX	GW803B79J	UF LF	0.026	186		1.76	0.004	29	37.7		1.4	25.2
10/19/2009	XX	GW803B7EE	UF LF		261		0.85		36.4	37.8		2.1	20.9
3/30/2010	XX	GW803B7H6	UF LF		147		4.83		17.9	47.5		1.2	18.4
7/26/2010	XX	GW803B7JB	UF LF	0.055	227		0.61	0.005	34.9	33.5		1.6	18.8
10/4/2010	XX	GW803B81I	UF LF		211		4.52		35.6	51.8		1.7	19.7
4/11/2011	XX	GW803B89H	UF LF		172		1.76		27.8			1.4	18.9
7/26/2011	XX	GW803B8DD	UF LF	0.118	197		1.39	0.001 U	32.1	43	0.045	1.4	18.5
10/17/2011	XX	GW803B8G2	UF LF			0.12							
10/17/2011	XX	GW803B8BF	UF LF	0.109	199		6.98		28.3			1.5	19.7
4/9/2012	XX	GW803B8I0	UF LF	0.062	168		5.72		29.2			1.3	19.8
7/9/2012	XX	GW803B903	UF LF	0.062	178	0.122	8.4	0.009	33.9	61	0.034	1.5	20.1
10/1/2012	XX	GW803B925	UF LF	0.055	224		1.04		35.6			1.6	17.7
4/8/2013	XX	GW803B945	UF LF	0.077	197		9.95		32.3			1.4	21.8
7/8/2013	XX	GW803B965	UF LF	0.113	176	0.147	16.2	0.014	33.9	70.4	0.022	1.5	18.5
10/21/2013	XX	GW803B9A4	UF LF	0.082	220		2.21		42.2			1.9	19.4
4/28/2014	XX	GW803B9C7	UF LF	0.107	172		22.1		30.9			1.4	18.6
7/14/2014	XX	GW803B9E9	UF LF	0.121	196	0.104	11	0.02	33.7	48.4	0.02	1.4	19.3
9/29/2014	XX	GW803B9G8	UF LF	0.088	238		1.58		39.7			1.9	18.9
4/13/2015	XX	GW803BA22	UF LF	0.077	180		8.01		34.8			1.6	18
7/20/2015	XX	GW803BA46	UF LF	0.087	181	0.077	0.93	0.004	37.6	34.1	0.016	1.7	18.2
10/19/2015	XX	GW803BA6C	UF LF	0.068	204		2.53		39.6			1.9	16.7
4/25/2016	XX	GW803BA8D	UF LF	0.181	172		10.1		36.8			1.5	18.6
7/27/2016	XX	GW803BAAI	UF LF	0.092	204		3.12		37.9			1.6	17.4
10/17/2016	XD	GWDP1XACA	UF LF	0.005	216	0.056	1.2	0.003 U	46.6	22.4	0.014	2	18.7
10/17/2016	XX	GW803BACE	UF LF	0.007	223	0.057	1.26	0.003 U	46.9	22.8	0.016	2	18.7
4/24/2017	XX	GW803BAEE	UF LF	0.051	180		15		42			1.7	23
10/2/2017	XD	GWDP1XAG8	UF LF	0.012	210	0.055	2.9	0.003 U	46	22	0.005 U	1.9	18
10/2/2017	XX	GW803BAGC	UF LF	0.015	200	0.058	3	0.003 U	45	22	0.005	1.8	18
4/9/2018	XX	GW803BAIA	UF LF	0.017	200		6.5		48			1.9	22
10/9/2018	XD	GWDP1XB06	UF LF	0.01	210	0.062	1.8	0.003 U	48	24	0.008	2	19
10/9/2018	XX	GW803BB0A	UF LF	0.009	200	0.059	1.8	0.003 U	47	24	0.008	1.9	19
4/8/2019	XX	GW803BB28	UF LF	0.017	180		19		49			2.2	24
10/15/2019	XD	GWDP1XB47	UF LF	0.053	150	0.1	32	0.003 U	36	33	0.008	1.6	20
10/15/2019	XX	GW803BB4B	UF LF	0.042	170	0.083	20	0.003 U	43	28	0.006	1.8	21
4/20/2020	XX	GW803BB69	UF LF	0.015	190		7.4		60			2.4	27
10/13/2020	XD	GWDP1XB87	UF LF	0.011	190	0.04	1.7	0.003 U	58	15	0.005 U	2.5	24
10/13/2020	XX	GW803BB8B	UF LF	0.008	200	0.038	1.5	0.003 U	58	16	0.006	2.6	24
4/26/2021	XX	GW803BBA8	UF LF	0.068	190		22		48			1.8	25

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW03-803B)			Filtration	Arsenic	Calcium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Sodium
			-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date	Type	Sample ID											
10/25/2021	XD	GWDP1XBCE	UF LF	0.036	210	0.065	6.2	0.003	48	19	0.014	2.1	22
10/25/2021	XX	GW803BBCI	UF LF	0.023	210	0.042	2.7	0.003 U	56	17	0.007	2.4	25
MW-906B													
4/29/2008	XX	GW906B70D	UF LF	0.003 U	59	0.003 U	0.12		7.7	1.24	0.003 U	1.8	61.9
7/22/2008	XX	GW906B734	UF LF	0.002 U	55.1	0.003 U	0.18	0.001 J	7.2	1.37	0.002 U	1.3	55.4
10/6/2008	XX	GW906B75G	UF LF	0.002 U	51.6	0.003 U	0.08		6.9	1.29	0.002 J	1.5	52.9
4/20/2009	XX	GW906B787	UF LF	0.002 U	59.6	0.003 U	0.06		7.9	1.49	0.002 U	1.2	48
7/22/2009	XX	GW906B7AG	UF LF	0.003 J	52.5	0.003 U	0.14	0.002 J	7	1.51	0.002 U	1	43.4
10/19/2009	XX	GW906B7FC	UF LF	0.004 J	59.9	0.003 U	0.1		8	1.34	0.002 J	1.3	59.7
3/29/2010	XX	GW906B7I4	UF LF	0.007	59	0.003 U	0.05		7.6	1.37	0.002 U	1.2	45.8
7/26/2010	XX	GW906B808	UF LF	0.014	57.5	0.005 J	1.46	0.002 J	7.6	1.84	0.002 J	1.2	62
10/4/2010	XX	GW906B82G	UF LF	0.017	51	0.003 U	0.14		7.8	0.82	0.002 U	1.3	75
4/11/2011	XX	GW906B89J	UF LF		56		0.06		7.5			1.2	41.3
7/25/2011	XX	GW906B8DF	UF LF	0.016	50.7		0.05	0.003	7.3	1.17	0.002 U	1.2	45.2
10/17/2011	XX	GW906B8BH	UF LF	0.004 J	51.6		0.06		6.5			1.1	38.5
10/17/2011	XX	GW906B8G4	UF LF			0.003 U							
4/9/2012	XX	GW906B8I2	UF LF	0.009	47.4		0.02 J		7.1			1.1	39.3
7/9/2012	XX	GW906B905	UF LF	0.005 U	53.2	0.01 U	0.05 U	0.003 U	8.4	1.98	0.005 U	1.3	45.6
10/2/2012	XX	GW906B927	UF LF	0.006	45.4		0.05 U		6.3			1.1	48.2
4/8/2013	XX	GW906B947	UF LF	0.007	54.9		0.05 U		8.1			1.3	42.6
7/9/2013	XX	GW906B967	UF LF	0.016	47.8	0.01 U	0.05 U	0.003 U	8	1.83	0.005 U	1.3	37.8
10/22/2013	XX	GW906B9A6	UF LF	0.005 U	57.6		0.22		8.3			1.2	38
4/28/2014	XX	GW906B9C9	UF LF	0.005 U	55.8		0.1		7.5			1.2	35.8
7/15/2014	XX	GW906B9EB	UF LF	0.012	49.8	0.01 U	0.05 U	0.003 U	6.8	1.26	0.005 U	1.1	34.3
9/30/2014	XX	GW906B9GA	UF LF	0.005	43.7		0.18		6.5			1.1	43.3
4/14/2015	XX	GW906BA24	UF LF	0.005	57.5		0.23		8.1			1.3	36.5
7/21/2015	XX	GW906BA48	UF LF	0.023	56.5	0.01 U	0.05 U	0.003 U	7.7	0.86	0.005 U	1.2	34.5
10/19/2015	XX	GW906BA6E	UF LF	0.007	44.1		0.2		6.5			1.3	42.2
4/25/2016	XX	GW906BA8F	UF LF	0.026	46.9		0.05 U		6.5			1	27.1
10/17/2016	XX	GW906BACG	UF LF	0.005 U	43.7	0.01 U	0.05 U	0.003 U	6.8	0.55	0.005 U	1.1	39.5
4/25/2017	XX	GW906BAEG	UF LF	0.008	45		0.05 U		6.9			1	27
10/2/2017	XX	GW906BAGE	UF LF	0.005 U	47	0.01 U	0.14	0.003 U	6.6	4.2	0.005 U	1	30
4/9/2018	XX	GW906BAIC	UF LF	0.005 U	44		0.05 U		6.3			0.9	24
10/9/2018	XX	GW906BB0C	UF LF	0.005 U	42	0.01 U	0.16	0.003 U	6.4	2.9	0.005 U	1	31
4/9/2019	XX	GW906BB2A	UF LF	0.005 U	44		0.05 U		6.1			0.9	20
10/15/2019	XX	GW906BB4D	UF LF	0.005 U	40	0.01 U	0.05 U	0.003 U	6.1	0.75	0.005 U	0.8	19
4/20/2020	XX	GW906BB6B	UF LF	0.005 U	47		0.05 U		7.6			1	20
10/15/2020	XX	GW906BB8D	UF LF	0.005 U	38	0.01 U	0.05 U	0.003 U	6.3	0.68	0.005 U	2.3	28
4/26/2021	XX	GW906BBAA	UF LF	0.005 U	50		0.08		7.5			1	19
10/27/2021	XX	GW906BBD0	UF LF	0.008	35	0.01 U	2	0.006	19	0.17	0.005 U	2.5	6.3
MW-916													
4/30/2008	XX	GW916X70H	UF LF		167.8		29.3		86.3	4.91		2.6	9.8
7/21/2008	XX	GW916X738	UF LF	0.072	184.5		32.61	0.005 J	71.7	4.88		2.1	7.6
10/7/2008	XX	GW916X760	UF LF		114.5		6.37		26.7	2.62		1.4	4.8
4/20/2009	XX	GW916X78B	UF LF		151.4		24.83		50.2	4.76		2	5.8
7/21/2009	XX	GW916X7B0	UF LF	0.006	87.4		9.27	0.009	23.5	1.42		2.6	3.4
10/20/2009	XX	GW916X7FG	UF LF		173		17.4		46.5	3.01		3.2	7.8
3/31/2010	XX	GW916X7I8	UF LF		31.4		1.1		8.2	0.06		1.3	1.5

SUMMARY REPORT

Groundwater Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
(MW-916)													
3/31/2010	XD	GWDP2X7GC	UF LF		33.3		1.45		8.8	0.08		1.4	1.6
7/27/2010	XX	GW916X80C	UF LF	0.04	105		6.63	0.001 J	42.3	1.82		2	6.4
10/5/2010	XX	GW916X830	UF LF		152		18.6		93.4	3.89		2.4	8.7
4/12/2011	XX	GW916X89A	UF LF		122		2.86		51.5			2.7	5.7
7/26/2011	XX	GW916X8D6	UF LF	0.031	118		5.15	0.001 U	47.9	2.73	0.016	2	6.1
10/18/2011	XX	GW916X8FF	UF LF			0.003 J							
10/18/2011	XX	GW916X8B8	UF LF	0.023	80		0.64		25.4			2.2	3.8
4/10/2012	XX	GW916X8HD	UF LF	0.021	131		4.16		59.1			2.4	7.4
7/10/2012	XX	GW916X8JG	UF LF	0.012	84.8	0.01 U	0.33	0.003 U	35.5	0.52	0.005 U	1.9	5.4
10/2/2012	XX	GW916X91I	UF LF	0.036	106		1.5		49.9			1.9	5.6
4/8/2013	XX	GW916X93I	UF LF	0.035	111		1.44		66.8			2.5	7.2
7/9/2013	XX	GW916X95I	UF LF	0.05	105	0.011	1.87	0.004	61.7	1.85	0.005 U	2.5	6.8
10/22/2013	XX	GW916X99H	UF LF	0.007	93.2		5.31		44.6			2.4	8.8
4/29/2014	XX	GW916X9C0	UF LF	0.033	84.5		0.96		35.8			2.1	5
7/15/2014	XX	GW916X9E2	UF LF	0.053	105	0.01 U	1.35	0.006	45.3	1.52	0.006	2.2	6.6
9/30/2014	XX	GW916X9G1	UF LF	0.016	106		3.44		49.6			2.4	7.4
4/29/2015	XX	GW916XA1F	UF LF	0.005 U	43		0.87		14.9			1.3	2.5
7/21/2015	XX	GW916XA3J	UF LF	0.032	97.9	0.01 U	2.15	0.003 U	44.6	1.01	0.005 U	2.5	7.6
10/20/2015	XX	GW916XA65	UF LF	0.011	70.4		1.06		32.5			7.7	4.7
4/26/2016	XX	GW916XA86	UF LF	0.008	73.3		2.25		29			3.3	5.2
10/18/2016	XX	GW916XAC7	UF LF	0.005 U	83.4	0.01 U	0.83	0.003 U	35.5	0.24	0.005 U	3.5	5.8
4/25/2017	XX	GW916XAE7	UF LF	0.01	76		0.85		27			1.6	4.4
10/3/2017	XX	GW916XAG5	UF LF	0.005 U	85	0.01 U	0.08	0.003 U	25	0.05	0.005 U	1.6	4
4/10/2018	XX	GW916XAJ3	UF LF	0.005 U	26		1.5		9.2			3.1	1.8
10/10/2018	XX	GW916XB03	UF LF	0.005 U	79	0.01 U	3.4	0.003 U	22	0.65	0.005 U	2.9	3.4
4/9/2019	XX	GW916XB21	UF LF	0.005 U	48		0.7		13			2	2.6
10/16/2019	XX	GW916XB44	UF LF	0.043	110	0.01 U	6.8	0.003	47	1.9	0.005 U	2.5	6.7
4/21/2020	XX	GW916XB62	UF LF	0.007	62		1.8		26			1.9	4.5
10/14/2020	XX	GW916XB84	UF LF	0.007	78	0.01 U	1.4	0.005	34	0.21	0.005 U	2.3	5.6
4/27/2021	XX	GW916XBA1	UF LF	0.007	110		1.4		49			2.7	9.7
10/26/2021	XX	GW916XBCB	UF LF	0.005	110	0.01 U	0.69	0.003 U	48	0.17	0.005 U	2.7	8.8
MW-917													
4/30/2008	XX	GW917X70I	UF LF	0.117	169.6	0.008 J	26.6		129	1.68	0.003 U	3.5	11.7
7/21/2008	XX	GW917X739	UF LF	0.142	173.3	0.022	38.29	0.005 J	114.9	1.64	0.003 U	3.1	10.8
10/7/2008	XX	GW917X761	UF LF	0.116	142	0.013	31.4		97.8	1.32	0.002 J	2.9	9.5
4/20/2009	XX	GW917X78C	UF LF	0.184	153.2	0.015	42.12		100.7	1.29	0.004 J	2.7	9.1
7/21/2009	XX	GW917X7B1	UF LF	0.101	144.2	0.008 J	31.54	0.002 J	89.8	1.27	0.002 J	2.9	9.8
10/20/2009	XX	GW917X7FH	UF LF	0.182	151	0.011	38.4		100	1.1	0.002 J	3	9.7
3/31/2010	XX	GW917X7I9	UF LF	0.093	135	0.013	29		94.5	0.98	0.002 U	2.7	9.5
7/27/2010	XX	GW917X80D	UF LF	0.175	120	0.009 J	24.7	0.002 J	80.5	0.79	0.002 U	2.6	8.7
10/5/2010	XX	GW917X831	UF LF	0.189	128	0.006 J	25.6		81.7	0.73	0.002 U	2.6	9.2
4/12/2011	XX	GW917X89I	UF LF		111		20.3		80.4			2.7	8.8
7/26/2011	XX	GW917X8DE	UF LF	0.092	109		14.7	0.001 U	81.9	0.6	0.004 J	2.6	9.6
10/18/2011	XX	GW917X8G3	UF LF			0.003 U							
10/18/2011	XX	GW917X8BG	UF LF	0.173	127		18.1		81.1			2.8	8.9
4/10/2012	XX	GW917X8I1	UF LF	0.16	121		14.9		80.1			2.7	8.9
7/10/2012	XX	GW917X904	UF LF	0.11	112	0.01 U	15.9	0.003 U	85.8	0.67	0.005 U	3	9.5
10/2/2012	XX	GW917X926	UF LF	0.161	127		14.2		81.6			2.6	8.7
4/8/2013	XX	GW917X946	UF LF	0.13	106		14.3		87.1			3.2	10.8

SUMMARY REPORT

Groundwater Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
(MW-917)													
7/9/2013	XX	GW917X966	UF LF	0.142	100	0.01 U	11.5	0.007	79.4	0.85	0.005 U	2.8	8.8
10/22/2013	XX	GW917X9A5	UF LF	0.157	113		11.1		75.7			2.5	8.5
4/29/2014	XX	GW917X9C8	UF LF	0.164	109		9.87		68.6			2.5	8.2
7/15/2014	XX	GW917X9EA	UF LF	0.162	103	0.01 U	10	0.004	65.1	0.82	0.005 U	2.7	11.8
9/30/2014	XX	GW917X9G9	UF LF	0.147	103		8.97		64			2.4	8.1
4/14/2015	XX	GW917XA23	UF LF	0.143	102		8.21		62.2			2.5	8.3
7/21/2015	XX	GW917XA47	UF LF	0.153	106	0.01 U	8.96	0.003 U	64.2	0.79	0.005 U	2.7	8.4
10/20/2015	XX	GW917XA6D	UF LF	0.129	94.8		7.81		58.1			2.3	7.5
4/26/2016	XX	GW917XA8E	UF LF	0.185	91.3		7.12		56.8			2.4	7.5
10/18/2016	XX	GW917XACF	UF LF	0.104	111	0.01 U	7.75	0.003 U	68.4	0.91	0.005 U	2.9	8.8
4/25/2017	XX	GW917XAEF	UF LF	0.1	93		7.7		58			2.4	8.2
10/3/2017	XX	GW917XAGD	UF LF	0.096	110	0.01 U	7.4	0.003 U	62	0.78	0.005 U	2.3	7.5
4/10/2018	XX	GW917XAIB	UF LF	0.086	100		7.5		57			2.5	8.5
10/10/2018	XX	GW917XB0B	UF LF	0.11	110	0.01 U	8.1	0.003 U	66	0.95	0.005 U	2.4	8
4/9/2019	XX	GW917XB29	UF LF	0.096	96		8.2		59			2.3	7.9
10/16/2019	XX	GW917XB4C	UF LF	0.09	98	0.01 U	7	0.003 U	56	0.68	0.005 U	2.3	7.6
4/21/2020	XX	GW917XB6A	UF LF	0.091	100		6.8		60			2.5	8.1
10/14/2020	XX	GW917XB8C	UF LF	0.088	99	0.01 U	6.5	0.003 U	59	0.61	0.005 U	2.3	7.5
4/27/2021	XX	GW917XBA9	UF LF	0.086	100		6.8		58			2.5	7.9
10/26/2021	XX	GW917XBCJ	UF LF	0.085	110	0.01 U	7	0.003 U	58	0.59	0.005 U	2.5	7.9
MW97-123													
4/28/2008	XX	GW123X6JJ	UF LF	0.004 J	169	0.003 U	1.29		43.2	2.33	0.005 J	3.6	77.1
7/21/2008	XX	GW123X72A	UF LF	0.004 J	145.5	0.003 U	2.55	0.003 U	37.1	2.17	0.007 J	3.7	64.5
10/6/2008	XX	GW123X752	UF LF	0.01	150.2	0.003 J	2.89		43.6	1.71	0.01	5.9	66.8
4/20/2009	XX	GW123X77D	UF LF	0.004 J	174.7	0.003 U	0.45		42.7	2.21	0.013	3.3	74.8
7/20/2009	XX	GW123X7A2	UF LF	0.002 U	177.4	0.003 U	1.25	0.001 U	44.7	2.28	0.012	3.6	78.9
10/19/2009	XX	GW123X7EI	UF LF	0.017	108	0.003 U	2.45		27.1	1.81	0.007	4.3	43.5
3/31/2010	XX	GW123X7HA	UF LF	0.004 J	180	0.003 U	0.16		47.9	2.49	0.011	3.5	79.9
7/27/2010	XX	GW123X7JE	UF LF	0.026	100	0.003 U	1.77	0.001 U	27.3	1.75	0.004 J	3.6	38.1
10/5/2010	XX	GW123X822	UF LF	0.029	174	0.003 U	0.47		45.5	2.18	0.007	3.8	75.6
4/12/2011	XX	GW123X898	UF LF		180		0.22		55.8			4.4	96.3
7/26/2011	XX	GW123X8D4	UF LF	0.046	181		0.98	0.001 U	58.9	2.81	0.01	4.4	98
7/26/2011	XD	GWDP1X8D9	UF LF	0.042	177		1.05	0.002 J	59.1	2.82	0.012	4.4	98.8
10/18/2011	XX	GW123X8FD	UF LF			0.003 U							
10/18/2011	XX	GW123X8B6	UF LF	0.025	192		0.21		52.7			4.1	93.5
4/10/2012	XX	GW123X8HB	UF LF	0.012	168		0.18		54.4			4.4	102
7/11/2012	XX	GW123X8JE	UF LF	0.015	177	0.01 U	1.2	0.004	56.6	3.24	0.007	4.3	105
7/11/2012	XD	GWDP1X8JJ	UF LF	0.016	180	0.01 U	1.23	0.003 U	57.3	3.19	0.006	4.4	107
10/2/2012	XX	GW123X91G	UF LF	0.024	186		0.39		54.3			4.3	95.5
4/10/2013	XX	GW123X93G	UF LF	0.024	161		0.95		52.9			4.6	105
7/9/2013	XX	GW123X95G	UF LF	0.008	158	0.01 U	4.96	0.003	59	3.31	0.013	5	109
7/9/2013	XD	GWDP1X961	UF LF	0.008	150	0.01 U	4.6	0.003 U	57.4	3.3	0.014	5.5	108
10/23/2013	XX	GW123X99F	UF LF	0.03	158		0.53		53.1			4.9	102
4/30/2014	XX	GW123X9BI	UF LF	0.019	149		1.35		44.9			3.8	115
7/16/2014	XX	GW123X9E0	UF LF	0.032	139	0.01 U	3.35	0.004	42.2	2.65	0.006	4.1	90.7
7/16/2014	XD	GWDP1X9E5	UF LF	0.034	130	0.01 U	3.14	0.003	40.2	2.47	0.006	3.9	84.2
10/1/2014	XX	GW123X9FJ	UF LF	0.033	152		1.56		45.3			3.8	84
4/15/2015	XX	GW123XA1D	UF LF	0.009	35.3		9.38		29.9			3.5	66.1
7/22/2015	XX	GW123XA3H	UF LF	0.008	44.2	0.01 U	9.13	0.003 U	30.6	0.71	0.005 U	3.2	67.6

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
(MW97-123)													
7/22/2015	XD	GWDP1XA42	UF LF	0.009	42.7	0.01 U	9.37	0.003 U	30.8	0.71	0.005 U	3.4	69.1
10/21/2015	XX	GW123XA63	UF LF	0.032	137		2.21		35.8			3.3	71.7
4/27/2016	XX	GW123XA84	UF LF	0.078	130		0.78		41.9			3.8	84.1
10/19/2016	XX	GW123XAC5	UF LF	0.007	88.9	0.01 U	1.84	0.003 U	26.3	1.87	0.005 U	3.5	37.3
4/26/2017	XX	GW123XAE5	UF LF	0.011	130		1.1		44			4.1	90
10/4/2017	XX	GW123XAG3	UF LF	0.005	100	0.01 U	2.1	0.003 U	30	1.9	0.005 U	3.3	55
4/11/2018	XX	GW123XAJH	UF LF	0.005	130		0.98		42			4	92
10/8/2018	XX	GW123XB01	UF LF	0.005 U	98	0.01 U	1.9	0.003 U	29	2	0.005 U	3.4	57
4/10/2019	XX	GW123XB3F	UF LF	0.005 U	120		2		43			4.2	86
10/16/2019	XX	GW123XB42	UF LF	0.007	140	0.01 U	3	0.003 U	45	2.5	0.006	4	88
4/22/2020	XX	GW123XB7G	UF LF	0.006	120		1.8		44			3.9	91
10/14/2020	XX	GW123XB82	UF LF	0.005 U	100	0.01 U	2.5	0.003	31	1.9	0.005 U	3.2	53
4/28/2021	XX	GW123XBBE	UF LF	0.005 U	130		1.4		40			3.6	85
10/27/2021	XX	GW123XBC9	UF LF	0.005 U	140	0.01 U	0.8	0.003 U	41	1.9	0.015	3.8	87
P-914A													
4/28/2008	XX	GW914A70F	UF LF	0.003 J	110.8	0.003 J	0.06		27.4	1.95	0.003 U	1.7	22.9
7/21/2008	XX	GW914A736	UF LF	0.003 U	103.4	0.003 J	0.06	0.003 U	26.5	2.04	0.003 U	1.5	22.2
10/7/2008	XX	GW914A75I	UF LF	0.005	101.8	0.003 J	0.12		23.6	1.91	0.004 J	1.5	22.7
4/20/2009	XX	GW914A789	UF LF	0.004 J	107.5	0.003 U	0.05		25	2.06	0.004 J	1.3	21.4
7/20/2009	XX	GW914A7AI	UF LF	0.002 U	101	0.003 J	0.2	0.001 U	25.7	1.65	0.004 J	1.4	21
10/19/2009	XX	GW914A7FE	UF LF	0.013	98.5	0.003 U	0.1		23.7	1.8	0.003 J	1.4	21.9
3/29/2010	XX	GW914A7I6	UF LF	0.016	96.9	0.003 U	0.04 J		23.7	1.54	0.002 U	1.3	20.1
7/28/2010	XX	GW914A80A	UF LF	0.019	86.1	0.003 U	0.02 U	0.003	22.5	1.5	0.002 U	1.2	20.4
10/5/2010	XX	GW914A82I	UF LF	0.014	79.1	0.003 J	0.02 U		21.6	1.49	0.002 U	1.2	20.6
4/13/2011	XX	GW914A8A0	UF LF		86.4		0.02 U		24.8			1.4	20.1
7/26/2011	XX	GW914A8DG	UF LF	0.026	86		0.02 U	0.001 U	22.5	1.21	0.002 J	1.2	19.6
10/18/2011	XX	GW914A8G5	UF LF			0.003 J							
10/18/2011	XX	GW914A8BI	UF LF	0.016	96.4		0.02 J		22.9			1.3	19.8
4/11/2012	XX	GW914A8I3	UF LF	0.008	91.2		0.05 U		24.1			1.3	21.2
7/10/2012	XX	GW914A906	UF LF	0.01	95.7	0.01 U	0.05 U	0.003 U	27.5	1.31	0.005 U	1.5	23.4
10/2/2012	XX	GW914A928	UF LF	0.014	96.4		0.05 U		23			1.3	22.7
4/10/2013	XX	GW914A948	UF LF	0.013	94.4		0.05 U		24.5			1.4	23.1
7/8/2013	XX	GW914A968	UF LF	0.025	90.2	0.01 U	0.05 U	0.003 U	27.1	1.38	0.006	2	22.4
10/22/2013	XX	GW914A9A7	UF LF	0.023	93.4		0.05 U		25.8			1.4	23.5
4/28/2014	XX	GW914A9CA	UF LF	0.02	96.4		0.05 U		23.3			1.3	21.7
7/14/2014	XX	GW914A9EC	UF LF	0.027	96	0.01 U	0.05 U	0.003 U	23.8	1.52	0.007	1.3	23.2
9/29/2014	XX	GW914A9GB	UF LF	0.018	91.9		0.05 U		23			1.3	23
4/13/2015	XX	GW914AA25	UF LF	0.016	97.8		0.05 U		22.9			1.3	22.7
7/20/2015	XX	GW914AA49	UF LF	0.021	102	0.01 U	0.05 U	0.003 U	25.4	1.67	0.005 U	1.4	24
10/19/2015	XX	GW914AA6F	UF LF	0.023	88.7		0.05 U		22.7			1.3	23.6
4/25/2016	XX	GW914AA8G	UF LF	0.05	104		0.05 U		25.7			1.4	22.8
10/17/2016	XX	GW914AACH	UF LF	0.005 U	91.6	0.01 U	0.05 U	0.003 U	23.2	2.04	0.005 U	1.4	27.7
4/24/2017	XX	GW914AAEH	UF LF	0.005 U	92		0.05 U		28			1.4	26
10/2/2017	XX	GW914AAGF	UF LF	0.005 U	96	0.01 U	0.05 U	0.003 U	24	2	0.005 U	1.3	27
4/9/2018	XX	GW914AAJD	UF LF	0.005 U	110		0.05 U		28			1.4	29
10/11/2018	XX	GW914AB0D	UF LF	0.005 U	95	0.01 U	0.05 U	0.003 U	23	2.2	0.005 U	1.2	31
4/8/2019	XX	GW914AB2B	UF LF	0.005 U	110		0.05		28			1.3	29
10/15/2019	XX	GW914AB4E	UF LF	0.005 U	110	0.01 U	0.05 U	0.003 U	28	1.7	0.005 U	1.4	27
4/20/2020	XX	GW914AB6C	UF LF	0.005 U	120		0.05 U		31			1.5	27

SUMMARY REPORT

Groundwater Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(P-914A)

Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L				
10/13/2020	XX	GW914AB8E	UF LF	0.005 U	110	0.01 U	0.05 U	0.003 U	28	2.3	0.005 U	1.5	39				
4/26/2021	XX	GW914ABAB	UF LF	0.005 U	120		0.08		30			1.5	36				
10/25/2021	XX	GW914ABD1	UF LF	0.005 U	120	0.01 U	0.05	0.003	28	2.2	0.005 U	1.5	37				

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

A - The sampling location was Inaccessible

J - Analyte was positively identified/Associated value is an estimate.

U - Not Detected above the laboratory reporting limit.

REPORT PREPARED: 2/23/2022 13:56

FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater VOAs Part 1 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW02-801A) Date	Type	Sample ID	Analytical Method (VOA) -	Chloromethane ug/L	Bromomethane ug/L	Vinyl Chloride ug/L	Chloroethane ug/L	Methylene Chloride ug/L	Acetone ug/L	Carbon Disulfide ug/L	1,1-Dichloroethene ug/L	1,1-Dichloroethane ug/L	trans-1,2-Dichloroethene ug/L	Chloroform ug/L	1,2-Dichloroethane ug/L	Methyl Ethyl Ketone ug/L	1,1,1-Trichloroethane ug/L
MW02-801A																	
7/22/2008	XX	GW801A730	EPA 8260	2 U	2 U	2 U	5	5 U	10 U	2 U	2 U	1 J	2 U	2 U	2 U	10 U	2 U
7/22/2008	XD	GWDP2X71D	EPA 8260	2 U	2 U	2 U	5	5 U	13	2 U	2 U	1 J	2 U	2 U	2 U	10 U	2 U
7/22/2009	XX	GW801A7AC	EPA 8260	1 U	1 U	1 U	2.6	5 U	10 U	1 U	1 U	0.8 J	1 U	1 U	1 U	10 U	1 U
7/22/2009	XD	GWDP2X795	EPA 8260	1 U	1 U	1 U	2.6	5 U	10 U	1 U	1 U	0.8 J	1 U	1 U	1 U	10 U	1 U
7/28/2010	XX	GW801A804	EPA 8260	0.5 U	1 U	0.5 U	2.6	5 U	10 U	0.5 U	0.5 U	0.58 J	0.5 U	0.5 U	0.5 U	11	0.5 U
7/28/2010	XD	GWDP2X7IH	EPA 8260	0.5 U	1 U	0.5 U	2.8	5 U	10 U	0.5 U	0.5 U	0.59 J	0.5 U	0.5 U	0.5 U	10	0.5 U
7/25/2011	XX	GW801A8DB	EPA 8260	0.5 U	1 U	1.5	3.4	5 U	10 U	0.5 U	0.5 U	2.6	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/9/2012	XX	GW801A901	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/8/2013	XX	GW801A963	EPA 8260	2.5 U	1 U	1 U	1 U	3 U	5 U	5 U	0.5 U	0.75 U	0.75 U	0.75 U	0.5 U	5 U	0.5 U
7/14/2014	XX	GW801A9E7	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/20/2015	XX	GW801AA44	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/17/2016	XX	GW801AACC	EPA 8260	2 U	2 U	0.4	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/2/2017	XX	GW801AAGA	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/9/2018	XX	GW801AB08	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/15/2019	XX	GW801AB49	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/14/2020	XX	GW801AB89	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/27/2021	XX	GW801ABCG	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
MW03-802A																	
7/22/2008	XX	GW802A731	EPA 8260	2 U	2 U	2 U	2	5 U	10 U	2 U	2 U	3	2 U	2 U	2 U	10 U	2 U
7/21/2009	XX	GW802A7AD	EPA 8260	1 U	1 U	1 U	1.4	5 U	10 U	1 U	1 U	2.1	1 U	1 U	1 U	10 U	1 U
7/26/2010	XX	GW802A805	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/26/2011	XX	GW802A8DC	EPA 8260	0.5 U	1 U	0.82 J	0.5 U	5 U	10 U	0.5 U	0.5 U	0.81 J	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/9/2012	XX	GW802A902	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/8/2013	XX	GW802A964	EPA 8260	2.5 U	1 U	1 U	1 U	3 U	5 U	5 U	0.5 U	0.75 U	0.75 U	0.75 U	0.5 U	5 U	0.5 U
7/8/2013	XD	GWDP4X97B	EPA 8260	2.5 U	1 U	1 U	1 U	3 U	5 U	5 U	0.5 U	0.75 U	0.75 U	0.75 U	0.5 U	5 U	0.5 U
7/14/2014	XX	GW802A9E8	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/14/2014	XD	GWDP4X9FF	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/20/2015	XX	GW802AA45	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/20/2015	XD	GWDP4XA5C	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/17/2016	XX	GW802AACD	EPA 8260	2 U	2 U	0.2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/2/2017	XX	GW802AAGB	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/9/2018	XX	GW802AB09	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/15/2019	XX	GW802AB4A	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/13/2020	XX	GW802AB8A	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/25/2021	XX	GW802ABCH	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
MW03-802B																	
7/22/2008	XX	GW802B725	EPA 8260	2 U	2 U	2 U	4	5 U	10 U	2 U	2 U	6	2 U	2 U	4	10 U	2 U
7/21/2009	XX	GW802B79H	EPA 8260	1 U	1 U	0.5 J	1.2	5 U	10 U	1 U	1 U	2.1	1 U	1 U	1.2	10 U	1 U
7/26/2010	XX	GW802B7J9	EPA 8260	0.5 U	1 U	1.2	1.9	5 U	10 U	0.5 U	0.5 U	4.3	0.5 U	0.5 U	2.7	5 U	0.5 U
4/25/2016	XX	GW802BA97	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/17/2016	XX	GW802BAD6	EPA 8260	2 U	2 U	1.5	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
4/24/2017	XX	GW802BAF8	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/2/2017	XX	GW802BAH4	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1	1 U	1 U	1 U	10 U	1 U
10/9/2018	XX	GW802BB12	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1.1	1 U	1 U	1 U	10 U	1 U
10/15/2019	XX	GW802BB53	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/13/2020	XX	GW802BB93	SW8260C	2 U	2 U	1.2	2 U	1 U	10 U	2 U	0.5 U	1	1 U	1 U	1 U	10 U	1 U
10/25/2021	XX	GW802BBDA	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U

SUMMARY REPORT

Groundwater VOAs Part 1 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW03-803A) Date	Type	Sample ID	Analytical Method (VOA)	Chloromethane ug/L	Bromomethane ug/L	Vinyl Chloride ug/L	Chloroethane ug/L	Methylene Chloride ug/L	Acetone ug/L	Carbon Disulfide ug/L	1,1-Dichloroethene ug/L	1,1-Dichloroethane ug/L	trans-1,2-Dichloroethene ug/L	Chloroform ug/L	1,2-Dichloroethane ug/L	Methyl Ethyl Ketone ug/L	1,1,1-Trichloroethane ug/L
MW03-803A																	
7/22/2008	XX	GW803A726	EPA 8260	2 U	2 U	2 U	2 U	5 U	10 U	2 U	2 U	6	2 U	2 U	2 U	10 U	2 U
7/21/2009	XX	GW803A79I	EPA 8260	1 U	1 U	0.5 J	1 U	5 U	10 U	1 U	1 U	4.6	1 U	1 U	1 U	10 U	1 U
7/26/2010	XX	GW803A7JA	EPA 8260	0.5 U	1 U	0.5 U	0.91 J	5 U	10 U	0.5 U	0.5 U	8.1	0.5 U	0.5 U	0.72 J	5 U	0.5 U
4/25/2016	XX	GW803AA98	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2	2 U	2 U	2 U	10 U	2 U
10/17/2016	XX	GW803AAD7	EPA 8260	2 U	2 U	0.3	5 U	5 U	10 U	5 U	1 U	4	2 U	2 U	2 U	10 U	2 U
4/24/2017	XX	GW803AAF7	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	2	1 U	1 U	1 U	10 U	1 U
10/2/2017	XX	GW803AAH5	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	4	1 U	1 U	1 U	10 U	1 U
10/9/2018	XX	GW803AB13	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	2.9	1 U	1 U	1 U	10 U	1 U
10/15/2019	XX	GW803AB54	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	3.3	1 U	1 U	1 U	10 U	1 U
10/13/2020	XX	GW803AB94	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	3.3	1 U	1 U	1 U	10 U	1 U
10/25/2021	XX	GW803ABDB	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	2.8	1 U	1 U	1 U	10 U	1 U
MW03-803B																	
7/22/2008	XX	GW803B727	EPA 8260	2 U	2 U	4	2	5 U	10 U	2 U	2 U	24	2 U	2 U	1 J	10 U	2 U
7/21/2009	XX	GW803B79J	EPA 8260	1 U	1 U	6.1	1.7	5 U	10 U	1 U	1 U	20	0.9 J	1 U	1.6	10 U	1 U
7/26/2010	XX	GW803B7JB	EPA 8260	0.5 U	1 U	3.4	1.4	5 U	10 U	0.5 U	0.5 U	15	0.54 J	0.5 U	1.3	5 U	0.5 U
7/26/2011	XX	GW803B8DD	EPA 8260	0.5 U	1 U	3.7	1	5 U	10 U	0.5 U	0.5 U	14	0.75 J	0.5 U	0.5 U	5 U	0.5 U
7/9/2012	XX	GW803B903	EPA 8260	1 U	2 U	2.5	1	5 U	10 U	1 U	1 U	9	1 U	1 U	1 U	10 U	1 U
7/8/2013	XX	GW803B965	EPA 8260	2.5 U	1 U	4.3	1.3	3 U	5 U	5 U	0.5 U	8.2	0.75 U	0.75 U	0.5 U	5 U	0.5 U
7/14/2014	XX	GW803B9E9	EPA 8260	2 U	2 U	7	5 U	5 U	10 U	5 U	1 U	9	2 U	2 U	2 U	10 U	2 U
7/20/2015	XX	GW803BA46	EPA 8260	2 U	2 U	3	5 U	5 U	10 U	5 U	1 U	6	2 U	2 U	2 U	10 U	2 U
10/17/2016	XD	GWDP1XACA	EPA 8260	2 U	2 U	1.6	5 U	5 U	10 U	5 U	1 U	5	2 U	2 U	2 U	10 U	2 U
10/17/2016	XX	GW803BACE	EPA 8260	2 U	2 U	1.5	5 U	5 U	10 U	5 U	1 U	5	2 U	2 U	2 U	10 U	2 U
10/2/2017	XD	GWDP1XAG8	SW8260C	2 U	2 U	4	5 U	5 U	10 U	2 U	1 U	5	1 U	1 U	1 U	10 U	1 U
10/2/2017	XX	GW803BAGC	SW8260C	2 U	2 U	4	5 U	5 U	10 U	2 U	1 U	5	1 U	1 U	1 U	10 U	1 U
10/9/2018	XD	GWDP1XB06	SW8260C	2 U	2 U	3.2	5 U	5 U	10 U	2 U	1 U	4.3	1 U	1 U	1 U	10 U	1 U
10/9/2018	XX	GW803BB0A	SW8260C	2 U	2 U	2.9	5 U	5 U	10 U	2 U	1 U	4.6	1 U	1 U	1 U	10 U	1 U
10/15/2019	XD	GWDP1XB47	SW8260C	2 U	2 U	14	5 U	5 U	10 U	2 U	1 U	4.7	1 U	1 U	1 U	10 U	1 U
10/15/2019	XX	GW803BB4B	SW8260C	2 U	2 U	9	5 U	5 U	10 U	2 U	1 U	4.7	1 U	1 U	1 U	10 U	1 U
10/13/2020	XD	GWDP1XB87	SW8260C	2 U	2 U	2	2 U	1 U	10 U	2 U	0.5 U	3.8	1 U	1 U	1 U	10 U	1 U
10/13/2020	XX	GW803BB8B	SW8260C	2 U	2 U	1.6	2 U	1 U	10 U	2 U	0.5 U	3.8	1 U	1 U	1 U	10 U	1 U
10/25/2021	XD	GWDP1XBCE	SW8260C	2 U	2 U	2.2	2 U	1 U	10 U	2 U	0.5 U	3.6	1 U	1 U	1 U	10 U	1 U
10/25/2021	XX	GW803BBCI	SW8260C	2 U	2 U	1.8	2 U	1 U	10 U	2 U	0.5 U	3.4	1 U	1 U	1 U	10 U	1 U
MW-916																	
7/21/2008	XX	GW916X738	EPA 8260	2 U	2 U	3	3	5 U	10 U	2 U	2 U	3	2 U	2 U	2 U	10 U	2 U
7/21/2009	XX	GW916X7B0	EPA 8260	1 U	1 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/27/2010	XX	GW916X80C	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/26/2011	XX	GW916X8D6	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/10/2012	XX	GW916X8JG	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/9/2013	XX	GW916X95I	EPA 8260	2.5 U	1 U	1 U	1 U	3 U	5 U	5 U	0.5 U	0.75 U	0.75 U	0.75 U	0.5 U	5 U	0.5 U
7/15/2014	XX	GW916X9E2	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/21/2015	XX	GW916XA3J	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/18/2016	XX	GW916XAC7	EPA 8260	2 U	2 U	0.2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/3/2017	XX	GW916XAG5	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/10/2018	XX	GW916XB03	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/16/2019	XX	GW916XB44	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/14/2020	XX	GW916XB84	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/26/2021	XX	GW916XBCB	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT) Date	Type	Sample ID	Analytical Method (VOA) -	Chloromethane ug/L	Bromomethane ug/L	Vinyl Chloride ug/L	Chloroethane ug/L	Methylene Chloride ug/L	Acetone ug/L	Carbon Disulfide ug/L	1,1-Dichloroethene ug/L	1,1-Dichloroethane ug/L	trans-1,2-Dichloroethene ug/L	Chloroform ug/L	1,2-Dichloroethane ug/L	Methyl Ethyl Ketone ug/L	1,1,1-Trichloroethane ug/L
QCBT																	
5/21/2008	XX	BTXXXX71B	EPA 8260	2 U	2 U	2 U	2 U	5 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	2 U
7/21/2008	XX	BTXXXX72G	EPA 8260	2 U	2 U	2 U	2 U	5 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	2 U
7/22/2008	XX	BTXXXX72H	EPA 8260	2 U	2 U	2 U	2 U	5 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	2 U
7/23/2008	XX	BTXXXX73G	EPA 8260	2 U	2 U	2 U	2 U	5 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	2 U
7/20/2009	XX	BTXXXX7A8	EPA 8260	1 U	1 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/21/2009	XX	BTXXXX7A9	EPA 8260	1 U	1 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/22/2009	XX	BTXXXX7B8	EPA 8260	1 U	1 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/26/2010	XX	BTXXXX800	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/27/2010	XX	BTXXXX801	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/28/2010	XX	BTXXXX810	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
4/13/2011	XX	BTXXXX8B3	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	23	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/25/2011	XX	BTXXXX8EJ	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/26/2011	XX	BTXXXX8F4	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/27/2011	XX	BTXXXX8F5	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
10/18/2011	XX	BTXXXX8D1	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
4/10/2012	XX	BTXXXX8J6	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/9/2012	XX	BTXXXX918	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/10/2012	XX	BTXXXX91D	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/2/2012	XX	BTXXXXHG8	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/2/2012	XX	BTXXXX938	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
4/8/2013	XX	BTXXXX95B	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/8/2013	XX	BTXXXX97A	EPA 8260	2.5 U	1 U	1 U	1 U	3 U	5 U	5 U	0.5 U	0.75 U	0.75 U	0.75 U	0.5 U	5 U	0.5 U
7/10/2013	XX	BTXXXX97C	EPA 8260	2.5 U	1 U	1 U	1 U	3 U	5 U	5 U	0.5 U	0.75 U	0.75 U	0.75 U	0.5 U	5 U	0.5 U
10/22/2013	XX	BTXXXX9B9	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/22/2013	XX	BTXXXX9BD	EPA 624	5 U	2 U	2 U	5 U	5 U	50 U		1 U	2 U	2 U	2 U	2 U	10 U	2 U
4/28/2014	XX	BTXXXX9DD	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/14/2014	XX	BTXXXX9FE	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
9/30/2014	XX	BTXXXX9HC	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/1/2014	XX	BTXXXX9HF	EPA 624	5 U	2 U	2 U	5 U	5 U	50 U		1 U	2 U	2 U	2 U	2 U	10 U	2 U
4/15/2015	XX	BTXXXXA37	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/20/2015	XX	BTXXXXA5B	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/22/2015	XX	BTXXXXA5D	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/20/2015	XX	BTXXXXA7G	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
4/25/2016	XX	BTXXXXA9F	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/17/2016	XX	BTXXXXADE	EPA 8260	2 U	2 U	0.2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/18/2016	XX	BTXXXXADF	EPA 8260	2 U	2 U	0.2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/19/2016	XX	BTXXXXADG	EPA 8260	2 U	2 U	0.2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
4/24/2017	XX	BTXXXXAFE	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/2/2017	XX	BTXXXXAHC	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/3/2017	XX	BTXXXXAHD	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/4/2017	XX	BTXXXXAHE	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/18/2018	XX	BTXXXXAA6	E624	5 U	2 U	2 U	5 U	5 U	50 U		1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/8/2018	XX	BTXXXXB1B	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/10/2018	XX	BTXXXXB1C	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
4/10/2019	XX	BTXXXXB3I	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/15/2019	XX	BTXXXXB5B	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/16/2019	XX	BTXXXXB5C	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/17/2019	XX	BTXXXXB5D	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U

REPORT PREPARED: 2/23/2022 13:56

FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater VOAs Part 1 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT) Date	Type	Sample ID	Analytical Method (VOA) -	Chloromethane ug/L	Bromomethane ug/L	Vinyl Chloride ug/L	Chloroethane ug/L	Methylene Chloride ug/L	Acetone ug/L	Carbon Disulfide ug/L	1,1-Dichloroethene ug/L	1,1-Dichloroethane ug/L	trans-1,2-Dichloroethene ug/L	Chloroform ug/L	1,2-Dichloroethane ug/L	Methyl Ethyl Ketone ug/L	1,1,1-Trichloroethane ug/L
10/13/2020	XX	BTXXXXB9B	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/14/2020	XX	BTXXXXB9C	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/15/2020	XX	BTXXXXB9D	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/25/2021	XX	BTXXXXBDI	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/27/2021	XX	BTXXXXBDJ	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

U - Not Detected above the laboratory reporting limit.

REPORT PREPARED: 2/23/2022 13:56

FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater VOAs Part 2 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW02-801A)			Carbon Tetrachloride	Vinyl Acetate	Bromo dichloro methane	1,2-Dichloro propane	cis-1,3-Dichloro propene	Trichloroethene	Dibromo chloromethane	1,1,2-Trichloroethane	Benzene	trans-1,3-Dichloro propene	Bromo form	4-Methyl-2-Pentanone	2-Hexanone	Tetrachloro ethene	1,1,2,2-Tetrachloro ethane
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	ug/L	ug/L	ug/L	ug/L
MW02-801A																	
7/22/2008	XX	GW801A730	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	5	2 U	2 U	10 U	10 U	2 U	2 U
7/22/2008	XD	GWDP2X71D	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	5	2 U	2 U	10 U	10 U	2 U	2 U
7/22/2009	XX	GW801A7AC	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.7	1 U	1 U	10 U	10 U	1 U	1 U
7/22/2009	XD	GWDP2X795	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.7	1 U	1 U	10 U	10 U	1 U	1 U
7/28/2010	XX	GW801A804	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.2	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/28/2010	XD	GWDP2X7IH	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.1	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/25/2011	XX	GW801A8DB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/9/2012	XX	GW801A901	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.8	1 U	1 U	10 U	10 U	1 U	1 U
7/8/2013	XX	GW801A963	0.5 U	5 U	0.5 U	1.8 U	0.5 U	0.5 U	0.5 U	0.75 U	3	0.5 U	2 U	5 U	5 U	0.5 U	0.5 U
7/14/2014	XX	GW801A9E7	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	4	2 U	2 U	10 U	10 U	2 U	2 U
7/20/2015	XX	GW801AA44	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	3	2 U	2 U	10 U	10 U	2 U	2 U
10/17/2016	XX	GW801AACC	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	3	2 U	2 U	10 U	10 U	2 U	2 U
10/2/2017	XX	GW801AAGA	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	3	0.5 U	2 U	10 U	10 U	1 U	1 U
10/9/2018	XX	GW801AB08	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1.7	0.5 U	2 U	10 U	10 U	1 U	1 U
10/15/2019	XX	GW801AB49	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	2.4	0.5 U	2 U	10 U	10 U	1 U	1 U
10/14/2020	XX	GW801AB89	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/27/2021	XX	GW801ABCG	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	2.1	0.5 U	2 U	10 U	10 U	1 U	1 U
MW03-802A																	
7/22/2008	XX	GW802A731	2 U	15 U	2 U	2 U	2 U	2	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/21/2009	XX	GW802A7AD	1 U	1 U	1 U	1 U	1 U	1.7	1 U	1 U	1 U	1 U	1 U	10 U	10 U	0.6 J	1 U
7/26/2010	XX	GW802A805	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/26/2011	XX	GW802A8DC	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.93 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/9/2012	XX	GW802A902	1 U	1 U	1 U	1 U	1 U	1.2	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/8/2013	XX	GW802A964	0.5 U	5 U	0.5 U	1.8 U	0.5 U	1.3	0.5 U	0.75 U	0.5 U	0.5 U	2 U	5 U	5 U	0.5 U	0.5 U
7/8/2013	XD	GWDP4X97B	0.5 U	5 U	0.5 U	1.8 U	0.5 U	1.5	0.5 U	0.75 U	0.5 U	0.5 U	2 U	5 U	5 U	0.5 U	0.5 U
7/14/2014	XX	GW802A9E8	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
7/14/2014	XD	GWDP4X9FF	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
7/20/2015	XX	GW802AA45	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
7/20/2015	XD	GWDP4XA5C	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/17/2016	XX	GW802AACD	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/2/2017	XX	GW802AAGB	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/9/2018	XX	GW802AB09	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/15/2019	XX	GW802AB4A	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/13/2020	XX	GW802AB8A	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/25/2021	XX	GW802ABCH	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
MW03-802B																	
7/22/2008	XX	GW802B725	2 U	15 U	2 U	2	2 U	6	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/21/2009	XX	GW802B79H	1 U	1 U	1 U	0.6 J	1 U	2.4	1 U	1 U	0.6 J	1 U	1 U	10 U	10 U	0.6 J	1 U
7/26/2010	XX	GW802B7J9	0.5 U	0.5 U	0.5 U	1.4	0.5 U	2.4	0.5 U	0.5 U	1.2	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
4/25/2016	XX	GW802BA97	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/17/2016	XX	GW802BAD6	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2	2 U	2 U	10 U	10 U	2 U	2 U
4/24/2017	XX	GW802BAF6	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/2/2017	XX	GW802BAH4	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	2	0.5 U	2 U	10 U	10 U	1 U	1 U
10/9/2018	XX	GW802BB12	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1.8	0.5 U	2 U	10 U	10 U	1 U	1 U
10/15/2019	XX	GW802BB53	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/13/2020	XX	GW802BB93	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1.9	0.5 U	2 U	10 U	10 U	1 U	1 U
10/25/2021	XX	GW802BBDA	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U

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FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater VOAs Part 2 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW03-803A) Date	Type	Sample ID	Carbon Tetrachloride ug/L	Vinyl Acetate ug/L	Bromo dichloro methane ug/L	1,2-Dichloro propane ug/L	cis-1,3-Dichloro propene ug/L	Trichloroethene ug/L	Dibromo chloromethane ug/L	1,1,2-Trichloroethane ug/L	Benzene ug/L	trans-1,3-Dichloro propene ug/L	Bromoform ug/L	4-Methyl-2-Pentanone ug/L	2-Hexanone ug/L	Tetrachloro ethene ug/L	1,1,2,2-Tetrachloro ethane ug/L
MW03-803A																	
7/22/2008	XX	GW803A726	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/21/2009	XX	GW803A79I	1 U	1 U	1 U	1 U	1 U	0.7 J	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/26/2010	XX	GW803A7JA	0.5 U	0.5 U	0.5 U	1.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
4/25/2016	XX	GW803AA98	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/17/2016	XX	GW803AAD7	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
4/24/2017	XX	GW803AAF7	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/2/2017	XX	GW803AAH5	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/9/2018	XX	GW803AB13	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/15/2019	XX	GW803AB54	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/13/2020	XX	GW803AB94	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/25/2021	XX	GW803ABDB	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
MW03-803B																	
7/22/2008	XX	GW803B727	2 U	15 U	2 U	5	2 U	1 J	2 U	2 U	1 J	2 U	2 U	10 U	10 U	2 U	2 U
7/21/2009	XX	GW803B79J	1 U	1 U	1 U	6.1	1 U	2.1	1 U	1 U	1.9	1 U	1 U	10 U	10 U	1 U	1 U
7/26/2010	XX	GW803B7JB	0.5 U	0.5 U	0.5 U	4.5	0.5 U	0.5 U	0.5 U	0.5 U	2.1	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/26/2011	XX	GW803B8DD	0.5 U	0.5 U	0.5 U	4.5	0.5 U	0.95 J	0.5 U	0.5 U	1.6	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/9/2012	XX	GW803B903	1 U	1 U	1 U	3.4	1 U	1 U	1 U	1 U	1.4	1 U	1 U	10 U	10 U	1 U	1 U
7/8/2013	XX	GW803B965	0.5 U	5 U	0.5 U	1.8 U	0.5 U	1.1	0.5 U	0.75 U	1.9	0.5 U	2 U	5 U	5 U	0.5 U	0.5 U
7/14/2014	XX	GW803B9E9	2 U	10 U	0.5 U	3	2 U	2 U	2 U	2 U	2	2 U	2 U	10 U	10 U	2 U	2 U
7/20/2015	XX	GW803BA46	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/17/2016	XD	GWDP1XACA	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/17/2016	XX	GW803BACE	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/2/2017	XD	GWDP1XAG8	1 U	10 U	0.5 U	2	0.5 U	1 U	1 U	1 U	1	0.5 U	2 U	10 U	10 U	1 U	1 U
10/2/2017	XX	GW803BAGC	1 U	10 U	0.5 U	2	0.5 U	1 U	1 U	1 U	1	0.5 U	2 U	10 U	10 U	1 U	1 U
10/9/2018	XD	GWDP1XB06	1 U	10 U	0.5 U	1.6	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/9/2018	XX	GW803BB0A	1 U	10 U	0.5 U	1.6	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/15/2019	XD	GWDP1XB47	1 U	10 U	0.5 U	2.4	0.5 U	1 U	1 U	1 U	4.5	0.5 U	2 U	10 U	10 U	1 U	1 U
10/15/2019	XX	GW803BB4B	1 U	10 U	0.5 U	1.9	0.5 U	1 U	1 U	1 U	2.5	0.5 U	2 U	10 U	10 U	1 U	1 U
10/13/2020	XD	GWDP1XB87	1 U	10 U	0.5 U	1.3	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/13/2020	XX	GW803BB8B	1 U	10 U	0.5 U	1.3	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/25/2021	XD	GWDP1XBCE	1 U	10 U	0.5 U	1.3	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/25/2021	XX	GW803BBCI	1 U	10 U	0.5 U	1.2	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
MW-916																	
7/21/2008	XX	GW916X738	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/21/2009	XX	GW916X7B0	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/27/2010	XX	GW916X80C	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/26/2011	XX	GW916X8D6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/10/2012	XX	GW916X8JG	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/9/2013	XX	GW916X95I	0.5 U	5 U	0.5 U	1.8 U	0.5 U	0.5 U	0.5 U	0.75 U	0.5 U	0.5 U	2 U	5 U	5 U	0.5 U	0.5 U
7/15/2014	XX	GW916X9E2	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
7/21/2015	XX	GW916XA3J	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/18/2016	XX	GW916XAC7	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/3/2017	XX	GW916XAG5	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/10/2018	XX	GW916XB03	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/16/2019	XX	GW916XB44	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/14/2020	XX	GW916XB84	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/26/2021	XX	GW916XBCB	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U

SUMMARY REPORT

Groundwater VOAs Part 2 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT) Date	Type	Sample ID	Carbon Tetrachloride ug/L	Vinyl Acetate ug/L	Bromo dichloro methane ug/L	1,2-Dichloro propane ug/L	cis-1,3-Dichloro propene ug/L	Trichloroethene ug/L	Dibromo chloromethane ug/L	1,1,2-Trichloroethane ug/L	Benzene ug/L	trans-1,3-Dichloro propene ug/L	Bromoform ug/L	4-Methyl-2-Pentanone ug/L	2-Hexanone ug/L	Tetrachloro ethene ug/L	1,1,2,2-Tetrachloro ethane ug/L
QCBT																	
5/21/2008	XX	BTXXXX71B	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/21/2008	XX	BTXXXX72G	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/22/2008	XX	BTXXXX72H	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/23/2008	XX	BTXXXX73G	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/20/2009	XX	BTXXXX7A8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/21/2009	XX	BTXXXX7A9	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/22/2009	XX	BTXXXX7B8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/26/2010	XX	BTXXXX800	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/27/2010	XX	BTXXXX801	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/28/2010	XX	BTXXXX810	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
4/13/2011	XX	BTXXXX8B3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/25/2011	XX	BTXXXX8EJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/26/2011	XX	BTXXXX8F4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/27/2011	XX	BTXXXX8F5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
10/18/2011	XX	BTXXXX8D1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
4/10/2012	XX	BTXXXX8J6	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/9/2012	XX	BTXXXX918	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/10/2012	XX	BTXXXX91D	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
10/2/2012	XX	BTXXXXHG8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
10/2/2012	XX	BTXXXX938	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
4/8/2013	XX	BTXXXX95B	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/8/2013	XX	BTXXXX97A	0.5 U	5 U	0.5 U	1.8 U	0.5 U	0.5 U	0.5 U	0.75 U	0.5 U	0.5 U	2 U	5 U	5 U	0.5 U	0.5 U
7/10/2013	XX	BTXXXX97C	0.5 U	5 U	0.5 U	1.8 U	0.5 U	0.5 U	0.5 U	0.75 U	0.5 U	0.5 U	2 U	5 U	5 U	0.5 U	0.5 U
10/22/2013	XX	BTXXXX9B9	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/22/2013	XX	BTXXXX9BD	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
4/28/2014	XX	BTXXXX9DD	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
7/14/2014	XX	BTXXXX9FE	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
9/30/2014	XX	BTXXXX9HC	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/1/2014	XX	BTXXXX9HF	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
4/15/2015	XX	BTXXXXA37	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
7/20/2015	XX	BTXXXXA5B	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
7/22/2015	XX	BTXXXXA5D	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/20/2015	XX	BTXXXXA7G	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
4/25/2016	XX	BTXXXXA9F	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/17/2016	XX	BTXXXXADE	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/18/2016	XX	BTXXXXADF	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/19/2016	XX	BTXXXXADG	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
4/24/2017	XX	BTXXXXAFE	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/2/2017	XX	BTXXXXAHC	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/3/2017	XX	BTXXXXAHD	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/4/2017	XX	BTXXXXAHE	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
7/18/2018	XX	BTXXXXAA6	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/8/2018	XX	BTXXXXB1B	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/10/2018	XX	BTXXXXB1C	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
4/10/2019	XX	BTXXXXB3I	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/15/2019	XX	BTXXXXB5B	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/16/2019	XX	BTXXXXB5C	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/17/2019	XX	BTXXXXB5D	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U

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FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater VOAs Part 2 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT)			Carbon Tetrachloride	Vinyl Acetate	Bromo dichloro methane	1,2-Dichloro propane	cis-1,3-Dichloro propene	Trichloroethene	Dibromo chloromethane	1,1,2-Trichloroethane	Benzene	trans-1,3-Dichloro propene	Bromoform	4-Methyl-2-Pentanone	2-Hexanone	Tetrachloro ethene	1,1,2,2-Tetrachloro ethane
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	ug/L	ug/L	ug/L	ug/L
10/13/2020	XX	BTXXXXB9B	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/14/2020	XX	BTXXXXB9C	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/15/2020	XX	BTXXXXB9D	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/25/2021	XX	BTXXXXBDI	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/27/2021	XX	BTXXXXBDJ	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

U - Not Detected above the laboratory reporting limit.

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FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater VOAs Part 3 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW02-801A) Date	Type	Sample ID	Toluene ug/L	Chlorobenzene ug/L	Ethylbenzene ug/L	Styrene ug/L	o-Xylene ug/L	m,p-Xylene ug/L	Tetra hydrofuran ug/L	2-Chloro ethylvinylether ug/L	Trichloro fluoromethane ug/L	cis-1,2-Dichloroethene ug/L	Bromochloro methane ug/L	Dibromo methane ug/L	1,2-Dibromoethane ug/L	1,1,1,2-Tetrachloro ethane ug/L	1,2,3-Trichloro propane ug/L
MW02-801A																	
7/22/2008	XX	GW801A730	2 U	2	2 U	2 U	2 U	2 U			2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/22/2008	XD	GWDP2X71D	2 U	2	2 U	2 U	2 U	2 U			2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/22/2009	XX	GW801A7AC	1 U	1.9	1 U	1 U	1 U	1 U			1 U	0.5 J	1 U	1 U	1 U	1 U	1 U
7/22/2009	XD	GWDP2X795	1 U	1.9	1 U	1 U	1 U	1 U			1 U	0.6 J	1 U	1 U	1 U	1 U	1 U
7/28/2010	XX	GW801A804	0.5 U	1.7	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/28/2010	XD	GWDP2X7IH	0.5 U	1.6	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/25/2011	XX	GW801A8DB	0.5 U	1.1	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	3.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/9/2012	XX	GW801A901	1 U	1.2	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/8/2013	XX	GW801A963	0.75 U	1.4	0.5 U	1 U	1 U	1 U			2.5 U	0.5 U	2.5 U	5 U	2 U	0.5 U	5 U
7/14/2014	XX	GW801A9E7	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
7/20/2015	XX	GW801AA44	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	GW801AACC	1 U	2 U	1 U	1 U	1 U	1 U	10		5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	GW801AACCSIM													0.05 U		0.05 U
10/2/2017	XX	GW801AAGA	1 U	2	1 U	1 U	1 U	1 U	20		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/9/2018	XX	GW801AB08	1 U	1.4	1 U	1 U	1 U	1 U	14		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/15/2019	XX	GW801AB49	1 U	1.5	1 U	1 U	1 U	1 U	17		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/14/2020	XX	GW801AB89	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U
10/27/2021	XX	GW801ABCG	1 U	1.4	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U
MW03-802A																	
7/22/2008	XX	GW802A731	2 U	2 U	2 U	2 U	2 U	2 U			2 U	5	2 U	2 U	2 U	2 U	2 U
7/21/2009	XX	GW802A7AD	1 U	1 U	1 U	1 U	1 U	1 U			1 U	3.9	1 U	1 U	1 U	1 U	1 U
7/26/2010	XX	GW802A805	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	2.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/26/2011	XX	GW802A8DC	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	1.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/9/2012	XX	GW802A902	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/8/2013	XX	GW802A964	0.75 U	0.5 U	0.5 U	1 U	1 U	1 U			2.5 U	1.2	2.5 U	5 U	2 U	0.5 U	5 U
7/8/2013	XD	GWDP4X97B	0.75 U	0.5 U	0.5 U	1 U	1 U	1 U			2.5 U	1.4	2.5 U	5 U	2 U	0.5 U	5 U
7/14/2014	XX	GW802A9E8	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
7/14/2014	XD	GWDP4X9FF	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
7/20/2015	XX	GW802AA45	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
7/20/2015	XD	GWDP4XA5C	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	GW802AACD	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	GW802AACDSIM													0.05 U		0.05 U
10/2/2017	XX	GW802AAGB	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/9/2018	XX	GW802AB09	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/15/2019	XX	GW802AB4A	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/13/2020	XX	GW802AB8A	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U
10/25/2021	XX	GW802ABCH	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U
MW03-802B																	
7/22/2008	XX	GW802B725	2 U	2 U	2 U	2 U	2 U	2 U			2 U	18	2 U	2 U	2 U	2 U	2 U
7/21/2009	XX	GW802B79H	1 U	1 U	1 U	1 U	1 U	1 U			1 U	6.9	1 U	1 U	1 U	1 U	1 U
7/26/2010	XX	GW802B7J9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	11	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4/25/2016	XX	GW802BA97	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	GW802BAD6SIM													0.05 U		0.05 U
10/17/2016	XX	GW802BAD6	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	4	2 U	2 U	2 U	2 U	2 U
4/24/2017	XX	GW802BAF6	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/2/2017	XX	GW802BAH4	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	4	1 U	1 U	2 U	1 U	0.5 U
10/9/2018	XX	GW802BB12	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	3.4	1 U	1 U	2 U	1 U	0.5 U

SUMMARY REPORT

Groundwater VOAs Part 3 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW03-802B) Date	Type	Sample ID	Toluene ug/L	Chlorobenzene ug/L	Ethylbenzene ug/L	Styrene ug/L	o-Xylene ug/L	m,p-Xylene ug/L	Tetra hydrofuran ug/L	2-Chloro ethylvinylether ug/L	Trichloro fluoromethane ug/L	cis-1,2-Dichloroethene ug/L	Bromochloro methane ug/L	Dibromo methane ug/L	1,2-Dibromoethane ug/L	1,1,1,2-Tetrachloro ethane ug/L	1,2,3-Trichloro propane ug/L
10/15/2019	XX	GW802BB53	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1.2	1 U	1 U	2 U	1 U	0.5 U
10/13/2020	XX	GW802BB93	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	3.5	1 U	1 U	0.5 U	1 U	0.5 U
10/25/2021	XX	GW802BBDA	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U
MW03-803A																	
7/22/2008	XX	GW803A726	2 U	2 U	2 U	2 U	2 U	2 U			2 U	1 J	2 U	2 U	2 U	2 U	2 U
7/21/2009	XX	GW803A79I	1 U	1 U	1 U	1 U	1 U	1 U			1 U	2.6	1 U	1 U	1 U	1 U	1 U
7/26/2010	XX	GW803A7JA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	2.4	0.5 U	0.5 U	0.5 U	0.5 U	0.57 J
4/25/2016	XX	GW803AA98	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	GW803AAD7	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	GW803AAD7SIM													0.05 U		0.05 U
4/24/2017	XX	GW803AAF7	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/2/2017	XX	GW803AAH5	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	2	1 U	1 U	2 U	1 U	0.5 U
10/9/2018	XX	GW803AB13	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1.4	1 U	1 U	2 U	1 U	0.5 U
10/15/2019	XX	GW803AB54	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1.6	1 U	1 U	2 U	1 U	0.5 U
10/13/2020	XX	GW803AB94	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	2.5	1 U	1 U	0.5 U	1 U	0.5 U
10/25/2021	XX	GW803ABDB	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1.9	1 U	1 U	0.5 U	1 U	0.5 U
MW03-803B																	
7/22/2008	XX	GW803B727	2 U	2 U	2 U	2 U	2 U	2 U			2 U	9	2 U	2 U	2 U	2 U	2 U
7/21/2009	XX	GW803B79J	1 U	1 U	1 U	1 U	1 U	1 U			1 U	11	1 U	1 U	1 U	1 U	1 U
7/26/2010	XX	GW803B7JB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	7.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/26/2011	XX	GW803B8DD	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	9.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/9/2012	XX	GW803B903	1 U	1 U	1 U	1 U	1 U	1 U			1 U	8.5	1 U	1 U	1 U	1 U	1 U
7/8/2013	XX	GW803B965	0.75 U	0.5 U	0.5 U	1 U	1 U	1 U			2.5 U	7	2.5 U	5 U	2 U	0.5 U	5 U
7/14/2014	XX	GW803B9E9	1 U	2 U	1 U	1 U	1 U	1 U			5 U	7	2 U	2 U	2 U	2 U	2 U
7/20/2015	XX	GW803BA46	1 U	2 U	1 U	1 U	1 U	1 U			5 U	4	2 U	2 U	2 U	2 U	2 U
10/17/2016	XD	GWDP1XACA	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	4	2 U	2 U	2 U	2 U	2 U
10/17/2016	XD	GWDP1XACASIM													0.05 U		0.05 U
10/17/2016	XX	GW803BACE	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	4	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	GW803BACESIM													0.05 U		0.05 U
10/2/2017	XD	GWDP1XAG8	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	5	1 U	1 U	2 U	1 U	0.5 U
10/2/2017	XX	GW803BAGC	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	5	1 U	1 U	2 U	1 U	0.5 U
10/9/2018	XD	GWDP1XB06	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	4.1	1 U	1 U	2 U	1 U	0.5 U
10/9/2018	XX	GW803BB0A	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	4.2	1 U	1 U	2 U	1 U	0.5 U
10/15/2019	XD	GWDP1XB47	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	6.3	1 U	1 U	2 U	1 U	0.5 U
10/15/2019	XX	GW803BB4B	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	5.1	1 U	1 U	2 U	1 U	0.5 U
10/13/2020	XD	GWDP1XB87	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	3.3	1 U	1 U	0.5 U	1 U	0.5 U
10/13/2020	XX	GW803BB8B	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	3.1	1 U	1 U	0.5 U	1 U	0.5 U
10/25/2021	XD	GWDP1XBCE	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	3.5	1 U	1 U	0.5 U	1 U	0.5 U
10/25/2021	XX	GW803BBCI	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	3	1 U	1 U	0.5 U	1 U	0.5 U
MW-916																	
7/21/2008	XX	GW916X738	2 U	2 U	2 U	2 U	2 U	2 U			2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/21/2009	XX	GW916X7B0	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/27/2010	XX	GW916X80C	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/26/2011	XX	GW916X8D6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/10/2012	XX	GW916X8JG	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/9/2013	XX	GW916X95I	0.75 U	0.5 U	0.5 U	1 U	1 U	1 U			2.5 U	0.5 U	2.5 U	5 U	2 U	0.5 U	5 U
7/15/2014	XX	GW916X9E2	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
7/21/2015	XX	GW916XA3J	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U

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SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW-916) Date	Type	Sample ID	Toluene ug/L	Chlorobenzene ug/L	Ethylbenzene ug/L	Styrene ug/L	o-Xylene ug/L	m,p-Xylene ug/L	Tetra hydrofuran ug/L	2-Chloro ethylvinylether ug/L	Trichloro fluoromethane ug/L	cis-1,2-Dichloroethene ug/L	Bromochloro methane ug/L	Dibromo methane ug/L	1,2-Dibromoethane ug/L	1,1,1,2-Tetrachloro ethane ug/L	1,2,3-Trichloro propane ug/L
10/18/2016	XX	GW916XAC7SIM													0.05 U		0.05 U
10/18/2016	XX	GW916XAC7	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/3/2017	XX	GW916XAG5	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/10/2018	XX	GW916XB03	1.7	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/16/2019	XX	GW916XB44	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/14/2020	XX	GW916XB84	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U
10/26/2021	XX	GW916XBCB	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U
QCBT																	
5/21/2008	XX	BTXXXX71B	2 U	2 U	2 U	2 U	2 U	2 U			2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/21/2008	XX	BTXXXX72G	2 U	2 U	2 U	2 U	2 U	2 U			2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/22/2008	XX	BTXXXX72H	2 U	2 U	2 U	2 U	2 U	2 U			2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/23/2008	XX	BTXXXX73G	2 U	2 U	2 U	2 U	2 U	2 U			2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/20/2009	XX	BTXXXX7A8	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/21/2009	XX	BTXXXX7A9	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/22/2009	XX	BTXXXX7B8	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/26/2010	XX	BTXXXX800	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/27/2010	XX	BTXXXX801	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/28/2010	XX	BTXXXX810	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4/13/2011	XX	BTXXXX8B3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/25/2011	XX	BTXXXX8EJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/26/2011	XX	BTXXXX8F4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/27/2011	XX	BTXXXX8F5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
10/18/2011	XX	BTXXXX8D1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4/10/2012	XX	BTXXXX8J6	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/9/2012	XX	BTXXXX918	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/10/2012	XX	BTXXXX91D	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
10/2/2012	XX	BTXXXXHG8	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
10/2/2012	XX	BTXXXX938	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
4/8/2013	XX	BTXXXX95B	1 U	1 U	1 U	1 U	1 U	1 U			1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/8/2013	XX	BTXXXX97A	0.75 U	0.5 U	0.5 U	1 U	1 U	1 U			2.5 U	0.5 U	2.5 U	5 U	2 U	0.5 U	5 U
7/10/2013	XX	BTXXXX97C	0.75 U	0.5 U	0.5 U	1 U	1 U	1 U			2.5 U	0.5 U	2.5 U	5 U	2 U	0.5 U	5 U
10/22/2013	XX	BTXXXX9BD	1 U	2 U	1 U	1 U	1 U	1 U		2 U	5 U	2 U					
10/22/2013	XX	BTXXXX9B9	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
4/28/2014	XX	BTXXXX9DD	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
7/14/2014	XX	BTXXXX9FE	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
9/30/2014	XX	BTXXXX9HC	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/1/2014	XX	BTXXXX9HF	1 U	2 U	1 U	1 U	1 U	1 U		2 U	5 U	2 U					
4/15/2015	XX	BTXXXXA37	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
7/20/2015	XX	BTXXXXA5B	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
7/22/2015	XX	BTXXXXA5D	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/20/2015	XX	BTXXXXA7G	1 U	2 U	1 U	1 U	1 U	1 U			5 U	2 U	2 U	2 U	2 U	2 U	2 U
4/25/2016	XX	BTXXXXA9F	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	BTXXXXADE	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	BTXXXXADESIM													0.05 U		0.05 U
10/18/2016	XX	BTXXXXADFSIM													0.05 U		0.05 U
10/18/2016	XX	BTXXXXADF	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/19/2016	XX	BTXXXXADG	1 U	2 U	1 U	1 U	1 U	1 U	10 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U
10/19/2016	XX	BTXXXXADGSIM													0.05 U		0.05 U
4/24/2017	XX	BTXXXXAFE	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U

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FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater VOAs Part 3 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT)			Toluene	Chlorobenzene	Ethylbenzene	Styrene	o-Xylene	m,p-Xylene	Tetra hydrofuran	2-Chloro ethylvinylether	Trichloro fluoromethane	cis-1,2-Dichloroethene	Bromochloro methane	Dibromo methane	1,2-Dibromoethane	1,1,1,2-Tetrachloro ethane	1,2,3-Trichloro propane
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	ug/L	ug/L	ug/L	ug/L
10/2/2017	XX	BTXXXXAHC	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/3/2017	XX	BTXXXXAHD	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/4/2017	XX	BTXXXXAHE	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
7/18/2018	XX	BTXXXXAA6	1 U	2 U	1 U	1 U	1 U	1 U		2 U	5 U	2 U					
10/8/2018	XX	BTXXXXB1B	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/10/2018	XX	BTXXXXB1C	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
4/10/2019	XX	BTXXXXB3I	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/15/2019	XX	BTXXXXB5B	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/16/2019	XX	BTXXXXB5C	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/17/2019	XX	BTXXXXB5D	1 U	1 U	1 U	1 U	1 U	1 U	10 U		5 U	1 U	1 U	1 U	2 U	1 U	0.5 U
10/13/2020	XX	BTXXXXB9B	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U
10/14/2020	XX	BTXXXXB9C	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U
10/15/2020	XX	BTXXXXB9D	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U
10/25/2021	XX	BTXXXXBDI	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U
10/27/2021	XX	BTXXXXBDJ	1 U	1 U	1 U	1 U	1 U	1 U	10 U		2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

U - Not Detected above the laboratory reporting limit.

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FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater VOAs Part 4 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW02-801A)			1,2-Dibromo-3-Chloropropane	1,3-Dichloro benzene	1,4-Dichloro benzene	1,2-Dichloro benzene	Methyltertiary butylether	Acrylonitrile	Diethyl ether	trans-1,4-Dichloro-2-butene	Iodomethane	Acrolein
Date	Type	Sample ID	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW02-801A												
7/22/2008	XX	GW801A730	2 U		3	2 U		2 U		2 U	2 U	
7/22/2008	XD	GWDP2X71D	2 U		3	2 U		2 U		2 U	2 U	
7/22/2009	XX	GW801A7AC	1 U		3.7	1.2		1 U		1 U	1 U	
7/22/2009	XD	GWDP2X795	1 U		3.8	1.2		1 U		1 U	1 U	
7/28/2010	XX	GW801A804	0.5 U		2.9	0.96 J		0.5 U		0.5 U	0.5 U	
7/28/2010	XD	GWDP2X7IH	0.5 U		3	1		0.5 U		0.5 U	0.5 U	
7/25/2011	XX	GW801A8DB	0.5 U		2.3	0.73 J		0.5 U		0.5 U	0.5 U	
7/9/2012	XX	GW801A901	1 U		2.9	1 U		1 U		1 U	1 U	
7/8/2013	XX	GW801A963	2.5 U		2.9	2.5 U		5 U		2.5 U		
7/14/2014	XX	GW801A9E7	2 U		4	1		20 U		5 U	5 U	
7/20/2015	XX	GW801AA44	2 U		4	1		20 U		5 U	5 U	
10/17/2016	XX	GW801AACC	2 U		4	1		20 U	34	5 U	5 U	
10/17/2016	XX	GW801AACCSIM	0.05 U					0.25 U				
10/2/2017	XX	GW801AAGA	2 U		4	1		20 U	31	5 U	5 U	
10/9/2018	XX	GW801AB08	2 U		4	1		20 U	26	5 U	5 U	
10/15/2019	XX	GW801AB49	2 U		3.5	1 U		20 U	27	5 U	5 U	
10/14/2020	XX	GW801AB89	2 U		1.9	1 U		20 U	8.5	5 U	5 U	
10/27/2021	XX	GW801ABCG	2 U		3.1	1 U		20 U	22	5 U	5 U	
MW03-802A												
7/22/2008	XX	GW802A731	2 U		2 U	2 U		2 U		2 U	2 U	
7/21/2009	XX	GW802A7AD	1 U		1 U	1 U		1 U		1 U	1 U	
7/26/2010	XX	GW802A805	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
7/26/2011	XX	GW802A8DC	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
7/9/2012	XX	GW802A902	1 U		1 U	1 U		1 U		1 U	1 U	
7/8/2013	XX	GW802A964	2.5 U		2.5 U	2.5 U		5 U		2.5 U		
7/8/2013	XD	GWDP4X97B	2.5 U		2.5 U	2.5 U		5 U		2.5 U		
7/14/2014	XX	GW802A9E8	2 U		1 U	1 U		20 U		5 U	5 U	
7/14/2014	XD	GWDP4X9FF	2 U		1 U	1 U		20 U		5 U	5 U	
7/20/2015	XX	GW802AA45	2 U		1 U	1 U		20 U		5 U	5 U	
7/20/2015	XD	GWDP4XA5C	2 U		1 U	1 U		20 U		5 U	5 U	
10/17/2016	XX	GW802AACD	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/17/2016	XX	GW802AACDSIM	0.05 U					0.25 U				
10/2/2017	XX	GW802AAGB	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/9/2018	XX	GW802AB09	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/15/2019	XX	GW802AB4A	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/13/2020	XX	GW802AB8A	2 U		1 U	1 U		20 U	2 U	5 U	5 U	
10/25/2021	XX	GW802ABCH	2 U		1 U	1 U		20 U	2 U	5 U	5 U	
MW03-802B												
7/22/2008	XX	GW802B725	2 U		2 U	2 U		2 U		2 U	2 U	
7/21/2009	XX	GW802B79H	1 U		1 U	1 U		1 U		1 U	1 U	
7/26/2010	XX	GW802B7J9	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
4/25/2016	XX	GW802BA97	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/17/2016	XX	GW802BAD6SIM	0.05 U					0.25 U				
10/17/2016	XX	GW802BAD6	2 U		1 U	1 U		20 U	40	5 U	5 U	
4/24/2017	XX	GW802BAF6	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/2/2017	XX	GW802BAH4	2 U		1 U	1 U		20 U	36	5 U	5 U	
10/9/2018	XX	GW802BB12	2 U		1 U	1 U		20 U	40	5 U	5 U	

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Groundwater VOAs Part 4 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW03-802B) Date	Type	Sample ID	1,2-Dibromo-3-Chloropropane ug/L	1,3-Dichloro benzene ug/L	1,4-Dichloro benzene ug/L	1,2-Dichloro benzene ug/L	Methyltertiary butylether ug/L	Acrylonitrile ug/L	Diethyl ether ug/L	trans-1,4-Dichloro-2-butene ug/L	Iodomethane ug/L	Acrolein ug/L
10/15/2019	XX	GW802BB53	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/13/2020	XX	GW802BB93	2 U		1 U	1 U		20 U	31	5 U	5 U	
10/25/2021	XX	GW802BBDA	2 U		1 U	1 U		20 U	4	5 U	5 U	
MW03-803A												
7/22/2008	XX	GW803A726	2 U		2 U	2 U		2 U		2 U	2 U	
7/21/2009	XX	GW803A79I	1 U		1 U	1 U		1 U		1 U	1 U	
7/26/2010	XX	GW803A7JA	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
4/25/2016	XX	GW803AA98	2 U		1 U	1 U		20 U	22	5 U	5 U	
10/17/2016	XX	GW803AAD7	2 U		1 U	1 U		20 U	61	5 U	5 U	
10/17/2016	XX	GW803AAD7SIM	0.05 U					0.25 U				
4/24/2017	XX	GW803AAF7	2 U		1 U	1 U		20 U	17	5 U	5 U	
10/2/2017	XX	GW803AAH5	2 U		1 U	1 U		20 U	61	5 U	5 U	
10/9/2018	XX	GW803AB13	2 U		1 U	1 U		20 U	41	5 U	5 U	
10/15/2019	XX	GW803AB54	2 U		1 U	1 U		20 U	60	5 U	5 U	
10/13/2020	XX	GW803AB94	2 U		1 U	1 U		20 U	70	5 U	5 U	
10/25/2021	XX	GW803ABDB	2 U		1 U	1 U		20 U	56	5 U	5 U	
MW03-803B												
7/22/2008	XX	GW803B727	2 U		2 U	2 U		2 U		2 U	2 U	
7/21/2009	XX	GW803B79J	1 U		1 U	1 U		1 U		1 U	1 U	
7/26/2010	XX	GW803B7JB	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
7/26/2011	XX	GW803B8DD	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
7/9/2012	XX	GW803B903	1 U		1 U	1 U		1 U		1 U	1 U	
7/8/2013	XX	GW803B965	2.5 U		2.5 U	2.5 U		5 U		2.5 U		
7/14/2014	XX	GW803B9E9	2 U		1 U	1 U		20 U		5 U	5 U	
7/20/2015	XX	GW803BA46	2 U		1 U	1 U		20 U		5 U	5 U	
10/17/2016	XD	GWDP1XACA	2 U		1 U	1 U		20 U	120	5 U	5 U	
10/17/2016	XD	GWDP1XACASIM	0.05 U					0.25 U				
10/17/2016	XX	GW803BACE	2 U		1 U	1 U		20 U	110	5 U	5 U	
10/17/2016	XX	GW803BACESIM	0.05 U					0.25 U				
10/2/2017	XD	GWDP1XAG8	2 U		1 U	1 U		20 U	120	5 U	5 U	
10/2/2017	XX	GW803BAGC	2 U		1 U	1 U		20 U	120	5 U	5 U	
10/9/2018	XD	GWDP1XB06	2 U		1 U	1 U		20 U	110	5 U	5 U	
10/9/2018	XX	GW803BB0A	2 U		1 U	1 U		20 U	110	5 U	5 U	
10/15/2019	XD	GWDP1XB47	2 U		1 U	1 U		20 U	100	5 U	5 U	
10/15/2019	XX	GW803BB4B	2 U		1 U	1 U		20 U	100	5 U	5 U	
10/13/2020	XD	GWDP1XB87	2 U		1 U	1 U		20 U	91	5 U	5 U	
10/13/2020	XX	GW803BB8B	2 U		1 U	1 U		20 U	88	5 U	5 U	
10/25/2021	XD	GWDP1XBCE	2 U		1 U	1 U		20 U	84	5 U	5 U	
10/25/2021	XX	GW803BBCI	2 U		1 U	1 U		20 U	81	5 U	5 U	
MW-916												
7/21/2008	XX	GW916X738	2 U		2 U	2 U		2 U		2 U	2 U	
7/21/2009	XX	GW916X7B0	1 U		1 U	1 U		1 U		1 U	1 U	
7/27/2010	XX	GW916X80C	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
7/26/2011	XX	GW916X8D6	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
7/10/2012	XX	GW916X8JG	1 U		1 U	1 U		1 U		1 U	1 U	
7/9/2013	XX	GW916X95I	2.5 U		2.5 U	2.5 U		5 U		2.5 U		
7/15/2014	XX	GW916X9E2	2 U		1 U	1 U		20 U		5 U	5 U	
7/21/2015	XX	GW916XA3J	2 U		1 U	1 U		20 U		5 U	5 U	

SUMMARY REPORT

Groundwater VOAs Part 4 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW-916) Date	Type	Sample ID	1,2-Dibromo-3-Chloropropane ug/L	1,3-Dichloro benzene ug/L	1,4-Dichloro benzene ug/L	1,2-Dichloro benzene ug/L	Methyltertiary butylether ug/L	Acrylonitrile ug/L	Diethyl ether ug/L	trans-1,4-Dichloro-2-butene ug/L	Iodomethane ug/L	Acrolein ug/L
10/18/2016	XX	GW916XAC7SIM	0.05 U					0.25 U				
10/18/2016	XX	GW916XAC7	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/3/2017	XX	GW916XAG5	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/10/2018	XX	GW916XB03	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/16/2019	XX	GW916XB44	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/14/2020	XX	GW916XB84	2 U		1 U	1 U		20 U	2 U	5 U	5 U	
10/26/2021	XX	GW916XBCB	2 U		1 U	1 U		20 U	2 U	5 U	5 U	
QCBT												
5/21/2008	XX	BTXXXX71B	2 U		2 U	2 U		2 U		2 U	2 U	
7/21/2008	XX	BTXXXX72G	2 U		2 U	2 U		2 U		2 U	2 U	
7/22/2008	XX	BTXXXX72H	2 U		2 U	2 U		2 U		2 U	2 U	
7/23/2008	XX	BTXXXX73G	2 U		2 U	2 U		2 U		2 U	2 U	
7/20/2009	XX	BTXXXX7A8	1 U		1 U	1 U		1 U		1 U	1 U	
7/21/2009	XX	BTXXXX7A9	1 U		1 U	1 U		1 U		1 U	1 U	
7/22/2009	XX	BTXXXX7B8	1 U		1 U	1 U		1 U		1 U	1 U	
7/26/2010	XX	BTXXXX800	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
7/27/2010	XX	BTXXXX801	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
7/28/2010	XX	BTXXXX810	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
4/13/2011	XX	BTXXXX8B3	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
7/25/2011	XX	BTXXXX8EJ	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
7/26/2011	XX	BTXXXX8F4	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
7/27/2011	XX	BTXXXX8F5	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
10/18/2011	XX	BTXXXX8D1	0.5 U		0.5 U	0.5 U		0.5 U		0.5 U	0.5 U	
4/10/2012	XX	BTXXXX8J6	1 U		1 U	1 U		1 U		1 U	1 U	
7/9/2012	XX	BTXXXX918	1 U		1 U	1 U		1 U		1 U	1 U	
7/10/2012	XX	BTXXXX91D	1 U		1 U	1 U		1 U		1 U	1 U	
10/2/2012	XX	BTXXXXHG8	1 U		1 U	1 U		1 U		1 U	1 U	
10/2/2012	XX	BTXXXX938	1 U		1 U	1 U		1 U		1 U	1 U	
4/8/2013	XX	BTXXXX95B	1 U		1 U	1 U		1 U		1 U	1 U	
7/8/2013	XX	BTXXXX97A	2.5 U		2.5 U	2.5 U		5 U		2.5 U		
7/10/2013	XX	BTXXXX97C	2.5 U		2.5 U	2.5 U		5 U		2.5 U		
10/22/2013	XX	BTXXXX9BD		1 U	1 U	1 U	10 U	50 U				50 U
10/22/2013	XX	BTXXXX9B9	2 U		1 U	1 U		20 U		5 U	5 U	
4/28/2014	XX	BTXXXX9DD	2 U		1 U	1 U		20 U		5 U	5 U	
7/14/2014	XX	BTXXXX9FE	2 U		1 U	1 U		20 U		5 U	5 U	
9/30/2014	XX	BTXXXX9HC	2 U		1 U	1 U		20 U		5 U	5 U	
10/1/2014	XX	BTXXXX9HF		1 U	1 U	1 U	10 U	50 U				50 U
4/15/2015	XX	BTXXXXA37	2 U		1 U	1 U		20 U		5 U	5 U	
7/20/2015	XX	BTXXXXA5B	2 U		1 U	1 U		20 U		5 U	5 U	
7/22/2015	XX	BTXXXXA5D	2 U		1 U	1 U		20 U		5 U	5 U	
10/20/2015	XX	BTXXXXA7G	2 U		1 U	1 U		20 U		5 U	5 U	
4/25/2016	XX	BTXXXXA9F	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/17/2016	XX	BTXXXXADE	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/17/2016	XX	BTXXXXADESIM	0.05 U					0.25 U				
10/18/2016	XX	BTXXXXADFSIM	0.05 U					0.25 U				
10/18/2016	XX	BTXXXXADF	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/19/2016	XX	BTXXXXADG	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/19/2016	XX	BTXXXXADGSIM	0.05 U					0.25 U				
4/24/2017	XX	BTXXXXAFE	2 U		1 U	1 U		20 U	5 U	5 U	5 U	

REPORT PREPARED: 2/23/2022 13:56

FOR: Pinetree Landfill

SUMMARY REPORT

Groundwater VOAs Part 4 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT)

Date	Type	Sample ID	1,2-Dibromo-3-Chloropropane ug/L	1,3-Dichloro benzene ug/L	1,4-Dichloro benzene ug/L	1,2-Dichloro benzene ug/L	Methyltertiary butylether ug/L	Acrylonitrile ug/L	Diethyl ether ug/L	trans-1,4-Dichloro-2-butene ug/L	Iodomethane ug/L	Acrolein ug/L
10/2/2017	XX	BTXXXXAHC	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/3/2017	XX	BTXXXXAHD	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/4/2017	XX	BTXXXXAHE	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
7/18/2018	XX	BTXXXXAA6		1 U	1 U	1 U	10 U	50 U				50 U
10/8/2018	XX	BTXXXXB1B	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/10/2018	XX	BTXXXXB1C	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
4/10/2019	XX	BTXXXXB3I	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/15/2019	XX	BTXXXXB5B	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/16/2019	XX	BTXXXXB5C	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/17/2019	XX	BTXXXXB5D	2 U		1 U	1 U		20 U	5 U	5 U	5 U	
10/13/2020	XX	BTXXXXB9B	2 U		1 U	1 U		20 U	2 U	5 U	5 U	
10/14/2020	XX	BTXXXXB9C	2 U		1 U	1 U		20 U	2 U	5 U	5 U	
10/15/2020	XX	BTXXXXB9D	2 U		1 U	1 U		20 U	2 U	5 U	5 U	
10/25/2021	XX	BTXXXXBDI	2 U		1 U	1 U		20 U	2 U	5 U	5 U	
10/27/2021	XX	BTXXXXBDJ	2 U		1 U	1 U		20 U	2 U	5 U	5 U	

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

U - Not Detected above the laboratory reporting limit.

REPORT PREPARED: 2/23/2022 14:01

FOR: Pinetree Landfill

SUMMARY REPORT

Residential Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(DW-103) Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Turbidity (field) NTU
DW-103												
4/28/2008	XX	DW103X710		436	8.2	10.2				115	1	0
7/21/2008	XX	DW103X73B		412	7.5	11.2				305	1	1
10/8/2008	XX	DW103X763		372	7.4	11.3				310	2	2
4/20/2009	XX	DW103X78E		376	7.5	10				96	0.6	0
7/20/2009	XX	DW103X7B3		403	7.2	13				264	1	0.2
10/20/2009	XX	DW103X7FJ		585	7.1	10.9				278	1	0.5
3/29/2010	XX	DW103X7IB		454	7.4	9.9				197	1	0
7/26/2010	XX	DW103X80F		414	7.4	11.6				242	2	0.1
10/4/2010	XX	DW103X833		494	8.1	15.9				272	2	0
4/11/2011	XX	DW103X8AI		452	7.8	11.4				108	1	0
7/25/2011	XX	DW103X8EE	GRAB	440	7.7	15.9				262	1	0
10/18/2011	XX	DW103X8CG	GRAB	326	8.1	13.4				259	1	0
4/9/2012	XX	DW103X8J1	GRAB	407	7.8	11.1				344	1	1.8
7/9/2012	XX	DW103X913	GRAB	386	7.6	15.3				9	2	3.5
10/24/2012	XX	DW103X933	GRAB	401	7.4	11.6				242	1	1.9
4/8/2013	XX	DW103X956	GRAB	426	7.5	10.8				95	1	0.8
7/8/2013	XX	DW103X975	GRAB	399	7.1	12.4				95	1	0.5
10/21/2013	XX	DW103X9B2	GRAB	372	7.2	12.6				174	1	0.2
4/28/2014	XX	DW103X9D8	GRAB	409	6.2	10.7				146	1	1.2
6/3/2014	XX	DW103N41793	GRAB	415	8.1	10.2				135	2	0.5
7/14/2014	XX	DW103X9F9	GRAB	418	7.7	14.8				145	1	0.8
9/29/2014	XX	DW103X9H6	GRAB	433	7.6	12.4				96	1	0.6
4/13/2015	XX	DW103XA33	GRAB	416	7.9	10.3				55	1.5	0.6
7/20/2015	XX	DW103XA5G	GRAB	428	7.7	12.6				105	1.3	0.6
12/15/2015	XX	DW103XA7AX	GRAB	383	8.7	10.5				94	2.3	3.7
12/15/2015	XX	DW103XA7A		A	A	A				A	A	A
4/25/2016	XX	DW103XA9B	GRAB	482	7.8	9.9				88	1.2	2.1
10/17/2016	XX	DW103XADA	GRAB	477	8.1	12.7				98	1.2	0.8
4/24/2017	XX	DW103XAFA	GRAB	411	7.9	11				123	1.5	2.6
10/2/2017	XX	DW103XAH8	GRAB	484	7.8	14.4				220	0.7	1.7
4/9/2018	XX	DW103XAJ6	GRAB	442	8.1	9.1				227	2.9	0.8
10/9/2018	XX	DW103XB16	LF	485	7.7	12.6				370	0.9	1.9
4/8/2019	XX	DW103XB34	LF	430	8.1	9.2				87	1	0.8
10/17/2019	XX	DW103XB57	LF	504	8.3	17.7				75	0.7	16
4/20/2020	XX	DW103XB75	LF	405	6.9	10.3				73	5.5	2.9
10/13/2020	XX	DW103XB97	LF	477	7.8	16.4				151	4.96	2.6
4/26/2021	XX	DW103XBB4	LF	355	7.8	10.9				98	3.8	0.6
10/26/2021	XX	DW103XBDE	GRB	377	7.6	12.7				127	1.2	0.1
DW04-109												
4/30/2008	XX	DW109X716	LF	858	7.9	9	134.04	100.54	33.5	278	0.8	18.3
7/21/2008	XX	DW109X740	LF	1105	7.2	16.4	134.04			876	6	8.7
10/7/2008	XX	DW109X768	LF	2880	7.6	11.3	134.04			1004	8	20.1
4/22/2009	XX	DW109X78I	LF	895	7.4	9.6	134.04	101.34	32.7	129	1	2.5
7/21/2009	XX	DW109X7BA	LF	905	7.2	14.9	134.04			109	3	12.6
10/20/2009	XX	DW109X7G3	LF	925	7.9	7.4	134.04	100.17	33.87	99	1	11.3
3/31/2010	XX	DW109X7IC	LF	1048	7.1	8.1	134.04	101.64	32.4	74	3	12.2
7/27/2010	XX	DW109X812	LF	905	7	12.1	134.04	99.84	34.2	105	1	2.6

REPORT PREPARED: 2/23/2022 14:01

FOR: Pinetree Landfill

SUMMARY REPORT

Residential Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(DW04-109)

Date	Type	Sample ID	Collection Method -	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Water Level Reference Point Feet	Water Level Elevation Feet	Water Level Depth Feet	Eh mV	Dissolved Oxygen mg/L	Turbidity (field) NTU
10/5/2010	XX	DW109X834	LF	1126	7.3	10.4	134.04	98.54	35.5	87	1	0.9
4/11/2011	XX	DW109X8AJ	LF	274	8.5	9.6	134.04	101.64	32.4	278	1	2.3
7/25/2011	XX	DW109X8EF	LF	204	8.9	12.9	134.04	98.34	35.7	197	1	5.7
10/18/2011	XX	DW109X8CH	LF	178	8.6	10.8	134.04	100.98	33.06	362	1	3.6
4/10/2012	XX	DW109X8J2	LF	761	7	9.4	134.04	101.04	33	352	0.6	3
7/10/2012	XX	DW109X914	LF	790	7.2	10.9	134.04	101.36	32.68	22	0.6	5.6
10/2/2012	XX	DW109X934	LF	805	7.3	10.6	134.04	100.29	33.75	168	1	9.2
4/9/2013	XX	DW109X957	LF	798	7.1	8.2	134.04	101.04	33	149	1	1.8
7/10/2013	XX	DW109X976	LF	877	7.1	10.2	134.04	101.04	33	314	1	7
10/21/2013	XX	DW109X9B3	LF	449	7.8	9.8	134.04	100.94	33.1	129	1	4.8
4/29/2014	XX	DW109X9D9	LF	295	6.8	9.6	134.04	100.54	33.5	251	1	1.6
6/3/2014	XX	DW109N41793	LF	273	9.7	12.3				219	1	5.4
7/14/2014	XX	DW109X9FA	LF	656	7.3	13.1	134.04	100.94	33.1	123	1	2.6
9/29/2014	XX	DW109X9H7	LF	793	7.6	11.6	134.04	100.44	33.6	291	0.6	6.3
4/13/2015	XX	DW109XA34	LF	229	9.4	10.9	134.04	100.74	33.3	347	1.1	3.5
7/20/2015	XX	DW109XA5F	LF	251	9.1	17.2	134.04	100.39	33.65	180	1	4.2
10/19/2015	XX	DW109XA81	LF	215	8.8	8.7	134.04	99.44	34.6	301	0.8	2.4
4/25/2016	XX	DW109XA9C	LF	280	9.1	9.8	134.04	101.48	32.56	212	0.9	1.4
10/17/2016	XX	DW109XADB	LF	260	8.9	12.8	134.04	98.73	35.31	233	1.6	3.1
4/24/2017	XX	DW109XAFB	LF	217	9.1	9.5	134.04	100.52	33.52	245	2.9	3.3
10/2/2017	XX	DW109XAH9	LF	201	8.5	13.2	134.04	98.74	35.3	351	1.6	3.5
4/9/2018	XX	DW109XAJ7	LF	206	9.3	8.1	134.04	100.69	33.35	297	4.8	1.2
10/9/2018	XX	DW109XB17	LF	237	9.2	12.6	134.04	98.47	35.57	357	0.9	2.6
4/8/2019	XX	DW109XB35	LF	213	9.2	8	134.04	99.4	34.64	235	2.5	1.2
10/15/2019	XX	DW109XB58	LF	236	8.9	11.1	134.04	100.84	33.2	156	2	10.8
4/20/2020	XX	DW109XB76	LF	225	9.3	9.3	134.04			251	3.1	2.6
10/13/2020	XX	DW109XB98	LF	238	7.7	8.5	134.04	99.14	34.9	245	1.3	15.1
4/26/2021	XX	DW109XBB5	LF	192	8.5	9.1	134.04	100.42	33.62	397	2.3	1.8
10/26/2021	XX	DW109XBDF	GRB	183	7.9	8.6	134.04	100.91	33.13	361	2	0.7

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

A- The sampling location was Inaccessible

Sample collection notes:

GRAB- Grab sample method used to collect the sample.

GRB- Grab sample method used to collect the sample.

LF- Low flow sample method used to collect the sample.

REPORT PREPARED: 2/23/2022 14:02

FOR: Pinetree Landfill

SUMMARY REPORT

Residential Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(DW-103) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
DW-103							
7/21/2008	XX	DW103X73B		11.6	165	1 J	26.7
7/20/2009	XX	DW103X7B3		10.8	162	1.2 J	24.8
7/26/2010	XX	DW103X80F		7.1	160	0.7 U	38.3
7/25/2011	XX	DW103X8EE	256	9.1	157	0.7 U	48.6
7/9/2012	XX	DW103X913	232	9.9	159	2 U	22.2
7/8/2013	XX	DW103X975	223	8.7	160	2 U	23.2
6/3/2014	XX	DW103N41793	239	9	161	2 U	36.4
6/3/2014	XD	DW103D41793	245	9.1	159	2 U	36.9
7/14/2014	XX	DW103X9F9	236	10	164	2 U	25.5
7/20/2015	XX	DW103XA56	255	10.1	158	2 U	33.8
10/17/2016	XD	DWDP3XADD	234	8.1	157	2 U	40.3
10/17/2016	XX	DW103XADA	243	8.4	157	2 U	42.5
10/2/2017	XD	DWDP3XAHB	243	11	160	2 U	43
10/2/2017	XX	DW103XAH8	247	10	160	2 U	43
10/9/2018	XD	DWDP3XB19	247	10 U	170	2 U	41
10/9/2018	XX	DW103XB16	246	9.8	160	2 U	42
10/17/2019	XD	DWDP3XB5A	249	9.3	160	2 U	33
10/17/2019	XX	DW103XB57	254	9.2	160	2 U	33
10/13/2020	XD	DWDP3XB9A	259	8	160	19 M10	46
10/13/2020	XX	DW103XB97	259	8	170	30 M10	44
10/26/2021	XD	DWDP3XBDH	249	10 U	160	2 U	32
10/26/2021	XX	DW103XBDE	253	10 U	160	2 U	31
DW04-109							
7/21/2008	XX	DW109X740		38.8	433	4.1	151
7/21/2009	XX	DW109X7BA		33.8	481	2.4	28.6
7/27/2010	XX	DW109X812		14.8	520	1.6 J	19.7
7/25/2011	XX	DW109X8EF	130	3.3	62	3.2	22.3
7/25/2011	XD	DWDP3X8EI	129	3.6	62	3.2	22
7/10/2012	XX	DW109X914	450	46.8	351	2 U	15.6
7/10/2012	XD	DWDP3X917	450	44.8	331	2 U	15.9
7/10/2013	XX	DW109X976	496	61.6	368	2 U	15.6
7/10/2013	XD	DWDP3X979	499	59.7	366	2 U	15.2
6/3/2014	XX	DW109N41793	327	25.3	248	3	11.6
7/14/2014	XX	DW109X9FA	229	10.4	180	3.1	11.9
7/14/2014	XD	DWDP3X9FD	264	17.8	200	3.1	14.1
7/20/2015	XX	DW109XA57	162	2 U	109	3	11.1
7/20/2015	XD	DWDP3XA5A	142	2 U	101	3	12
10/17/2016	XX	DW109XADB	124	2 U	78	2.7	12
10/2/2017	XX	DW109XAH9	106	2 U	74	2.7	13
10/9/2018	XX	DW109XB17	119	3.6	97	3.1	8.8
10/15/2019	XX	DW109XB58	124	2 U	100	2.8	8.4
10/13/2020	XX	DW109XB98	129	2 U	95	13 M10	6.8
10/26/2021	XX	DW109XBDF	118	2 U	98	2.5	6.3

SUMMARY REPORT

Residential Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(DW04-109)			Total Dissolved Solids	Sulfate	Bicarbonate Alkalinity (CaCO3)	Organic Carbon	Chloride
Date	Type	Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

M10 - Due to a identified laboratory instrumentation malfunction, this analytical result is likely elevated--the laboratory has fixed the issue.

U - Not Detected above the laboratory reporting limit.

REPORT PREPARED: 2/23/2022 14:03

FOR: Pinetree Landfill

SUMMARY REPORT

Residential Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(DW-103)			Filtration	Arsenic	Calcium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Sodium				
			-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L				
Date	Type	Sample ID															
DW-103																	
7/21/2008	XX	DW103X73B	UF	0.008 J	36		0.24		15.1	0.16		2.6	23.4				
7/20/2009	XX	DW103X7B3	UF	0.007	34.3		0.43		14.1	0.16		2.4	21.7				
7/26/2010	XX	DW103X80F	UF	0.016	32.1		0.19		14.7	0.14		2.6	34.9				
7/25/2011	XX	DW103X8EE	UF	0.02	27.8		0.12	0.001 J	14.9	0.12	0.002 U	2.9	38.9				
10/18/2011	XX	DW103X8H0	UF	0.017		0.003 U											
7/9/2012	XX	DW103X913	UF	0.013	29.5	0.01 U	0.44	0.003 U	17.9	0.17	0.005 U	2.9	27.8				
7/8/2013	XX	DW103X975	UF	0.029	35.7	0.01 U	0.58	0.003 U	16.3	0.19	0.009	2.8	20.5				
6/3/2014	XX	DW103N41793	UF	0.012	33.5				14.3			2.6	32.5				
6/3/2014	XD	DW103D41793	UF	0.013	34.4				14.4			2.7	31.4				
7/14/2014	XX	DW103X9F9	UF	0.012	38.5	0.01 U	0.51	0.004 U	14.9	0.18	0.005 U	2.5	21.9				
4/13/2015	XX	DW103XA3C	UF	0.013													
7/20/2015	XX	DW103XA5G	UF	0.014													
7/20/2015	XX	DW103XA56	UF	0.019	36.5	0.01 U	0.4	0.004 U	15.5	0.16	0.005 U	2.7	30.1				
12/15/2015	XX	DW103XA7AX	UF	0.011													
12/15/2015	XX	DW103XA7A		A													
10/17/2016	XD	DWDP3XADD	UF	0.01	34.8	0.01 U	0.49	0.004 U	15.8	0.17	0.005 U	2.7	34.7				
10/17/2016	XX	DW103XADA	UF	0.01	35	0.01 U	0.45	0.004 U	15.2	0.16	0.005 U	2.7	34.5				
10/2/2017	XD	DWDP3XAHB	UF	0.009	33	0.01 U	0.46	0.003 U	15	0.16	0.005 U	2.4	31				
10/2/2017	XX	DW103XAH8	UF	0.01	31	0.01 U	0.44	0.003 U	15	0.15	0.005 U	2.4	31				
10/9/2018	XD	DWDP3XB19	UF	0.009	34	0.01 U	0.45	0.003 U	16	0.16	0.005 U	2.6	35				
10/9/2018	XX	DW103XB16	UF	0.006	34	0.01 U	0.48	0.003 U	16	0.16	0.005 U	2.7	36				
10/17/2019	XD	DWDP3XB5A	UF	0.011	39	0.01 U	0.58	0.003 U	16	0.18	0.005 U	2.7	30				
10/17/2019	XX	DW103XB57	UF	0.012	39	0.01 U	0.6	0.003 U	17	0.19	0.005 U	2.9	31				
10/13/2020	XD	DWDP3XB9A	UF	0.011	29	0.01 U	0.35	0.003 U	15	0.14	0.005 U	2.7	35				
10/13/2020	XX	DW103XB97	UF	0.008	30	0.01 U	0.38	0.003 U	15	0.14	0.005 U	2.8	36				
10/26/2021	XD	DWDP3XBDH	UF	0.008	35	0.01 U	0.47	0.003 U	15	0.15	0.005 U	2.6	30				
10/26/2021	XX	DW103XBDE	UF	0.007	36	0.01 U	0.5	0.003 U	16	0.16	0.005 U	2.6	32				
DW04-109																	
7/21/2008	XX	DW109X740	UF	0.003 J	94.3		43.92		37.1	0.45		4.5	44.5				
7/21/2009	XX	DW109X7BA	UF	0.002 U	166.2		164		50.4	1.36		1.9	16.3				
7/27/2010	XX	DW109X812	UF	0.039	140		31.1		50.3	0.34		1.4	14.5				
7/25/2011	XX	DW109X8EF	UF	0.002 U	5.8		19	0.001 J	15.8	0.11	0.003 J	8.3	10.1				
7/25/2011	XD	DWDP3X8EI	UF	0.002 U	6.1		23.1	0.001 J	16.3	0.13	0.004 J	8.8	10.4				
10/18/2011	XX	DW109X8H1	UF	0.003 J		0.003 U											
7/10/2012	XX	DW109X914	UF	0.01	57.3	0.01 U	1.89	0.003 U	30	0.09	0.005 U	8.4	12.8				
7/10/2012	XD	DWDP3X917	UF	0.005 U	97.8	0.01 U	3.77	0.003 U	43.5	0.15	0.005 U	4.6	14.6				
7/10/2013	XX	DW109X976	UF	0.042	109	0.01 U	3.07	0.003 U	46.2	0.17	0.005 U	2.8	12.5				
7/10/2013	XD	DWDP3X979	UF	0.036	87.4	0.01 U	3.33	0.003 U	41.5	0.15	0.005 U	3.8	12.9				
6/3/2014	XX	DW109N41793	UF	0.005 U	5.4				14.5			10.1	14.9				
7/14/2014	XX	DW109X9FA	UF	0.005 U	87.2	0.01 U	2.39	0.004 U	32.7	0.13	0.005 U	6.8	10.5				
7/14/2014	XD	DWDP3X9FD	UF	0.005 U	47.1	0.01 U	4.4	0.004 U	24	0.11	0.005 U	9.9	10.1				
4/13/2015	XX	DW109XA3D	UF	0.005 U													
7/20/2015	XX	DW109XA5F	UF	0.005													
7/20/2015	XX	DW109XA57	UF	0.006	42	0.01 U	2.44	0.004 U	19.7	0.09	0.005 U	13.1	7.5				
7/20/2015	XD	DWDP3XA5A	UF	0.006	45.2	0.01 U	2.12	0.004 U	20.2	0.09	0.005 U	13.2	7.5				
10/19/2015	XX	DW109XA81	UF	0.005													
10/17/2016	XX	DW109XADB	UF	0.005 U	5.3	0.01 U	0.53	0.004 U	14.8	0.05 U	0.005 U	11.5	12.1				

REPORT PREPARED: 2/23/2022 14:03

FOR: Pinetree Landfill

SUMMARY REPORT

Residential Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(DW04-109)

Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
10/2/2017	XX	DW109XAH9	UF	0.003 U	5.6	0.01 U	1.4	0.003 U	13	0.06	0.005 U	9.4	8.7
10/9/2018	XX	DW109XB17	UF	0.005 U	10	0.01 U	17	0.003 U	13	0.13	0.005 U	11	9.9
10/15/2019	XX	DW109XB58	UF	0.005 U	7.7	0.01 U	0.47	0.003 U	13	0.08	0.005 U	10	9.3
10/13/2020	XX	DW109XB98	UF	0.005 U	7.3	0.01 U	1.7	0.003 U	13	0.05 U	0.005 U	11	10
10/26/2021	XX	DW109XBDF	UF	0.005 U	9.1	0.01 U	3.5	0.003	13	0.1	0.005 U	10	9.3

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

A - The sampling location was Inaccessible

J - Analyte was positively identified/Associated value is an estimate.

U - Not Detected above the laboratory reporting limit.

Sample collection notes:

UF - No analytical parameters were field filtered

REPORT PREPARED: 2/23/2022 14:04

FOR: Pinetree Landfill

SUMMARY REPORT

Surface Water Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SW-A) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Eh mV	Dissolved Oxygen mg/L	Turbidity (field) NTU
SW-A								
4/28/2008	XX	SWXXAX6J7	86	8.3	13.6	261	4	0
7/22/2008	XX	SWXXAX71J	113	8	22.9	433	6	2.1
10/7/2008	XX	SWXXAX74A	99	7.9	12.3	350	6	0.8
4/21/2009	XX	SWXXAX771	74	8.1	9.7	90	6	0.4
7/21/2009	XX	SWXXAX79B	110	8.1	22.1	265	6	2.3
10/20/2009	XX	SWXXAX7E6	156	7	5.6	304	5	0.8
3/30/2010	XX	SWXXAX7GI	71	7.6	7	373	5	3.7
7/27/2010	XX	SWXXAX7J3	115	7.8	22.3	328	5	1.6
10/5/2010	XX	SWXXAX81A	131	7.9	14.1	278	5	0.4
4/12/2011	XX	SWXXAX8A1	86	7.5	8.2	242	5	3.5
7/26/2011	XX	SWXXAX8DH	107	7.8	20.3	472	6	2.3
10/18/2011	XX	SWXXAX8BJ	109	8.7	12.3	341	6	0.5
4/11/2012	XX	SWXXAX8I4	97	7.7	7.2	325	6	3.5
7/10/2012	XX	SWXXAX907	100	7.9	25.6	84	5	6.8
10/3/2012	XX	SWXXAX929	115	8	15.4	238	5	4
4/9/2013	XX	SWXXAX949	88	7.9	4.5	221	5	2.2
7/9/2013	XX	SWXXAX969	111	7.9	24.1	379	6	1.2
10/22/2013	XX	SWXXAX9A8	118	7.8	13.4	170	6	2.8
4/29/2014	XX	SWXXAX9CB	89	7.7	7.6	304	6	0.5
7/15/2014	XX	SWXXAX9ED	105	7.8	23.7	339	5	0.5
9/30/2014	XX	SWXXAX9GC	114	7.8	13.1	219	4	1.1
4/14/2015	XX	SWXXAXA26	91	7.1	2.2	337	11.4	1.8
7/21/2015	XX	SWXXAXA4A	126	7.8	22.2	332	4.9	1.2
10/20/2015	XX	SWXXAXA6G	104	8.2	8.1	369	9.7	2.3
4/26/2016	XX	SWXXAXA8H	100	8.7	9.5	265	8.1	1.6
10/18/2016	XX	SWXXAXACI	180	8.3	10.3	331	4.6	1.8
4/25/2017	XX	SWXXAXAEI	81	8.1	8	292	11.2	1.2
10/3/2017	XX	SWXXAXAGG	135	8.3	9.3	369	8.9	1.1
4/10/2018	XX	SWXXAXAIE	99	8.7	2.8	405	6.9	1.1
10/10/2018	XX	SWXXAXB0E	167	7.9	16.1	324	6.9	1.1
4/9/2019	XX	SWXXAXB2C	115	7.9	3.5	236	2.3	0.9
10/16/2019	XX	SWXXAXB4F	133	8.4	8.9	261	8.2	1.5
4/21/2020	XX	SWXXAXB6D	106	7.8	7.1	292	9	1.5
10/14/2020	XX	SWXXAXB8F	107	7.8	11.9	281	11.1	1.3
4/27/2021	XX	SWXXAXBAC	85	7.9	9.1	325	9.2	1.6
10/26/2021	XX	SWXXAXBD2	119	7.7	9.8	372	7.9	1.5
SW-C								
4/28/2008	XX	SWXXCX6J9	83	8.2	15.7	330	6	0.6
7/22/2008	XX	SWXXCX721	116	7.8	23.2	397	6	6.8
10/7/2008	XX	SWXXCX74C	98	8	11	361	6	1.2
4/21/2009	XX	SWXXCX773	86	8.3	10.8	234	6	4.1
7/21/2009	XX	SWXXCX79D	100	7.9	22.6	469	4	1.2
10/20/2009	XX	SWXXCX7E8	97	6.6	6.1	428	6	0.2
3/30/2010	XX	SWXXCX7H0	71	7.5	5.9	323	6	3.4
7/27/2010	XX	SWXXCX7J5	120	7.6	25.3	552	6	1.8
10/5/2010	XX	SWXXCX81C	134	8	12.7	283	6	0.3
4/12/2011	XX	SWXXCX8A2	87	7.1	6.6	427	5	2.5

SUMMARY REPORT

Surface Water Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Eh mV	Dissolved Oxygen mg/L	Turbidity (field) NTU
(SW-C)								
7/26/2011	XX	SWXXCX8DI	114	7.9	20.1	350	5	2.7
10/18/2011	XX	SWXXCX8C0	112	8.4	12.9	334	6	1.7
4/11/2012	XX	SWXXCX8I5	100	7	8.1	305	8	2.3
7/10/2012	XX	SWXXCX908	109	7.5	23.3	201	8	9.3
10/3/2012	XX	SWXXCX92A	110	7.8	15.8	239	6	3.8
4/9/2013	XX	SWXXCX94A	110	6	4.6	-2	5	2.7
7/9/2013	XX	SWXXCX96A	104	7.9	23.7	227	6	0.6
10/22/2013	XX	SWXXCX9A9	140	7.5	13.4	175	5	1.2
4/29/2014	XX	SWXXCX9CC	66	7.6	8.4	270	6	0.9
7/15/2014	XX	SWXXCX9EE	123	7.9	23.8	303	5	0.8
9/30/2014	XX	SWXXCX9GD	145	7.4	12.6	343	6	1.3
4/14/2015	XX	SWXXCXA27	96	7.6	8.8	360	9.1	0.7
7/21/2015	XX	SWXXCXA4B	136	8	22.4	321	5.3	1.3
10/20/2015	XX	SWXXCXA6H	83	8.3	7.9	388	9.5	2.1
4/26/2016	XX	SWXXCXA8I	116	8.4	8.1	309	8.3	1.6
10/18/2016	XX	SWXXCXACJ	200	8.3	10.1	345	6.8	2.2
4/25/2017	XX	SWXXCXAEJ	71	7.6	8.2	369	9.9	0.8
10/3/2017	XX	SWXXCXAGH	163	8.3	10.9	398	9.7	0.9
4/10/2018	XX	SWXXCXAIF	106		2.2	430	15.5	1.2
10/10/2018	XX	SWXXCXB0F	170	7.7	18	421	7.6	2.1
4/9/2019	XX	SWXXCXB2D	165	7.9	2.7	342	13.8	1.3
10/16/2019	XX	SWXXCXB4G	127	8.3	9.9	275	8.8	1.7
4/21/2020	XX	SWXXCXB6E	99	8.1	8.5	379	8.7	1.4
10/14/2020	XX	SWXXCXB8G	139	7.4	12.5	424	8.2	1.7
4/27/2021	XX	SWXXCXBAD	87	7.8	11.4	320	8.4	0.7
10/26/2021	XX	SWXXCXBD3	124	7.6	10	378	7.2	0.5
SW-D								
4/28/2008	XX	SWXXDX6JA	393	7.8	13.1	324	5	0.6
7/22/2008	XX	SWXXDX722	305	7.6	20.9	388	5	6.4
10/7/2008	XX	SWXXDX74D	188	7.9	8.2	373	6	1.2
4/21/2009	XX	SWXXDX774	196	7.7	7.5	225	6	8.7
7/21/2009	XX	SWXXDX79E	605	8.1	14.6	445	6	1.9
10/20/2009	XX	SWXXDX7E9	302	7	4.6	303	5	0.8
3/30/2010	XX	SWXXDX7H1	146	7.8	4.8	182	6	8.1
7/27/2010	XX	SWXXDX7J6	581	7.8	15.6	298	5	2.2
10/5/2010	XX	SWXXDX81D	234	7.8	12.1	317	5	3.2
4/12/2011	XX	SWXXDX8A3	287	7.4	7.4	402	5	1.8
7/26/2011	XX	SWXXDX8DJ	550	7.7	13.8	460	4	1.2
10/18/2011	XX	SWXXDX8C1	292	8.3	11.3	306	6	1.2
4/11/2012	XX	SWXXDX8I6	289	7.9	5.7	341	6	4.6
7/10/2012	XX	SWXXDX909	657	7.8	16.2	96	6	8
10/3/2012	XX	SWXXDX92B	268	8.3	14.4	237	6	7.7
4/9/2013	XX	SWXXDX94B	332	6	2.8	170	6	6.4
7/9/2013	XX	SWXXDX96B	461	7.8	18.8	239	6	1
10/22/2013	XX	SWXXDX9AA	554	7.2	11.1	208	4	2.2
4/29/2014	XX	SWXXDX9CD	200	7.1	5.5	391	4	0.8
7/15/2014	XX	SWXXDX9EF	657	7.6	16.5	360	6	2.4
9/30/2014	XX	SWXXDX9GE	788	7.6	11	370	5	0.8
4/14/2015	XX	SWXXDXA28	197	7.3	2.4	294	10.2	0.9

SUMMARY REPORT

Surface Water Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SW-D) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Eh mV	Dissolved Oxygen mg/L	Turbidity (field) NTU
7/21/2015	XX	SWXXDXA4C	705	7.7	18.3	365	6.7	1.2
10/20/2015	XX	SWXXDXA6I	406	7.8	5.7	404	9.1	1.8
4/26/2016	XX	SWXXDXA8J	553	8.2	4.7	351	9.9	1.8
10/18/2016	XX	SWXXDXAD0	890	7.5	9.8	285	5.1	2.1
4/25/2017	XX	SWXXDXAF0	368	7.7	5.8	309	11.9	1.1
10/3/2017	XX	SWXXDXAGI	883	8.1	8.8	433	7.7	1
4/10/2018	XX	SWXXDXAIG	337	8.4	1	420	13.2	1.2
10/10/2018	XX	SWXXDXB0G	728	7.8	15.9	421	5.3	2.2
4/9/2019	XX	SWXXDXB2E	391	7	1.1	319	12.1	1.1
10/16/2019	XX	SWXXDXB4H	703	8.3	6.2	266	8.8	1.2
4/21/2020	XX	SWXXDXB6F	644	7.9	5.6	369	10.2	1.1
10/14/2020	XX	SWXXDXB8H	325	7.8	13	341	10.7	2.1
4/27/2021	XX	SWXXDXBAE	421	7.7	7.8	329	10.6	0.7
10/26/2021	XX	SWXXDXBD4	271	7.2	8.2	409	7.2	0.6
SW-E								
4/28/2008	XX	SWXXEX6JB	519	8.3	15.8	364	5	0.8
7/22/2008	XX	SWXXEX723	508	7.7	18.2	385	6	2.2
10/7/2008	XX	SWXXEX74E	408	7.7	8.5	359	6	0.8
4/21/2009	XX	SWXXEX775	523	7.7	7.6	250	6	6.1
7/21/2009	XX	SWXXEX79F	618	7.9	14.8	436	6	5
10/20/2009	XX	SWXXEX7EA	692	7.9	3.9	318	4	0.6
3/30/2010	XX	SWXXEX7H2	180	7.6	7	142	6	7.6
7/27/2010	XX	SWXXEX7J7	709	7.7	15.8	352	6	2.6
10/5/2010	XX	SWXXEX81E	477	7.8	12.2	249	6	2.3
4/12/2011	XX	SWXXEX8A4	289	7.6	7.1	406	5	1.8
7/26/2011	XX	SWXXEX8E0	674	7.7	13.2	428	6	0.6
10/18/2011	XX	SWXXEX8C2	469	7.9	10.8	385	6	1
4/11/2012	XX	SWXXEX8I7	420	8.1	5.3	351	8	4.6
7/10/2012	XX	SWXXEX90A	715	8.2	17.5	97	8	2.9
10/3/2012	XX	SWXXEX92C	415	8	13.8	229	6	6.2
4/9/2013	XX	SWXXEX94C	559	6.3	3.6	433	5	8.7
7/9/2013	XX	SWXXEX96C	737	7.9	14.8	244	6	0.8
10/22/2013	XX	SWXXEX9AB	693	7.7	11.7	193	6	2.1
4/29/2014	XX	SWXXEX9CE	527	6.8	6.2	366	5	0.7
7/15/2014	XX	SWXXEX9EG	806	7.9	15.4	337	5	1.4
9/30/2014	XX	SWXXEX9GF	826	7.9	11.2	321	5	1
4/14/2015	XX	SWXXEXA29	241	7.2	4.4	332	12.3	0.8
7/21/2015	XX	SWXXEXA4D	914	7.9	14.1	341	7.2	0.8
10/20/2015	XX	SWXXEXA6J	689	7.5	6.7	414	9.5	1.3
4/26/2016	XX	SWXXEXA90	827	8.1	4.9	357	10.3	1.8
10/18/2016	XX	SWXXEXAD1	721	7.8	9.6	332	8.6	2.2
4/25/2017	XX	SWXXEXAF1	529	7.8	6.3	305	11.9	1.3
10/3/2017	XX	SWXXEXAGJ	883	8	7.2	417	11.2	1.5
4/10/2018	XX	SWXXEXAIH	547	8	2.1	426	17.2	2.2
10/10/2018	XX	SWXXEXB0H	1046	8	14.5	412	7.4	1.8
4/9/2019	XX	SWXXEXB2F	880	7.5	2.6	314	13.4	0.9
10/16/2019	XX	SWXXEXB4I	816	8.2	6.5	258	7.7	1.1
4/21/2020	XX	SWXXEXB6G	740	8.2	6.1	368	10.7	1.6
10/14/2020	XX	SWXXEXB8I	439	7.9	14.2	341	10	2.1

REPORT PREPARED: 2/23/2022 14:04

FOR: Pinetree Landfill

SUMMARY REPORT

Surface Water Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SW-E) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Eh mV	Dissolved Oxygen mg/L	Turbidity (field) NTU
4/27/2021	XX	SWXXEXBAF	687	7.8	9.4	339	9.2	2.1
10/26/2021	XX	SWXXEXBD5	495	7.4	8.6	397	7.6	0.4

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

REPORT PREPARED: 2/23/2022 14:05

FOR: Pinetree Landfill

SUMMARY REPORT

Surface Water Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SW-A) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
SW-A							
4/28/2008	XX	SWXXAX6J7		2.4	21	5	10.6
7/22/2008	XX	SWXXAX71J		3.1	27	9.1	9.8
10/7/2008	XX	SWXXAX74A		5.8	23	18	10
4/21/2009	XX	SWXXAX771		2	17.9	6.2	8
7/21/2009	XX	SWXXAX79B		1.2 J	32	10.2	8.6
10/20/2009	XX	SWXXAX7E6		2.2	37	6.2	10.7
3/30/2010	XX	SWXXAX7GI		2.4	16.6	4.2	6.8
7/27/2010	XX	SWXXAX7J3		1 J	36	6.9	7.9
10/5/2010	XX	SWXXAX81A		1.9 J	30	9.2	10
4/12/2011	XX	SWXXAX8A1	60	1.9 J	15.4	4.5	7.6
7/26/2011	XX	SWXXAX8DH	99	1.1 J	37	7	9.7
10/18/2011	XX	SWXXAX8BJ	99	1.3 J	29	11.1	8.7
4/11/2012	XX	SWXXAX8I4	68	3.3	23	5.8	9.5
7/10/2012	XX	SWXXAX907	71	2 U	28	9.6	6.8
10/3/2012	XX	SWXXAX929	89	3.2	29	10.3	9.3
4/9/2013	XX	SWXXAX949	48	2.9	20	4.1	8.4
7/9/2013	XX	SWXXAX969	78	2 U	33	8.3	7.7
10/22/2013	XX	SWXXAX9A8	95	2.4	35	8.9	9
4/29/2014	XX	SWXXAX9CB	50	3.6	20	4.5	9.7
7/15/2014	XX	SWXXAX9ED	70	2 U	35	9.2	9.6
9/30/2014	XX	SWXXAX9GC	100	2 U	38	8.1	10.4
4/14/2015	XX	SWXXAXA26	68	3.1	22	4	18.1
7/21/2015	XX	SWXXAXA4A	87	2 U	35	7	14.5
10/20/2015	XX	SWXXAXA6G	85	3.4	29	9.7	15.8
4/26/2016	XX	SWXXAXA8H	66	2.6	26	4.9	13.1
10/18/2016	XX	SWXXAXACI	118	2 U	49	9.1	22.7
4/25/2017	XX	SWXXAXAEI	48	10 U	20	5.9	11
10/3/2017	XX	SWXXAXAGG	92	2 U	37	7.3	17
4/10/2018	XX	SWXXAXAIE	54	2 U	21	6.4	13
10/10/2018	XX	SWXXAXB0E	85	4.1	42	7.8	17
4/9/2019	XX	SWXXAXB2C	79	2.2	20	5.1	12
10/16/2019	XX	SWXXAXB4F	99	3.3	35	11	15
4/21/2020	XX	SWXXAXB6D	73	2.5	21	5.6	12
10/14/2020	XX	SWXXAXB8F	88	2.7	45	9.6 M10	25
4/27/2021	XX	SWXXAXBAC	60	2.1	25	6.4	12
10/26/2021	XX	SWXXAXBD2	96	10 U	38	12	12
SW-C							
4/28/2008	XX	SWXXCX6J9		2.5	21	5.3	10.8
7/22/2008	XX	SWXXCX721		3.4	33	9.5	10.2
10/7/2008	XX	SWXXCX74C		2.4	28	13.6	9.9
4/21/2009	XX	SWXXCX773		1.7 J	18.9	5.1	8.5
7/21/2009	XX	SWXXCX79D		1.4 J	32	10.2	8.4
10/20/2009	XX	SWXXCX7E8		2.4	39	6.5	10.6
3/30/2010	XX	SWXXCX7H0		2.4	16.6	4.7	6.6
7/27/2010	XX	SWXXCX7J5		1.4 J	38	6.4	8.4
10/5/2010	XX	SWXXCX81C		2.5	33	9.2	10.2
4/12/2011	XX	SWXXCX8A2	56	2	15.5	4.4	7.8

SUMMARY REPORT

Surface Water Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SW-C) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
7/26/2011	XX	SWXXCX8DI	94	1.9 J	37	6.8	10
10/18/2011	XX	SWXXCX8C0	80	1.5 J	29	11.3	8.6
10/18/2011	XD	SWDP2X8BC	75	1.4 J	28	10.9	8.3
4/11/2012	XX	SWXXCX8I5	72	3.5	25	4.7	9.6
7/10/2012	XX	SWXXCX908	72	2 U	28	8.5	7
10/3/2012	XX	SWXXCX92A	88	3.3	30	10.4	8.7
10/3/2012	XD	SWDP2X922	80	3.3	30	12	8.9
4/9/2013	XX	SWXXCX94A	54	3	21	4.1	8.3
7/9/2013	XX	SWXXCX96A	73	2 U	34	8.3	8
10/22/2013	XX	SWXXCX9A9	83	2 U	35	8.9	8.7
10/22/2013	XD	SWDP2X9A1	84	2 U	35	9	8.8
4/29/2014	XX	SWXXCX9CC	57	3.6	21	4.5	9.8
7/15/2014	XX	SWXXCX9EE	70	2 U	34	9.7	9.5
9/30/2014	XX	SWXXCX9GD	97	2 U	42	7.9	10.3
9/30/2014	XD	SWDP2X9G5	92	2	45	7.7	10.2
4/14/2015	XX	SWXXCXA27	67	3.2	23	4.1	17.9
7/21/2015	XX	SWXXCXA4B	93	2 U	37	7	14.5
10/20/2015	XX	SWXXCXA6H	86	3.5	30	9.5	15.7
10/20/2015	XD	SWDP2XA69	99	3.5	30	9.3	13.4
4/26/2016	XX	SWXXCXA8I	55	2.6	27	5.1	13.1
10/18/2016	XX	SWXXCXACJ	114	2.5	58	4.4	18.6
4/25/2017	XX	SWXXCXAEJ	35	2.5	20	6.1	11
10/3/2017	XX	SWXXCXAGH	91	2.1	37	6.8	18
4/10/2018	XX	SWXXCXAIF	55	2 U	21	5.8	13
10/10/2018	XX	SWXXCXB0F	87	4.4	48	7.4	17
4/9/2019	XX	SWXXCXB2D	63	2.2	21	5.2	12
10/16/2019	XX	SWXXCXB4G	88	2 U	37	11	15
4/21/2020	XX	SWXXCXB6E	63	2.1	23	5.8	12
10/14/2020	XX	SWXXCXB8G	95	4	45	9.8 M10	26
4/27/2021	XX	SWXXCXBAD	58	2	27	6.1	12
10/26/2021	XX	SWXXCXBD3	103	10 U	39	12	12
SW-D							
4/28/2008	XX	SWXXDX6JA		7.4	120	4.9	56.3
4/28/2008	XD	SWDP3X6J4		7.2	116	5.2	55.6
7/22/2008	XX	SWXXDX722		9.1	62	11.2	47
10/7/2008	XX	SWXXDX74D		3.8	46	18.1	31.4
10/7/2008	XD	SWDP3X747		3.7	47	22.9	31.2
4/21/2009	XX	SWXXDX774		3.1	54	8	30
7/21/2009	XX	SWXXDX79E		4.1	119	7.6	40.7
10/20/2009	XX	SWXXDX7E9		8	62	7.4	35.1
3/30/2010	XX	SWXXDX7H1		3.9	54	7.6	48.6
3/30/2010	XD	SWDP3X7GF		3.8	36	7.8	28.7
7/27/2010	XX	SWXXDX7J6		6.6	234	0.9 J	63.8
10/5/2010	XX	SWXXDX81D		3.2	46	14.3	29.1
10/5/2010	XD	SWDP3X817		3.3	46	14.5	32.4
4/12/2011	XX	SWXXDX8A3	163	2.8	45	5.9	43.5
4/12/2011	XD	SWDP2X89E	199	3.1	62	4.9	53.4
7/26/2011	XX	SWXXDX8DJ	354	13.2	171	2	72.8
10/18/2011	XX	SWXXDX8C1	196	2.5	75	12	30.8

SUMMARY REPORT

Surface Water Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SW-D) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
4/11/2012	XX	SWXXDX8I6	190	4.6	55	6.7	48.8
4/11/2012	XD	SWDP2X8HH	183	4.7	57	6.5	58.8
7/10/2012	XX	SWXXDX909	404	9.4	210	2	94
10/3/2012	XX	SWXXDX92B	198	5.8	62	14.2	41.2
4/9/2013	XX	SWXXDX94B	162	4.4	39	5.1	56.9
4/9/2013	XD	SWDP2X942	171	4.6	40	5.4	61.3
7/9/2013	XX	SWXXDX96B	280	3.2	110	10	71.5
10/22/2013	XX	SWXXDX9AA	354	6.4	161	7.3	77.9
4/29/2014	XX	SWXXDX9CD	197	5.4	50	6.6	67.9
4/29/2014	XD	SWDP2X9C4	196	5.3	50	6.6	68.4
7/15/2014	XX	SWXXDX9EF	360	7.6	167	6.1	85.6
9/30/2014	XX	SWXXDX9GE	497	9.2	251	2 U	96.4
4/14/2015	XX	SWXXDXA28	117	3.2	25	5.8	45.5
4/14/2015	XD	SWDP2XA1J	106	3.1	24	5.6	41
7/21/2015	XX	SWXXDXA4C	414	6 U	130	5.7	144
10/20/2015	XX	SWXXDXA6I	280	8.9	77	10.4	76
4/26/2016	XD	SWDP2XA8A	311	5.3	84	5.5	131
4/26/2016	XX	SWXXDXA8J	310	5.6	85	6.6	103
10/18/2016	XD	SWDP2XACB	557	11	230	2 U	96.3
10/18/2016	XX	SWXXDXAD0	566	11	235	2 U	96.2
4/25/2017	XD	SWDP2XAEB	223	3.9	46	8.7	98
4/25/2017	XX	SWXXDXAF0	213	4.3	47	8.6	99
10/3/2017	XD	SWDP2XAG9	558	9.7	220	2 U	140
10/3/2017	XX	SWXXDXAGI	554	11	220	2 U	180
4/10/2018	XD	SWDP2XAI7	233	10 U	57	6.5	89
4/10/2018	XX	SWXXDXAIG	224	10 U	52	5	87
10/10/2018	XD	SWDP2XB07	411	12	120	9.3	150
10/10/2018	XX	SWXXDXB0G	407	10 U	110	9.6	150
4/9/2019	XD	SWDP2XB25	241	6 U	42	9.1	82
4/9/2019	XX	SWXXDXB2E	245	6 U	41	9.2	96
10/16/2019	XD	SWDP2XB48	420	6.6	150	8.3	120
10/16/2019	XX	SWXXDXB4H	394	5.7	140	8.3	120
4/21/2020	XD	SWDP2XB66	331	6.3	90	5.6	100
4/21/2020	XX	SWXXDXB6F	359	6.1	100	6.8	110
10/14/2020	XD	SWDP2XB88	208	19	47	12 M10	74
10/14/2020	XX	SWXXDXB8H	209	12	48	11 M10	84
4/27/2021	XD	SWDP2XBA5	301	10 U	76	9	110
4/27/2021	XX	SWXXDXBAE	297	4 U	71	8.7	97
10/26/2021	XD	SWDP2XBCF	201	10 U	72	10	50
10/26/2021	XX	SWXXDXBD4	206	10 U	71	11	48
SW-E							
4/28/2008	XX	SWXXEX6JB		12.9	149	6.8	83.4
7/22/2008	XX	SWXXEX723		12.4	155	6.5	64.1
10/7/2008	XX	SWXXEX74E		8.2	124	16.6	60.9
4/21/2009	XX	SWXXEX775		10.1	170	4.7	73.4
7/21/2009	XX	SWXXEX79F		12.5	220	4.8	77.1
10/20/2009	XX	SWXXEX7EA		9.4	135	5	54.7
3/30/2010	XX	SWXXEX7H2		3.4	35	7.9	24.7
7/27/2010	XX	SWXXEX7J7		7.5	258	1.6 J	68.4

SUMMARY REPORT

Surface Water Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SW-E) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
10/5/2010	XX	SWXXEX81E		6.2	124	8.6	49.6
4/12/2011	XX	SWXXEX8A4	168	3.6	55	5.4	47
7/26/2011	XX	SWXXEX8E0	445	14.7	241	2.1	81.5
7/26/2011	XD	SWDP2X8DA	454	14.7	237	1.9 J	81.2
10/18/2011	XX	SWXXEX8C2	293	5.4	126	9.2	45.8
4/11/2012	XX	SWXXEX8I7	276	18.2	107	5.6	64.9
7/10/2012	XX	SWXXEX90A	442	13.5	243	3.2	96.6
7/10/2012	XD	SWDP2X900	441	13.2	240	2 U	97.2
10/3/2012	XX	SWXXEX92C	273	7.9	111	10.8	54
4/9/2013	XX	SWXXEX94C	317	5.9	75	6.2	114
7/9/2013	XX	SWXXEX96C	460	10.1	221	3.2	87.6
7/9/2013	XD	SWDP2X962	456	10.2	220	3.2	87.7
10/22/2013	XX	SWXXEX9AB	446	10.4	235	2.3	78.5
4/29/2014	XX	SWXXEX9CE	303	8.2	105	4.9	88.7
7/15/2014	XX	SWXXEX9EG	481	10.2	228	2.8	106
7/15/2014	XD	SWDP2X9E6	473	10.4	230	2.8	109
9/30/2014	XX	SWXXEX9GF	500	8.9	256	2 U	98.5
4/14/2015	XX	SWXXEXA29	155	4.1	39	5.3	68.9
7/21/2015	XX	SWXXEXA4D	555	10.4	244	2 U	138
7/21/2015	XD	SWDP2XA43	553	10.3	243	2 U	147
10/20/2015	XX	SWXXEXA6J	443	11.4	185	4.3	86.1
4/26/2016	XX	SWXXEXA90	484	9.2	193	2.4	149
10/18/2016	XX	SWXXEXAD1	534	10.2	253	2.2	131
4/25/2017	XX	SWXXEXAF1	334	6.3	110	6.9	130
10/3/2017	XX	SWXXEXAGJ	526	9.4	230	2 U	130
4/10/2018	XX	SWXXEXAIH	315	10 U	83	6.3	110
10/10/2018	XX	SWXXEXB0H	582	11	220	3.5	180
4/9/2019	XX	SWXXEXB2F	507	4.8	79	7.6	150
10/16/2019	XX	SWXXEXB4I	473	7.5	190	6	140
4/21/2020	XX	SWXXEXB6G	416	7.3	140	4.9	110
10/14/2020	XX	SWXXEXB8I	283	13	79	9.9 M10	98
4/27/2021	XX	SWXXEXBAF	467	10 U	180	4.8	150
10/26/2021	XX	SWXXEXBD5	348	10 U	150	6.7	90

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

M10 - Due to a identified laboratory instrumentation malfunction, this analytical result is likely elevated–the laboratory has fixed the issue.

U - Not Detected above the laboratory reporting limit.

REPORT PREPARED: 2/23/2022 14:06

FOR: Pinetree Landfill

SUMMARY REPORT

Surface Water Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SW-A) Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
SW-A													
4/28/2008	XX	SWXXAX6J7	UF		6.4		0.14		1.3	0.02 J		0.5	5.6
7/22/2008	XX	SWXXAX71J	UF		10.4		0.25		2.2	0.08		0.6	7.3
10/7/2008	XX	SWXXAX74A	UF		9.3		0.37		2.1	0.04 J		0.9	6.3
4/21/2009	XX	SWXXAX771	UF		6.2		0.11		1.5	0.02 U		0.5	5.2
7/21/2009	XX	SWXXAX79B	UF		9.5		0.46		2	0.05		0.4	5.7
10/20/2009	XX	SWXXAX7E6	UF		11.6		0.29		2.5	0.03 J		1	7.3
3/30/2010	XX	SWXXAX7GI	UF		5.4		0.13		1.2	0.02 U		0.5	4.4
7/27/2010	XX	SWXXAX7J3	UF		10.4		0.11		2.4	0.04 J		0.4	6.6
10/5/2010	XX	SWXXAX81A	UF		10.5		0.19		2.6	0.05		1	7.7
4/12/2011	XX	SWXXAX8A1	UF		5.5		0.12		1.3			0.5	5.3
7/26/2011	XX	SWXXAX8DH	UF	0.004 J	10.4		0.17	0.0001 U	2.4	0.06	0.002 J	0.3	6.9
10/18/2011	XX	SWXXAX8BJ	UF	0.002 J	9.5		0.34		2			0.9	5.6
10/18/2011	XX	SWXXAX8G6	UF			0.003 U							
4/11/2012	XX	SWXXAX8I4	UF	0.003 J	7.5		0.13		1.8			0.6	5.8
7/10/2012	XX	SWXXAX907	UF	0.005 U	8.4	0.01 U	0.35	0.0003 U	2	0.05	0.005 U	0.4	6
10/3/2012	XX	SWXXAX929	UF	0.005 U	9.4		0.31		2.1			0.8	6.4
4/9/2013	XX	SWXXAX949	UF	0.005 U	6.4		0.11		1.7			0.7	6.2
7/9/2013	XX	SWXXAX969	UF	0.005	9.4	0.01 U	0.34	0.0003 U	2.3	0.05 U	0.005 U	0.4	6.1
10/22/2013	XX	SWXXAX9A8	UF	0.005 U	11		0.26		2.6			0.8	7.1
4/29/2014	XX	SWXXAX9CB	UF	0.005 U	6.2		0.11		1.4			1	6.6
7/15/2014	XX	SWXXAX9ED	UF	0.005 U	9.8	0.01 U	0.33	0.0003 U	2	0.05	0.005 U	0.4	6.7
9/30/2014	XX	SWXXAX9GC	UF	0.008	10.5		0.33		2.3			1.4	7.5
4/14/2015	XX	SWXXAXA26	UF	0.005 U	7		0.22		1.6			0.7	6.1
7/21/2015	XX	SWXXAXA4A	UF	0.012	11.8	0.01 U	0.2	0.0003 U	2.7	0.05 U	0.005 U	1.5	10.6
10/20/2015	XX	SWXXAXA6G	UF	0.013	9.8		0.39		2.2			1.3	8.4
4/26/2016	XX	SWXXAXA8H	UF	0.01	8.1		0.12		1.7			0.5	5.9
10/18/2016	XX	SWXXAXACI	UF	0.005 U	17.3		0.11		4	0.1		1.3	11
4/25/2017	XX	SWXXAXAEI	UF	0.006	5.1		0.11		1.3			0.4	5.5
10/3/2017	XX	SWXXAXAGG	UF	0.005	12		0.12		2.6	0.05 U		0.6	7.4
4/10/2018	XX	SWXXAXAIE	UF	0.005 U	7		0.24		1.6			0.6	7.3
10/10/2018	XX	SWXXAXB0E	UF	0.005 U	13		0.11		2.7	0.05 U		0.6	8.7
4/9/2019	XX	SWXXAXB2C	UF	0.005 U	6		0.23		1.4			0.6	5.9
10/16/2019	XX	SWXXAXB4F	UF	0.005 U	13		0.32		2.8	0.05 U		0.9	9.1
4/21/2020	XX	SWXXAXB6D	UF	0.005 U	6		0.13		1.4			0.6	6.1
10/14/2020	XX	SWXXAXB8F	UF	0.005 U	14		0.22		3	0.07		1.1	9.6
4/27/2021	XX	SWXXAXBAC	UF	0.005 U	8.4		0.2		1.8			0.5	7.2
10/26/2021	XX	SWXXAXBD2	UF	0.005 U	13		0.38		2.7	0.05 U		1	9.2
SW-C													
4/28/2008	XX	SWXXCX6J9	UF		6.7		0.16		1.5	0.03 J		0.5	5.6
7/22/2008	XX	SWXXCX721	UF		10.9		0.38		2.4	0.09		0.6	7.4
10/7/2008	XX	SWXXCX74C	UF		8.3		0.37		2.1	0.05		0.9	6.1
4/21/2009	XX	SWXXCX773	UF		6.4		0.13		1.5	0.02 J		0.4	5.1
7/21/2009	XX	SWXXCX79D	UF		9.6		0.46		2	0.06		0.4	5.7
10/20/2009	XX	SWXXCX7E8	UF		12.7		0.32		2.9	0.06		1.1	7.9
3/30/2010	XX	SWXXCX7H0	UF		5.5		0.13		1.2	0.02 U		0.5	4.3
7/27/2010	XX	SWXXCX7J5	UF		10.8		0.14		2.6	0.07		0.5	6.5
10/5/2010	XX	SWXXCX81C	UF		11.2		0.19		2.6	0.04 J		0.9	7.6

SUMMARY REPORT

Surface Water Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Filtration	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
(SW-C)													
4/12/2011	XX	SWXXCX8A2	UF		5.4		0.11		1.3			0.5	5.2
7/26/2011	XX	SWXXCX8DI	UF	0.006	11.9		0.19	0.0002 J	2.3	0.07	0.002 U	0.4	6.8
10/18/2011	XX	SWXXCX8G7	UF			0.003 U							
10/18/2011	XX	SWXXCX8C0	UF	0.002 U	9.6		0.33		2			0.8	5.7
10/18/2011	XD	SWDP2X8BC	UF	0.002 U	10		0.35		2			0.9	5.7
10/18/2011	XD	SWDP2X8FJ	UF			0.003 U							
4/11/2012	XX	SWXXCX8I5	UF	0.002 J	8		0.14		1.8			0.6	6.2
7/10/2012	XX	SWXXCX908	UF	0.005 U	7.9	0.01 U	0.35	0.0003 U	2	0.05	0.005 U	0.4	6
10/3/2012	XX	SWXXCX92A	UF	0.005 U	9.4		0.31		2.2			0.8	6.3
10/3/2012	XD	SWDP2X922	UF	0.005 U	9.8		0.32		2.3			0.9	6.5
4/9/2013	XX	SWXXCX94A	UF	0.005 U	6.6		0.11		1.8			0.7	6.3
7/9/2013	XX	SWXXCX96A	UF	0.005	9.1	0.01 U	1.36	0.0003 U	2.4	0.08	0.005 U	0.5	6.1
10/22/2013	XX	SWXXCX9A9	UF	0.005	10.2		0.24		2.5			0.8	6.9
10/22/2013	XD	SWDP2X9A1	UF	0.005	10.6		0.26		2.6			0.8	6.6
4/29/2014	XX	SWXXCX9CC	UF	0.005 U	6.4		0.11		1.4			0.8	6.1
7/15/2014	XX	SWXXCX9EE	UF	0.005 U	9.7	0.01 U	0.28	0.0003 U	2	0.05 U	0.005 U	0.4	6.7
9/30/2014	XX	SWXXCX9GD	UF	0.005	12.1		0.34		2.6			1.4	7.6
9/30/2014	XD	SWDP2X9G5	UF	0.007	11.7		0.34		2.5			1.2	7.2
4/14/2015	XX	SWXXCXA27	UF	0.006	6.8		0.19		1.6			0.7	6.2
7/21/2015	XX	SWXXCXA4B	UF	0.013	12.4	0.01 U	0.19	0.0003 U	2.8	0.05	0.005 U	0.8	9.3
10/20/2015	XX	SWXXCXA6H	UF	0.006	10.5		0.29		2.1			1	7.6
10/20/2015	XD	SWDP2XA69	UF	0.008	10.6		0.28		2.1			1	7.1
4/26/2016	XX	SWXXCXA8I	UF	0.011	8.4		0.12		1.8			0.5	6.1
10/18/2016	XX	SWXXCXACJ	UF	0.005 U	20.2		0.16		4.5	0.1		1.2	9.9
4/25/2017	XX	SWXXCXAEJ	UF	0.009	5.6		0.11		1.3			0.4	5.5
10/3/2017	XX	SWXXCXAGH	UF	0.005 U	13		0.12		2.7	0.05 U		0.6	7.5
4/10/2018	XX	SWXXCXAIF	UF	0.005 U	7.3		0.2		1.4			0.4	7.1
10/10/2018	XX	SWXXCXB0F	UF	0.005 U	12		0.08		2.6	0.05 U		0.6	8.4
4/9/2019	XX	SWXXCXB2D	UF	0.005 U	6.5		0.19		1.5			0.6	6.1
10/16/2019	XX	SWXXCXB4G	UF	0.005 U	13		0.34		2.7	0.05 U		0.9	9.1
4/21/2020	XX	SWXXCXB6E	UF	0.005 U	6		0.24		1.5			0.6	6
10/14/2020	XX	SWXXCXB8G	UF	0.005 U	14		0.17		2.9	0.06		1.3	9.3
4/27/2021	XX	SWXXCXBAD	UF	0.005 U	8.2		0.18		1.8			0.5	6.9
10/26/2021	XX	SWXXCXBD3	UF	0.005	14		0.92		2.7	0.2		0.9	8.9
SW-D													
4/28/2008	XX	SWXXDX6JA	UF		43.9		0.2		7.1	0.08		1.3	29.9
4/28/2008	XD	SWDP3X6J4	UF		41.5		0.23		6.7	0.07		1.3	28.9
7/22/2008	XX	SWXXDX722	UF		24.1		0.45		5.9	0.02 J		2.2	24.8
10/7/2008	XX	SWXXDX74D	UF		16.5		0.34		4.2	0.02 J		1	18.5
10/7/2008	XD	SWDP3X747	UF		16.8		0.39		4.5	0.02 J		1.1	18.9
4/21/2009	XX	SWXXDX774	UF		18.5		0.46		5.1	0.06		0.7	16
7/21/2009	XX	SWXXDX79E	UF		28.6		0.68		7	0.08		0.7	18.4
10/20/2009	XX	SWXXDX7E9	UF		22.8		0.46		5.9	0.04 J		1.8	19.2
3/30/2010	XX	SWXXDX7H1	UF		13.7		2.11		3	0.08		1.2	18.7
3/30/2010	XD	SWDP3X7GF	UF		19.1		1.24		3.2	0.07		1.2	27.9
7/27/2010	XX	SWXXDX7J6	UF		76.6		0.02 J		9.9	0.07		1.7	40.9
10/5/2010	XX	SWXXDX81D	UF		15.3		0.54		3.8	0.02 J		1.4	20.4
10/5/2010	XD	SWDP3X817	UF		15.9		0.59		4.1	0.02 J		1.4	21.4
4/12/2011	XX	SWXXDX8A3	UF		16.3		0.28		3.1			0.9	26.1

SUMMARY REPORT

Surface Water Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
(SW-D)													
4/12/2011	XD	SWDP2X89E	UF		17.7		0.25		3.7			0.9	28.1
7/26/2011	XX	SWXXDX8DJ	UF	0.011	62.4		0.13	0.0003	10.1	0.12	0.002 U	1.4	36.9
10/18/2011	XX	SWXXDX8G8	UF			0.003 U							
10/18/2011	XX	SWXXDX8C1	UF	0.002 U	26.5		0.38		5.2			1.6	18
4/11/2012	XX	SWXXDX8I6	UF	0.003 J	22.8		0.19		5.7			1	25.7
4/11/2012	XD	SWDP2X8HH	UF	0.003 J	26		0.18		5.8			1.1	26.7
7/10/2012	XX	SWXXDX909	UF	0.005 U	73.3	0.01 U	0.08	0.0003 U	11.6	0.14	0.005 U	2	49.8
10/3/2012	XX	SWXXDX92B	UF	0.005 U	21.5		0.33		4.9			1.8	22.7
4/9/2013	XX	SWXXDX94B	UF	0.005 U	17.3		0.79		5.2			1.4	38.8
4/9/2013	XD	SWDP2X942	UF	0.005 U	18.2		0.68		5.2			1.4	49.9
7/9/2013	XX	SWXXDX96B	UF	0.01	36.5	0.01 U	0.47	0.0003 U	10.9	0.17	0.005 U	1.9	39.2
10/22/2013	XX	SWXXDX9AA	UF	0.009	53.2		0.17		12			2.7	40.9
4/29/2014	XX	SWXXDX9CD	UF	0.005 U	19.5		0.23		5.2			2.4	30.8
4/29/2014	XD	SWDP2X9C4	UF	0.005 U	20.1		0.22		5.1			2.3	31.4
7/15/2014	XX	SWXXDX9EF	UF	0.01	66.1	0.01 U	0.2	0.0003 U	10	0.17	0.005 U	4.6	51.8
9/30/2014	XX	SWXXDX9GE	UF	0.005 U	101		0.05 U		11.9			2.3	50.7
4/14/2015	XX	SWXXDXA28	UF	0.005	9.4		0.38		2.3			1.1	18.8
4/14/2015	XD	SWDP2XA1J	UF	0.006	9		0.39		2.3			1.1	18.2
7/21/2015	XX	SWXXDXA4C	UF	0.012	52.7	0.01 U	0.2	0.0003	13.1	0.08	0.005 U	6.6	81.4
10/20/2015	XX	SWXXDXA6I	UF	0.011	31.7		0.28		7.1			3.1	36.8
4/26/2016	XD	SWDP2XA8A	UF	0.014	35		0.31		9.2			2.3	54.5
4/26/2016	XX	SWXXDXA8J	UF	0.014	34.5		0.29		8.7			2.3	54.1
10/18/2016	XD	SWDP2XACB	UF	0.005 U	111		0.24		13.9	0.19		2.3	65.4
10/18/2016	XX	SWXXDXAD0	UF	0.005 U	109		0.26		13.7	0.14		2.2	62.8
4/25/2017	XD	SWDP2XAEB	UF	0.007	19		0.23		5			1.4	48
4/25/2017	XX	SWXXDXAF0	UF	0.005 U	19		0.21		4.8			1.4	45
10/3/2017	XD	SWDP2XAG9	UF	0.005 U	100		0.33		12	0.13		1.7	55
10/3/2017	XX	SWXXDXAGI	UF	0.005 U	100		0.71		13	0.23		1.8	56
4/10/2018	XD	SWDP2XAI7	UF	0.005 U	27		0.24		4.9			1.3	51
4/10/2018	XX	SWXXDXAIG	UF	0.005 U	34		0.19		4.9			1.4	59
10/10/2018	XD	SWDP2XB07	UF	0.005 U	44		0.4		9.6	0.19		5.7	76
10/10/2018	XX	SWXXDXB0G	UF	0.005 U	38		0.28		8.7	0.16		5.2	68
4/9/2019	XD	SWDP2XB25	UF	0.005 U	18		0.43		5.1			1.6	46
4/9/2019	XX	SWXXDXB2E	UF	0.005 U	17		0.4		4.7			1.5	43
10/16/2019	XD	SWDP2XB48	UF	0.005 U	63		0.19		11	0.06		2.4	60
10/16/2019	XX	SWXXDXB4H	UF	0.005 U	63		0.19		10	0.06		2.4	59
4/21/2020	XD	SWDP2XB66	UF	0.005 U	40		0.22		7.1			1.7	58
4/21/2020	XX	SWXXDXB6F	UF	0.005 U	35		0.23		6.5			1.7	53
10/14/2020	XD	SWDP2XB88	UF	0.005 U	18		0.34		4.7	0.06		4.4	37
10/14/2020	XX	SWXXDXB8H	UF	0.005 U	20		0.26		4.6	0.06		4.2	37
4/27/2021	XD	SWDP2XBA5	UF	0.005 U	29		0.29		7.7			1.3	50
4/27/2021	XX	SWXXDXBAE	UF	0.005 U	30		0.29		7.9			1.3	51
10/26/2021	XD	SWDP2XBCF	UF	0.005 U	22		0.34		5.4	0.05 U		1.1	30
10/26/2021	XX	SWXXDXBD4	UF	0.005 U	23		0.33		5.7	0.05 U		1.3	33
SW-E													
4/28/2008	XX	SWXXEX6JB	UF		58.5		0.25		9.4	0.17		1.8	38.5
7/22/2008	XX	SWXXEX723	UF		56.7		0.33		9	0.12		2.2	35.2
10/7/2008	XX	SWXXEX74E	UF		48.6		0.27		8.3	0.13		1.6	30.5
4/21/2009	XX	SWXXEX775	UF		62.6		0.5		10.7	0.35		1.7	37.1

SUMMARY REPORT

Surface Water Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SW-E) Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
7/21/2009	XX	SWXXEX79F	UF		75.9		0.31		11.5	0.35		1.9	38.3
10/20/2009	XX	SWXXEX7EA	UF		55.6		0.35		9.8	0.15		2.3	31.1
3/30/2010	XX	SWXXEX7H2	UF		12.3		1.74		2.9	0.08		1.1	14.1
7/27/2010	XX	SWXXEX7J7	UF		84.8		0.24		13.1	0.27		2.2	40.7
10/5/2010	XX	SWXXEX81E	UF		44.5		0.3		7.2	0.1		1.6	28.2
4/12/2011	XX	SWXXEX8A4	UF		20.6		0.26		4.3			1	22.9
7/26/2011	XX	SWXXEX8E0	UF	0.014	82.2		0.18	0.0001 J	12.2	0.22	0.002 U	2.2	44.3
7/26/2011	XD	SWDP2X8DA	UF	0.016	81.7		0.17	0.0001 J	12.3	0.22	0.002 U	2.2	45
10/18/2011	XX	SWXXEX8C2	UF	0.011	48.8		0.28		7.6			1.8	24.5
10/18/2011	XX	SWXXEX8G9	UF			0.003 U							
4/11/2012	XX	SWXXEX8I7	UF	0.006	40.2		0.23		7.8			1.4	30.9
7/10/2012	XX	SWXXEX90A	UF	0.005 U	94.3	0.01 U	0.15	0.0003 U	13.5	0.23	0.005 U	2.5	51
7/10/2012	XD	SWDP2X900	UF	0.005 U	88.3	0.01 U	0.16	0.0003 U	14.9	0.24	0.005 U	2.7	57.1
10/3/2012	XX	SWXXEX92C	UF	0.005	42.8		0.29		7.1			1.9	29.4
4/9/2013	XX	SWXXEX94C	UF	0.005 U	35.6		0.88		7.1			2	79.8
7/9/2013	XX	SWXXEX96C	UF	0.005 U	79.9	0.01 U	0.31	0.0003 U	13.8	0.29	0.005 U	2.6	52.2
7/9/2013	XD	SWDP2X962	UF	0.005 U	80.5	0.01 U	0.29	0.0003 U	14.5	0.28	0.005 U	2.5	56.6
10/22/2013	XX	SWXXEX9AB	UF	0.005 U	92.4		0.16		15.1			2.8	53.1
4/29/2014	XX	SWXXEX9CE	UF	0.008	46.2		0.21		8.1			2.3	42.6
7/15/2014	XX	SWXXEX9EG	UF	0.019	88.1	0.01 U	0.22	0.0003 U	12.6	0.26	0.005 U	2.9	59.2
7/15/2014	XD	SWDP2X9E6	UF	0.017	86	0.01 U	0.22	0.0003 U	12.1	0.26	0.005 U	2.8	58.3
9/30/2014	XX	SWXXEX9GF	UF	0.018	97.4		0.09		13.4			2.8	57.1
4/14/2015	XX	SWXXEXA29	UF	0.007	16.2		0.37		3.1			1.2	24.2
7/21/2015	XX	SWXXEXA4D	UF	0.017	106	0.01 U	0.12	0.0003 U	14.8	0.22	0.005 U	3.3	85.3
7/21/2015	XD	SWDP2XA43	UF	0.017	103	0.01 U	0.12	0.0003 U	14.9	0.23	0.005 U	3.2	84
10/20/2015	XX	SWXXEXA6J	UF	0.02	76.9		0.14		10.6			2.7	47.6
4/26/2016	XX	SWXXEXA90	UF	0.03	83.3		0.17		12.3			2.2	59.8
10/18/2016	XX	SWXXEXAD1	UF	0.005 U	109		0.16		15.2	0.2		2.6	65.7
4/25/2017	XX	SWXXEXAF1	UF	0.008	41		0.38		7.7			1.7	55
10/3/2017	XX	SWXXEXAGJ	UF	0.005 U	98		0.25		12	0.17		1.9	57
4/10/2018	XX	SWXXEXAIH	UF	0.005 U	42		0.28		6.5			1.7	64
10/10/2018	XX	SWXXEXB0H	UF	0.005	83		0.11		12	0.11		2.6	68
4/9/2019	XX	SWXXEXB2F	UF	0.005 U	37		0.37		6.9			1.9	110
10/16/2019	XX	SWXXEXB4I	UF	0.005 U	80		0.33		12	0.25		2.4	69
4/21/2020	XX	SWXXEXB6G	UF	0.005 U	53		0.22		9			1.8	63
10/14/2020	XX	SWXXEXB8I	UF	0.005 U	30		0.32		5.8	0.12		3.8	44
4/27/2021	XX	SWXXEXBAF	UF	0.005	69		0.2		11			1.8	68
10/26/2021	XX	SWXXEXBD5	UF	0.005 U	55		0.31		9	0.11		1.7	56

SUMMARY REPORT

Surface Water Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(SW-E)			Filtration	Arsenic	Calcium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Sodium
			-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date	Type	Sample ID											

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

U - Not Detected above the laboratory reporting limit.

Sample collection notes:

UF - No analytical parameters were field filtered

REPORT PREPARED: 2/23/2022 14:07

FOR: Pinetree Landfill

SUMMARY REPORT

Leachate Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-3C) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Eh mV	Dissolved Oxygen mg/L	Turbidity (field) NTU
LCS-3C								
7/27/2011	XX	LTL3CX8E3	36300	6.9	30.3	99	6	D3
10/18/2011	XX	LTXXXX8GC	36400	7.3	27.9	-61	0.6	629
7/9/2012	XX	LTL3CX90D	22800	7.5	24.1	101	2	824
7/8/2013	XX	LTL3CX96F	47600	7.4	30	202	3	6.4
7/15/2014	XX	LTL3CX9EJ	42500	7.2	27.9	-101	D2	1946
7/21/2015	XX	LTL3CXA4G	38500	7.2	28.1	88	D2	3.2
4/27/2016	XX	LTLCSXA92	40200	6.4	20.6	64	0.8	1.2
10/18/2016	XX	LTLCSXAD3	40100	6.5	17.7	220	D2	2.6
4/26/2017	XX	LTLCSXAF3	43500	6.5	20.7	124	1	2.3
10/4/2017	XX	LTLCSXAH1	46600	7.5	21.4	178	1	1.4
4/11/2018	XX	LTLCSXAIJ	20000 G	7.3	18.2	35	1	1.9
10/9/2018	XX	LTLCSXB0J	45800	7.7	19.7	60	1	7.7
4/10/2019	XX	LTLCSXB2H	20000 G	7.7	17.3	89	1.5	6.1
10/17/2019	XX	LTLCSXB50	38297	7.4	21.7	196	0.4	10.4
4/22/2020	XX	LTLCSXB6I	27500	6.9	16	132	4	1.7
10/15/2020	XX	LTLCSXB90	14396	7.8	20.8	191	1.5	4.1
4/26/2021	XX	LTLCSXBAH	12190	7.5	16.7	-315	2.2	1.4
10/26/2021	XX	LTLCSXBD7	32200	7.6	16.4	-167	1.7	1
LCS-6								
4/29/2008	XX	LTLC6X6J2	14540	6.8	17.4	103	1	4.93
7/23/2008	XX	LTLC6X71E	14840	6.8	23.7	107	1	27
10/8/2008	XX	LTLC6X745	14790	6.9	21.3	94	1	34
4/21/2009	XX	LTLC6X76G	15330	6.9	17.1	110	1	27
7/21/2009	XX	LTLC6X796	18860	6.6	27.9	86	D2	D3
10/21/2009	XX	LTLC6X7E1	31100	6.2	19.4	169	3	23.6
3/29/2010	XX	LTLC6X7GD	27900	6.5	22.1	144	2	41
7/26/2010	XX	LTLC6X7II	17800	6.7	25.9	106	1	60
10/6/2010	XX	LTLC6X815	24200	6.9	17.2	99	1	26
4/12/2011	XX	LTLC6X8A6	15530	6.8	19.1	82	1	45
7/26/2011	XX	LTLC6X8E2	21400	7.4	25.1	90	3	83.6
10/17/2011	XX	LTLCSX8C4	32200	6.9	20.9	96	1	39.2
4/10/2012	XX	LTLCSX8I9	26800	6.6	18.1	199	5	668
7/10/2012	XX	LTLC6X90C	29600	6.6	27.3	87	1	6
10/2/2012	XX	LTLCSX92E	28500	6.7	24.6	119	1	28.1
4/9/2013	XX	LTLCSX94E	15440	6.7	14.3	163	1	20.6
7/10/2013	XX	LTLC6X96E	24300	6.3	22.1	155	1	6.9
10/23/2013	XX	LTLCSX9AD	13840	7	13.9	125	D2	D3
4/29/2014	XX	LTLCSX9CG	33200	6.9	23.5	88	0.8	5.2
7/16/2014	XX	LTLC6X9EI	27400	6.7	23	122	2	20.3
9/30/2014	XX	LTLCSX9GH	17700	7	18.6	175	3	77.2
1/20/2015	XX	LTLC6X9I7	A	A	A	A	A	A
4/15/2015	XX	LTLCSXA2B	2700	7	20.9	133	1	4.2
7/21/2015	XX	LTLC6XA4F	26800	7	27.1	-32	1	6.6
10/20/2015	XX	LTLCSXA71	195000	6.9	24.3	106	1	12.8
10/29/2019	XX	LTXXXXB5H	22219	7.1	23.2	145	1.7	19.6
LCS-7								
10/18/2011	XX	LTS37X8C6	35500	7.1	29.7	83	2	40.4

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FOR: Pinetree Landfill

SUMMARY REPORT

Leachate Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-7) Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Eh mV	Dissolved Oxygen mg/L	Turbidity (field) NTU
10/2/2012	XX	LTS37X92G	42800	7	19.7	108	1	31.1
10/22/2013	XX	LTS37X9AF	31500	6.8	28.4	70	6	738
9/30/2014	XX	LTS37X9GJ	43300	6.9	17.3	96	3	D3
10/20/2015	XX	LTS37XA73	40500	6.8	22.6	98	1	12.9
10/15/2020	XX	LTXXXXB9H	43458	7.2	24.1	120	0.6	6
LCS-SI								
4/13/2011	XX	LTSC1X8A7	16250	7.5	6.8	-94	D2	5.8
4/10/2012	XX	LTSC1X8IA	14900	7.7	9.7	50	D2	8.9
4/8/2013	XX	LTSC1X94F	15560	7.6	6.9	-67	D2	6.5
4/29/2014	XX	LTSC1X9CH	17120	7.9	6.7	-153	D2	5.8
4/15/2015	XX	LTSC1XA2C	18130	8.4	8.1	279	D2	1
10/18/2016	XX	LTXXXXAE0	15120	6.7	15.5	139	D2	0.6
10/26/2021	XX	LTXXXXBE4	11140	8.8	13.2	-81	1.5	0.1
LCS-SII								
4/13/2011	XX	LTSC2X8A8	15630	7.2	14.2	1	3	0.8
4/10/2012	XX	LTSC2X8IB	17340	7.3	14.3	187	2	10.6
4/8/2013	XX	LTSC2X94G	15530	7.5	14.9	236	2	2
4/29/2014	XX	LTSC2X9CI	11870	7.2	13.1	106	3	1.8
1/20/2015	XX	LTSIIX9I4	13910	7.5	6	187	1	33.9
4/15/2015	XX	LTSC2XA2D	10040	7.7	13	215	3	17
10/4/2017	XX	LTXXXXAHI	12510	7.5	12.3	290	1	4.9
10/9/2018	XX	LTXXXXB1G	15430	7.3	19.6	216	1	6
LCS-SIII								
10/18/2011	XX	LTSC3X8C5	64200	9.4	21.8	-109	D2	38.7
10/3/2012	XX	LTSC3X92F	54100	9.3	22.1	50	2	795
10/22/2013	XX	LTSC3X9AE	55900	9.6	21.1	-99	12 G	70.8
9/30/2014	XX	LTSC3X9GI	61400	8.8	22.1	116	0.8	50.2
10/20/2015	XX	LTSC3XA72	54200	8.6	23.2	-31	0.4	53.2
4/10/2019	XX	LTXXXXB3G	20000 G	9.1	18.6	-62	0.8	6.6
PDPS								
4/30/2008	XX	LTPDPX6J3	12930	7.5	14.3	217	2	21.2
7/23/2008	XX	LTPDPX71F	5870	6.8	21.4	116	1	6.2
10/8/2008	XX	LTPDPX746	5100	7.3	18.4	51	1	4.3
4/22/2009	XX	LTPDPX76H	6070	7.1	16.2	223	1	0
7/21/2009	XX	LTPDPX797	6370	7.2	23.2	292	2	7.7
10/21/2009	XX	LTPDPX7E2	5490	7	20.1	208	5	26.3
3/30/2010	XX	LTPDPX7GE	3130	6.7	10.5	173	1	1.4
7/26/2010	XX	LTPDPX7IJ	7560	7	25.8	138	1	6
10/6/2010	XX	LTPDPX816	4910	7	17	211	1	3.6
4/12/2011	XX	LTPDPX8A5	3920	7.2	15.4	125	1	3.7
7/26/2011	XX	LTPDPX8E1	6670	7.3	23.5	230	2	4.4
10/18/2011	XX	LTPDPX8C3	3310	7.2	18.8	56	1	11.6
4/10/2012	XX	LTPDPX8I8	3800	7.1	16.8	340	2	6.9
7/9/2012	XX	LTPDPX90B	4040	6.9	22.9	48	3	3.9
10/2/2012	XX	LTPDPX92D	2930	6.7	21.3	201	2	6.1
4/9/2013	XX	LTPDPX94D	2410	6.9	11.9	145	1	5.4
7/10/2013	XX	LTPDPX96D	4130	6.7	20.7	140	3	23

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FOR: Pinetree Landfill

SUMMARY REPORT

Leachate Field Data

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(PDPS)

Date	Type	Sample ID	Specific Conductance µmhos/cm @25°C	pH STU	Temperature Deg C	Eh mV	Dissolved Oxygen mg/L	Turbidity (field) NTU
10/23/2013	XX	LTPDPX9AC	3880	7.2	14.8	219	3	35
4/29/2014	XX	LTPDPX9CF	8660	7.5	14	87	1	0.8
7/15/2014	XX	LTPDPX9EH	2690	6.8	20.2	170	1	2.6
9/30/2014	XX	LTPDPX9GG	4890	7.1	17.8	175	1	5.7
1/20/2015	XX	LTPDPX9I8	2110	7.6	4.4	57	3	2.8
4/15/2015	XX	LTPDPXA2A	1536	7	10.4	276	1	4.9
7/21/2015	XX	LTPDPXA4E	3240	7.1	23.3	254	2	4.3
10/20/2015	XX	LTPDPXA70	3670	7.1	16.7	207	1	3.6
4/27/2016	XX	LTPDPXA91	2060	6.8	8.7	167	1	25.6
10/18/2016	XX	LTPDPXAD2	9100	6.5	18.3	238	1	6.6
4/26/2017	XX	LTPDPXAF2	1497	6.2	11.4	155	1	1.8
10/3/2017	XX	LTPDPXAH0	5890	7.8	17.7	347	1	4.6
4/11/2018	XX	LTPDPXAII	1301	6.9	10.7	177	1	8.6
10/9/2018	XX	LTPDPXB0I	8190	7.4	19	143	1	4.4
4/10/2019	XX	LTPDPXB2G	2310	7.1	11.4	159	1	3.2
10/16/2019	XX	LTPDPXB4J	2708	7.1	17.8	199	0.9	3.7
4/22/2020	XX	LTPDPXB6H	2260	6.9	15.1	135	3.5	4.6
10/15/2020	XX	LTPDPXB8J	3941	7.3	19.6	306	1.7	3.5
4/28/2021	XX	LTPDPXBAG	1810	6.8	17.9	131	1.6	16.3
10/26/2021	XX	LTPDPXBD6	3240	7.4	16.1	81	2.7	1.9

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

A - The sampling location was Inaccessible
D2 - Sample too dark to read D.O. reading.
D3 - Sample too dark to take reading.
G - Greater than specified amount.

REPORT PREPARED: 2/23/2022 14:09

FOR: Pinetree Landfill

SUMMARY REPORT

Leachate Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-3C) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
LCS-3C							
7/27/2011	XX	LTL3CX8E3	21470	247 J	1910	632	19200
7/27/2011	XD	LTDP4X8F0	21940	225 J	1970	634	17800
7/9/2012	XX	LTL3CX90D	13220	219	1500	436	8210
7/9/2012	XD	LTDP4X919	15610	206	1770	470	9010
7/8/2013	XX	LTL3CX96F	22390	1100	3690	1700	32600
7/15/2014	XX	LTL3CX9EJ	18760	4450	3950	1020	22800
7/21/2015	XX	LTL3CXA4G	25640	1780	4150	1150	17700
4/27/2016	XX	LTLCSXA92	20840	685	5260	1510	10700
10/18/2016	XX	LTLCSXAD3	21490	2260	4900	2020	19200
4/26/2017	XX	LTLCSXAF3	20676	640	5400	2 U	24000
10/4/2017	XX	LTLCSXAH1	21476	2500	5500	3100	16000
4/11/2018	XX	LTLCSXAIJ	19772	600 U	4900	1000	11000
10/9/2018	XX	LTLCSXB0J	20804	5100	5400	1100	25000
4/10/2019	XX	LTLCSXB2H	18976	1500	4600	2000	13000
10/17/2019	XX	LTLCSXB50	20496	600 U	5100	1500	12000
4/22/2020	XX	LTLCSXB6I	9270	1500	2500	840	9600
10/15/2020	XX	LTLCSXB90	18760	26	5000	390 M10	11000
4/26/2021	XX	LTLCSXBAH	7160	100 U	1800	18	2700
10/26/2021	XX	LTLCSXBD7	6360	42	1700	960	2500
LCS-6							
4/29/2008	XX	LTLC6X6J2		204	1720	339	4480
7/23/2008	XX	LTLC6X71E		595	970	200	13300
10/8/2008	XX	LTLC6X745		1370	1140	191	16900
4/21/2009	XX	LTLC6X76G		297 J	1240	240	11000
7/21/2009	XX	LTLC6X796		496	1620	352	11900
10/21/2009	XX	LTLC6X7E1		210 J	1640	288	15300
3/29/2010	XX	LTLC6X7GD		300 U	930	369	36800
7/26/2010	XX	LTLC6X7II		180 U	1370	356	24400
10/6/2010	XX	LTLC6X815		120 U	1490	330	22400
4/12/2011	XX	LTLC6X8A6	8522	280 J	840	185	10100
7/26/2011	XX	LTLC6X8E2	13130	333	1250	258	9670
10/17/2011	XX	LTLCSX8C4	18063	342 J	1190	61.3	25900
10/17/2011	XD	LTDP4X8D2	19178	301 J	1150	305	26500
4/10/2012	XX	LTLCSX8I9	16690	373	720	141	8110
7/10/2012	XX	LTLC6X90C	22270	83.1	1030	257	1440
10/2/2012	XX	LTLCSX92E	16330	230	890	158	9600
10/2/2012	XD	LTDP4X939	15570	143	750	156	21800
4/9/2013	XX	LTLCSX94E	15730	537	617	138	22600
7/10/2013	XX	LTLC6X96E	11870	401	542	33.6	13900
10/23/2013	XX	LTLCSX9AD	9310	518	360	29.4	9100
4/29/2014	XX	LTLCSX9CG	17390	234	1370	334	10600
7/16/2014	XX	LTLC6X9EI	15400	1940	960	174	12800
9/30/2014	XX	LTLCSX9GH	12230	200 U	650	75.1	7080
4/15/2015	XX	LTLCSXA2B	1540	68.2	376	9.3	577
7/21/2015	XX	LTLC6XA4F	18620	1050	1160	296	12100
10/20/2015	XX	LTLCSXA71	12440	2430	950	265	11500
10/29/2019	XX	LTXXXXB5H	12740	2300	730	160	13000

SUMMARY REPORT

Leachate Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-7) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
LCS-7							
10/18/2011	XX	LTS37X8C6	19977	141 J	1150	281	11200
10/2/2012	XX	LTS37X92G	23440	379	1720	420	18600
10/22/2013	XX	LTS37X9AF	14100	126	730	226	15300
9/30/2014	XX	LTS37X9GJ	21500	950	1610	417	16100
10/20/2015	XX	LTS37XA73	25860	2570	1700	381	18300
10/15/2020	XX	LTXXXXB9H	23180	160	2400	570 M10	15000
LCS-SI							
4/13/2011	XX	LTSC1X8A7	9078	1560	5740	31	2070
4/10/2012	XX	LTSC1X8IA	9250	2940	5630	772	3480
4/8/2013	XX	LTSC1X94F	9240	1060	5900	374	1710
4/29/2014	XX	LTSC1X9CH	9520	1080	6120	609	2160
4/15/2015	XX	LTSC1XA2C	9665	979	6420	538	2560
10/18/2016	XX	LTXXXXAE0	10410	3340	6870	1510	11400
10/26/2021	XX	LTXXXXBE4	6220	20 U	3400	530	1800
LCS-SII							
4/13/2011	XX	LTSC2X8A8	9096	434	378	6.1	6660
4/10/2012	XX	LTSC2X8IB	11120	392	335	5.8	6040
4/8/2013	XX	LTSC2X94G	10060	373	247	5.8	5210
4/29/2014	XX	LTSC2X9CI	7380	596	284	4.5	4290
4/15/2015	XX	LTSC2XA2D	6129	200 U	243	5.8	3260
10/4/2017	XX	LTXXXXAHI	7982	440	370	7	980
10/9/2018	XX	LTXXXXB1G	9686	2100	300	5	9000
LCS-SIII							
10/18/2011	XX	LTSC3X8C5	41847	273 J	370	825	24500
10/3/2012	XX	LTSC3X92F	35200	831	920	500	23100
10/22/2013	XX	LTSC3X9AE	38400	309	1320	578	28700
9/30/2014	XX	LTSC3X9GI	38500	200 U	400	646	18700
10/20/2015	XX	LTSC3XA72	38000	4660	160	588	37500
4/10/2019	XX	LTXXXXB3G	31874	150	130	640	5000
PDPS							
4/30/2008	XX	LTPDPX6J3		78.6	4300	999	2320
7/23/2008	XX	LTPDPX71F		37	1930	233	1190
10/8/2008	XX	LTPDPX746		58.3	1780	224	1160
4/22/2009	XX	LTPDPX76H		20.6	1920	286	1010
7/21/2009	XX	LTPDPX797		34.8	2060	257	1270
10/21/2009	XX	LTPDPX7E2		6 U	2370	235	1010
3/30/2010	XX	LTPDPX7GE		34.8	1090	67.2	507
7/26/2010	XX	LTPDPX7IJ		120 U	2670	335	1630
10/6/2010	XX	LTPDPX816		30.8	1440	142	889
4/12/2011	XX	LTPDPX8A5	1842	39.4	1240	6	707
4/12/2011	XD	LTDP4X8B4	1832	42.9	1270	5.9	715
7/26/2011	XX	LTPDPX8E1	1638	6 U	2090	218	1610
10/18/2011	XX	LTPDPX8C3	1519	22.6	940	82.2	423
4/10/2012	XX	LTPDPX8I8	2007	57.5	1320	117	527
4/10/2012	XD	LTDP4X8J7	2037	59.4	1310	113	546

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FOR: Pinetree Landfill

SUMMARY REPORT

Leachate Inorganics

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(PDPS) Date	Type	Sample ID	Total Dissolved Solids mg/L	Sulfate mg/L	Bicarbonate Alkalinity (CaCO3) mg/L	Organic Carbon mg/L	Chloride mg/L
7/9/2012	XX	LTPDPX90B	2108	35.5	1340	142	662
10/2/2012	XX	LTPDPX92D	1523	35.3	870	55.8	443
4/9/2013	XX	LTPDPX94D	1154	15.9	749	43.7	313
4/9/2013	XD	LTDP4X95C	1190	15.8	763	44.8	315
7/10/2013	XX	LTPDPX96D	1994	4.7	1270	134	464
10/23/2013	XX	LTPDPX9AC	1916	20 U	1350	97	829
4/29/2014	XX	LTPDPX9CF	3660	21.6	2720	258	1070
7/15/2014	XX	LTPDPX9EH	1294	1390	900	5450	3370
9/30/2014	XX	LTPDPX9GG	2336	20 U	1470	141	727
4/15/2015	XX	LTPDPXA2A	767	30 U	500	27.4	161
7/21/2015	XX	LTPDPXA4E	1790	864	1090	89.4	3390
10/20/2015	XX	LTPDPXA70	1906	21.8	1190	110	621
4/27/2016	XX	LTPDPXA91	984	17.4	670	53.3	258
10/18/2016	XX	LTPDPXAD2	4540	31	2890	399	1480
4/26/2017	XX	LTPDPXAF2	736	11	530	33	140
10/3/2017	XX	LTPDPXAH0	2560	30 U	1600	170	820
4/11/2018	XX	LTPDPXAII	615	12	450	17	99
10/9/2018	XX	LTPDPXB0I	3876	40 U	2500	260	1100
4/10/2019	XX	LTPDPXB2G	963	30 U	590	43	220
10/16/2019	XX	LTPDPXB4J	1306	40 U	890	79	310
4/22/2020	XX	LTPDPXB6H	1148	30 U	770	41	270
10/15/2020	XX	LTPDPXB8J	1720	17	1300	6.1 M10	570
4/28/2021	XX	LTPDPXBAG	1018	20 U	760	38	200
10/26/2021	XX	LTPDPXBD6	1510	18	1100	76	360

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample

Blank Cells appear when a parameter was not analyzed

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

M10 - Due to a identified laboratory instrumentation malfunction, this analytical result is likely elevated–the laboratory has fixed the issue.

U - Not Detected above the laboratory reporting limit.

REPORT PREPARED: 2/23/2022 14:10

FOR: Pinetree Landfill

SUMMARY REPORT

Leachate Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-3C) Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
LCS-3C													
7/27/2011	XX	LTL3CX8E3	UF	0.239	522		22	0.029	303	1.1	0.175	1736	4252
7/27/2011	XD	LTDP4X8F0	UF	0.249	541		22	0.025	306	1.2	0.178	1737	4228
10/18/2011	XX	LTXXXX8GC	UF			0.016 J							
7/9/2012	XX	LTL3CX90D	UF	0.36	489	0.1 U	23.4	0.03 U	198	1.8	0.06	1289	3321
7/9/2012	XD	LTDP4X919	UF	0.44	455	0.1 U	23.4	0.03 U	260	1.4	0.08	1807	3864
7/8/2013	XX	LTL3CX96F	UF	0.554	320	0.05 U	18.1	0.015 U	348	0.4	0.096	2383	6638
7/15/2014	XX	LTL3CX9EJ	UF	0.532	302	0.028	7.42	0.003 U	227	0.54	0.101	1752	5083
7/21/2015	XX	LTL3CXA4G	UF	0.66	459	0.1 U	8	0.03 U	376	3 U	0.14	2668	7005
4/27/2016	XX	LTLCSXA92	UF	0.51	184		8.05		154			1737	4560
10/18/2016	XX	LTLCSXAD3	UF	0.581	179	0.05 U	5.5	0.015 U	192	0.4	0.119	2087	5874
4/26/2017	XX	LTLCSXAF3	UF	0.35	150		8.2		190			2116	5700
10/4/2017	XX	LTLCSXAH1	UF	0.59	140	0.05 U	13	0.015 U	180	0.16	0.059	1600	4500
4/11/2018	XX	LTLCSXAIJ	UF	0.43	130		6.9		130			1600	4900
10/9/2018	XX	LTLCSXB0J	UF	0.51	110	0.011	8	0.003 U	130	0.2	0.072	1500	5200
4/10/2019	XX	LTLCSXB2H	UF	0.48	140		6.3		130			1500	4100
10/17/2019	XX	LTLCSXB50	UF	0.55	150	0.05 U	8.4	0.015 U	140	0.25 U	0.086	1800	5000
4/22/2020	XX	LTLCSXB6I	UF	0.44	110		8.4		98			1100	3500
10/15/2020	XX	LTLCSXB90	UF	0.22	110	0.01 U	4.7	0.003	64	0.65	0.058	520	1600
4/26/2021	XX	LTLCSXBAH	UF	0.17	110		3.1		42			440	1400
10/26/2021	XX	LTLCSXBD7	UF	0.46	140	0.1 U	7.4	0.03 U	110	0.5 U	0.12	1300	3900
LCS-6													
4/29/2008	XX	LTLC6X6J2	UF		655		14.9		183	1.82		630	1390
7/23/2008	XX	LTLC6X71E	UF	0.125	881		45.16	0.106	182	3.23		601	1537
10/8/2008	XX	LTLC6X745	UF		1139		60		256	7.3		632	1537
4/21/2009	XX	LTLC6X76G	UF		762		24.2		183	2.4		672	1674
7/21/2009	XX	LTLC6X796	UF	0.126	727		135	0.206	209	5.4		675	1740
10/21/2009	XX	LTLC6X7E1	UF		804		22.5		213	2.4		847	2080
3/29/2010	XX	LTLC6X7GD	UF		3162		209		563	7.7		1678	3822
7/26/2010	XX	LTLC6X7II	UF	0.153	1133		64.7	0.029	261	4.83		980	2379
10/6/2010	XX	LTLC6X815	UF		1070		24.6		235	2.3		1069	2487
4/12/2011	XX	LTLC6X8A6	UF		548		64.7		150			600	1487
7/26/2011	XX	LTLC6X8E2	UF	0.047	954		21.9	0.053	255	2.82	0.347	813	1932
10/17/2011	XX	LTLCSX8C4	UF	0.175	1708		107		299			1120	2900
10/17/2011	XX	LTLCSX8GB	UF			0.006 U							
10/17/2011	XD	LTDP4X8D2	UF	0.18	1910		104		293			1250	2925
4/10/2012	XX	LTLCSX8I9	UF	0.177	1740		63		236			1396	3239
7/10/2012	XX	LTLC6X90C	UF	0.11	1443	0.01 U	94	0.003 U	438	3.5	0.005 U	1749	3898
10/2/2012	XX	LTLCSX92E	UF	0.208	1221		61.5		286			1143	2545
10/2/2012	XD	LTDP4X939	UF	0.193	1388		65.1		293			1050	2072
4/9/2013	XX	LTLCSX94E	UF	0.062	1348		35.2		298			1345	2784
7/10/2013	XX	LTLC6X96E	UF	0.035	1031	0.05 U	3.3	0.077	131	2.5	0.025 U	880	1654
10/23/2013	XX	LTLCSX9AD	UF	0.259	1118		234		137			845	1550
4/29/2014	XX	LTLCSX9CG	UF	0.144	1019		49.2		308			1263	3284
7/16/2014	XX	LTLC6X9EI	UF	0.098	1258	0.01 U	40	0.038	257	2.37	0.07	1128	2760
9/30/2014	XX	LTLCSX9GH	UF	0.05	1122		17.5		174			869	2763
4/15/2015	XX	LTLCSXA2B	UF	0.048	260		8.83		48.7			31.4	196
7/21/2015	XX	LTLC6XA4F	UF	0.25	1259	0.05 U	78	0.015 U	347	3.5	0.056	1419	3941

SUMMARY REPORT

Leachate Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-6) Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
10/20/2015	XX	LTLCSXA71	UF	0.208	691		40		246			875	2269
10/29/2019	XX	LTXXXXB5H	UF	0.069	690	0.01 U	17	0.003 U	200	2.6	0.035	690	2100
LCS-7													
10/18/2011	XX	LTS37X8C6	UF	0.435	1305	0.015 U	79	0.015	365	3.5	0.15	1732	3910
10/2/2012	XX	LTS37X92G	UF	0.398	966	0.05 U	65.7	0.015 U	385	2.4	0.176	1644	3811
10/22/2013	XX	LTS37X9AF	UF	0.681	1414	0.05 U	159	0.015 U	433	1.3	0.118	1539	3196
9/30/2014	XX	LTS37X9GJ	UF	0.162	993	0.02 U	24.9	0.017	363	1.48	0.132	1777	3989
10/20/2015	XX	LTS37XA73	UF	0.403	1314	0.11	39.7	0.199	474	3.2	0.234	1778	4084
10/15/2020	XX	LTXXXXB9H	UF	0.73	770	0.05 U	32	0.015 U	350	1.7	0.24	1800	4600
LCS-SI													
4/13/2011	XX	LTSC1X8A7	UF	0.108	51.6		1.2	0.02	703	0.7	0.205	401	1887
4/10/2012	XX	LTSC1X8IA	UF	0.095	56.5	0.032	0.88	0.002 J	772	0.63	0.184	470	2156
4/8/2013	XX	LTSC1X94F	UF	0.098	46.8	0.035	0.72	0.006 U	684	0.56	0.209	478	2075
4/29/2014	XX	LTSC1X9CH	UF	0.114	46.6	0.05	0.52	0.006	591	0.58	0.266	504	2181
4/15/2015	XX	LTSC1XA2C	UF	0.213	38	0.065	6.15	0.024	455	0.46	0.377	588	2677
10/18/2016	XX	LTXXXXAE0	UF	0.209	30.8	0.066	14.5	0.006 U	311	0.16	0.425	692	2756
10/26/2021	XX	LTXXXXBE4	UF	0.14	36	0.08	6.3	0.025	28	0.06	0.29	360	1600
LCS-SII													
4/13/2011	XX	LTSC2X8A8	UF	0.048	944		2	0.013 J	96	1.9	0.039	753	1409
4/10/2012	XX	LTSC2X8IB	UF	0.034	1496	0.05 U	1.1	0.015 U	126	2.7	0.025 U	1075	2078
4/8/2013	XX	LTSC2X94G	UF	0.026	1316	0.02 U	0.11	0.006 U	133	1.68	0.027	922	1715
4/29/2014	XX	LTSC2X9CI	UF	0.031	911	0.01 U	0.22	0.01	85.1	1.36	0.032	614	1110
1/20/2015	XX	LTSIIX9I4	UF	0.064									
1/20/2015	XX	LTSIIX9J1	FILT	0.041									
4/15/2015	XX	LTSC2XA2D	UF	0.031	800	0.01 U	1.95	0.02	57.1	1.07	0.017	541	1031
10/4/2017	XX	LTXXXXAHI	UF	0.028	830	0.01 U	5.7	0.003 U	190	1.5	0.005 U	460	910
10/9/2018	XX	LTXXXXB1G	UF	0.01	990	0.01 U	0.37	0.003 U	100	1.5	0.019	610	1300
LCS-SIII													
10/18/2011	XX	LTSC3X8C5	UF	0.175	3890	0.015 J	14.6	0.025	103	1.3	0.13	2810	6290
10/3/2012	XX	LTSC3X92F	UF	0.104	2274	0.05 U	5.3	0.015 U	170	1	0.183	2463	6405
10/22/2013	XX	LTSC3X9AE	UF	0.19	3181	0.1 U	1	0.03 U	229	0.5 U	0.05 U	3189	7835
9/30/2014	XX	LTSC3X9GI	UF	0.12	2689	0.1 U	0.8	0.06	191	0.3	0.05 U	2624	7199
10/20/2015	XX	LTSC3XA72	UF	0.169	2486	0.085	0.9	0.115	201	0.4	0.107	2404	6559
4/10/2019	XX	LTXXXXB3G	UF	0.1	2100	0.05 U	0.25 U	0.015 U	91	0.25 U	0.025 U	2300	6100
PDPS													
4/30/2008	XX	LTPDPX6J3	UF		113		9.62		76.4	1.03		427	1482
7/23/2008	XX	LTPDPX71F	UF	0.207	128.6		18.72	0.029	98.5	1.29		179.7	605
10/8/2008	XX	LTPDPX746	UF		141		10.4		72	2.5		167	631
4/22/2009	XX	LTPDPX76H	UF		93		11.9		86	0.7		155	598
7/21/2009	XX	LTPDPX797	UF	0.126	104		7	0.005 U	76	0.9		170	659
10/21/2009	XX	LTPDPX7E2	UF		101		13.1		85	0.7		193	716
3/30/2010	XX	LTPDPX7GE	UF		129		9.38		55.2	2.22		83.9	287
7/26/2010	XX	LTPDPX7IJ	UF	0.294	86.4		11.5	0.009	92.4	0.19		237	891
10/6/2010	XX	LTPDPX816	UF		109		4		68	0.9		113	438
4/12/2011	XX	LTPDPX8A5	UF		112		7.5		52			102	373
4/12/2011	XD	LTDP4X8B4	UF		105		6.4		54.2			104	355

REPORT PREPARED: 2/23/2022 14:10

FOR: Pinetree Landfill

SUMMARY REPORT

Leachate Metals

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(PDPS) Date	Type	Sample ID	Filtration -	Arsenic mg/L	Calcium mg/L	Cobalt mg/L	Iron mg/L	Lead mg/L	Magnesium mg/L	Manganese mg/L	Nickel mg/L	Potassium mg/L	Sodium mg/L
7/26/2011	XX	LTPDPX8E1	UF	0.171	83.8		4.63	0.004	93.9	0.19	0.244	181	726
10/18/2011	XX	LTPDPX8C3	UF	0.15	119		12.8		48			66	238
10/18/2011	XX	LTPDPX8GA	UF			0.012							
4/10/2012	XX	LTPDPX8I8	UF	0.11	113		3.8		72			120	419
4/10/2012	XD	LTDP4X8J7	UF	0.107	105		3.2		69			104	395
7/9/2012	XX	LTPDPX90B	UF	0.211	87	0.05 U	8.8	0.015 U	71	0.8	0.105	132	533
10/2/2012	XX	LTPDPX92D	UF	0.103	149		6		72			93	324
4/9/2013	XX	LTPDPX94D	UF	0.13	100		7.2		65			83.4	244
4/9/2013	XD	LTDP4X95C	UF	0.111	91		6.52		59.2			76.6	244
7/10/2013	XX	LTPDPX96D	UF	0.394	94	0.05 U	21.3	0.015 U	79	0.8	0.09	104	401
10/23/2013	XX	LTPDPX9AC	UF	0.546	103		38.9		79.9			123	418
4/29/2014	XX	LTPDPX9CF	UF	0.55	73.8		9.27		65.4			238	985
7/15/2014	XX	LTPDPX9EH	UF	0.17	89.4	0.01 U	6.37	0.003 U	49.8	0.76	0.072	65.4	233
9/30/2014	XX	LTPDPX9GG	UF	0.377	81.3		8.61		78.2			141	542
1/20/2015	XX	LTPDPX9I8	UF	0.135									
1/20/2015	XX	LTPDPX9J5	FILT	0.128									
4/15/2015	XX	LTPDPXA2A	UF	0.112	84.1		2.16		26.6			32.7	118
7/21/2015	XX	LTPDPXA4E	UF	0.198	98.8	0.01 U	4.03	0.003 U	72.2	0.54	0.102	113	435
10/20/2015	XX	LTPDPXA70	UF	0.212	95.7		3.16		60.9			101	415
4/27/2016	XX	LTPDPXA91	UF	0.521	92.7		23.5		26.9			39.7	171
10/18/2016	XX	LTPDPXAD2	UF	0.648	83.6	0.045	21.1	0.005	54.5	0.84	0.303	209	1254
4/26/2017	XX	LTPDPXAF2	UF	0.29	85		11		26			34.1	130
10/3/2017	XX	LTPDPXAH0	UF	0.35	72	0.01	4.3	0.003 U	63	0.5	0.1	150	540
4/11/2018	XX	LTPDPXAII	UF	0.3	89		21		24			27	90
10/9/2018	XX	LTPDPXB0I	UF	0.21	82	0.031	9.4	0.003 U	37	1.2	0.2	150	1100
4/10/2019	XX	LTPDPXB2G	UF	0.1	100		5.8		37			40	140
10/16/2019	XX	LTPDPXB4J	UF	0.1	110	0.01 U	3	0.003 U	34	0.77	0.046	53	260
4/22/2020	XX	LTPDPXB6H	UF	0.28	96		11		48			57	220
10/15/2020	XX	LTPDPXB8J	UF	0.25	86	0.01 U	4.4	0.003	56	0.31	0.076	97	390
4/28/2021	XX	LTPDPXBAG	UF	0.21	110		9.7		45			44	160
10/26/2021	XX	LTPDPXBD6	UF	0.19	100	0.01	2.3	0.003 U	52	0.48	0.076	77	300

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample

Blank Cells appear when a parameter was not analyzed

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

U - Not Detected above the laboratory reporting limit.

Sample collection notes:

FILT - One or more analytical parameters were field filtered.

UF - No analytical parameters were field filtered

REPORT PREPARED: 2/23/2022 14:11

FOR: Pinetree Landfill

SUMMARY REPORT

Leachate VOAs - Current Part 1 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-3C) Date	Type	Sample ID	Analytical Method (VOA)	Chloromethane ug/L	Bromomethane ug/L	Vinyl Chloride ug/L	Chloroethane ug/L	Methylene Chloride ug/L	Acetone ug/L	Carbon Disulfide ug/L	1,1-Dichloroethene ug/L	1,1-Dichloroethane ug/L	trans-1,2-Dichloroethene ug/L	Chloroform ug/L	1,2-Dichloroethane ug/L	Methyl Ethyl Ketone ug/L	1,1,1-Trichloroethane ug/L
LCS-3C																	
7/27/2011	XX	LTL3CX8E3	EPA 8260	2.5 U	5 U	2.5 U	2.5 U	25 U	87	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	27 J	2.5 U
7/27/2011	XD	LTDP4X8F0	EPA 8260	2.5 U	5 U	2.5 U	2.5 U	25 U	101	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	30 J	2.5 U
7/9/2012	XX	LTL3CX90D	EPA 8260	10 U	20 U	10 U	10 U	50 U	427	10 U	10 U	10 U	10 U	10 U	10 U	203	10 U
7/9/2012	XD	LTDP4X919	EPA 8260	10 U	20 U	10 U	10 U	50 U	388	10 U	10 U	10 U	10 U	10 U	10 U	183	10 U
7/8/2013	XX	LTL3CX96F	EPA 8260	250 U	100 U	100 U	100 U	300 U	1800	500 U	50 U	75 U	75 U	75 U	50 U	820	50 U
7/15/2014	XX	LTL3CX9EJ	EPA 8260	2 U	2 U	2 U	5 U	5 U	160	5 U	1 U	2 U	2 U	2 U	2 U	130	2 U
7/21/2015	XX	LTL3CXA4G	EPA 8260	2 U	2 U	2 U	5 U	5 U	330	5 U	1 U	2 U	2 U	2 U	2 U	160	2 U
10/18/2016	XX	LTLCSXAD3	EPA 8260	20 U	20 U	2 U	50 U	50 U	300	20 U	10 U	10 U	10 U	10 U	10 U	200	10 U
10/4/2017	XX	LTLCSXAH1	SW8260C	20 U	20 U	20 U	50 U	50 U	300	20 U	10 U	10 U	10 U	10 U	10 U	200	10 U
10/9/2018	XX	LTLCSXB0J	SW8260C	2 U	2 U	2 U	5 U	5 U	110	2 U	1 U	1 U	1 U	1 U	1 U	65	1 U
10/17/2019	XX	LTLCSXB50	SW8260C	4 U	4 U	4 U	10 U	10 U	160	4 U	2 U	2 U	2 U	2 U	2 U	110	2 U
10/15/2020	XX	LTLCSXB90	SW8260C	2 U	2 U	1 U	2 U	1 U	23	2 U	0.5 U	1 U	1 U	1 U	1 U	11	1 U
10/26/2021	XX	LTLCSXBD7	SW8260C	2 U	2 U	1 U	2 U	1 U	110	2 U	0.5 U	1 U	1 U	1 U	1 U	53	1 U
LCS-6																	
7/23/2008	XX	LTLC6X71E	EPA 8260	2 U	2 U	2 U	2 U	5 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	2 U
7/21/2009	XX	LTLC6X796	EPA 8260	10 U	10 U	10 U	10 U	50 U	217	10 U	10 U	10 U	10 U	10 U	10 U	145	10 U
7/26/2010	XX	LTLC6X7II	EPA 8260	5 U	10 U	5 U	5 U	50 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U
7/26/2011	XX	LTLC6X8E2	EPA 8260	1.3	1 U	0.5 U	0.5 U	5 U	504	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	337	0.5 U
7/10/2012	XX	LTLC6X90C	EPA 8260	10 U	20 U	10 U	10 U	50 U	100 U	10 U	10 U	10 U	10 U	10 U	10 U	100 U	10 U
7/10/2013	XX	LTLC6X96E	EPA 8260	25 U	10 U	10 U	10 U	30 U	50 U	50 U	5 U	7.5 U	7.5 U	7.5 U	5 U	50 U	5 U
7/16/2014	XX	LTLC6X9EI	EPA 8260	2 U	2 U	2 U	5 U	5 U	30	5 U	1 U	2 U	2 U	2 U	2 U	60	2 U
7/21/2015	XX	LTLC6XA4F	EPA 8260	2 U	2 U	2 U	5 U	5 U	20	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/29/2019	XX	LTXXXXB5H	SW8260C	4 U	4 U	4 U	10 U	10 U	20 U	4 U	2 U	2 U	2 U	2 U	2 U	20 U	2 U
LCS-7																	
10/18/2011	XX	LTS37X8C6	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	26	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
10/2/2012	XX	LTS37X92G	EPA 8260	5 U	10 U	5 U	5 U	25 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U
10/22/2013	XX	LTS37X9AF	EPA 8260	2 U	2 U	2 U	5 U	5 U	10	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
9/30/2014	XX	LTS37X9GJ	EPA 8260	2 U	2 U	2 U	5 U	5 U	20	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/20/2015	XX	LTS37XA73	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/15/2020	XX	LTXXXXB9H	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
LCS-SI																	
4/13/2011	XX	LTSC1X8A7	EPA 8260	5 U	10 U	5 U	5 U	50 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U
4/10/2012	XX	LTSC1X8IA	EPA 8260	5 U	10 U	5 U	5 U	25 U	81	14	5 U	5 U	5 U	5 U	5 U	50 U	5 U
4/8/2013	XX	LTSC1X94F	EPA 8260	1 U	2 U	1 U	1 U	5 U	18	1.4	1 U	1 U	1 U	1 U	1 U	10 U	1 U
4/29/2014	XX	LTSC1X9CH	EPA 8260	10 U	10 U	10 U	30 U	30 U	50 U	10 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U
4/15/2015	XX	LTSC1XA2C	EPA 8260	20 U	20 U	20 U	50 U	50 U	100 U	20 U	10 U	10 U	10 U	10 U	10 U	100 U	10 U
10/18/2016	XX	LTXXXXAE0	EPA 8260	20 U	20 U	2 U	50 U	50 U	100 U	20 U	10 U	10 U	10 U	10 U	10 U	100 U	10 U
10/26/2021	XX	LTXXXXBE4	SW8260C	2 U	2 U	1 U	2 U	1 U	35	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
LCS-SII																	
4/13/2011	XX	LTSC2X8A8	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
4/10/2012	XX	LTSC2X8IB	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
4/8/2013	XX	LTSC2X94G	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
4/29/2014	XX	LTSC2X9CI	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
4/15/2015	XX	LTSC2XA2D	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/4/2017	XX	LTXXXXAHI	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U

SUMMARY REPORT

Leachate VOAs - Current Part 1 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-SII) Date	Type	Sample ID	Analytical Method (VOA) -	Chloromethane ug/L	Bromomethane ug/L	Vinyl Chloride ug/L	Chloroethane ug/L	Methylene Chloride ug/L	Acetone ug/L	Carbon Disulfide ug/L	1,1-Dichloroethene ug/L	1,1-Dichloroethane ug/L	trans-1,2-Dichloroethene ug/L	Chloroform ug/L	1,2-Dichloroethane ug/L	Methyl Ethyl Ketone ug/L	1,1,1-Trichloroethane ug/L
10/9/2018	XX	LTXXXXB1G	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
LCS-SIII																	
10/18/2011	XX	LTSC3X8C5	EPA 8260	5 U	10 U	5 U	5 U	50 U	1160	5 U	5 U	5 U	5 U	5 U	5 U	94 J	5 U
10/3/2012	XX	LTSC3X92F	EPA 8260	5 U	10 U	5 U	5 U	25 U	894	5 U	5 U	5 U	5 U	5 U	5 U	79	5 U
10/22/2013	XX	LTSC3X9AE	EPA 8260	10 U	10 U	10 U	30 U	30 U	680	20	5 U	5 U	5 U	5 U	5 U	80	5 U
9/30/2014	XX	LTSC3X9GI	EPA 8260	10 U	10 U	10 U	30 U	30 U	730	10 U	5 U	5 U	5 U	5 U	5 U	80	5 U
10/20/2015	XX	LTSC3XA72	EPA 8260	10 U	10 U	10 U	30 U	30 U	840	10 U	5 U	5 U	5 U	5 U	5 U	190	5 U
4/10/2019	XX	LTXXXXB3G	SW8260C	20 U	20 U	20 U	50 U	50 U	740	26	10 U	10 U	10 U	10 U	10 U	110	10 U
PDPS																	
7/23/2008	XX	LTPDPX71F	EPA 8260	20 U	20 U	20 U	20 U	50 U	100 U	20 U	20 U	20 U	20 U	20 U	20 U	100 U	20 U
7/21/2009	XX	LTPDPX797	EPA 8260	5 U	5 U	5 U	5 U	25 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U
7/26/2010	XX	LTPDPX71J	EPA 8260	5 U	10 U	5 U	5 U	50 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U
7/26/2011	XX	LTPDPX8E1	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	129	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.5 J	0.5 U
7/9/2012	XX	LTPDPX90B	EPA 8260	10 U	20 U	10 U	10 U	50 U	100 U	10 U	10 U	10 U	10 U	10 U	10 U	100 U	10 U
7/10/2013	XX	LTPDPX96D	EPA 8260	25 U	10 U	10 U	10 U	30 U	50 U	50 U	5 U	7.5 U	7.5 U	7.5 U	5 U	50 U	5 U
7/15/2014	XX	LTPDPX9EH	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/21/2015	XX	LTPDPXA4E	EPA 8260	2 U	2 U	2 U	5 U	5 U	30	5 U	1 U	2 U	2 U	2 U	2 U	10	2 U
10/18/2016	XX	LTPDPXAD2	EPA 8260	20 U	20 U	2 U	50 U	50 U	100 U	20 U	10 U	10 U	10 U	10 U	10 U	100 U	10 U
10/3/2017	XX	LTPDPXAH0	SW8260C	10 U	10 U	10 U	30 U	30 U	50 U	10 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U
10/9/2018	XX	LTPDPXB0I	SW8260C	2 U	2 U	2 U	5 U	5 U	35	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/16/2019	XX	LTPDPXB4J	SW8260C	2 U	2 U	2 U	5 U	5 U	16	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/15/2020	XX	LTPDPXB8J	SW8260C	2 U	2 U	1 U	2 U	1 U	29	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/26/2021	XX	LTPDPXBD6	SW8260C	2 U	2 U	1 U	2 U	1 U	33	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
QCBT																	
5/21/2008	XX	BTXXXX71B	EPA 8260	2 U	2 U	2 U	2 U	5 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	2 U
7/21/2008	XX	BTXXXX72G	EPA 8260	2 U	2 U	2 U	2 U	5 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	2 U
7/22/2008	XX	BTXXXX72H	EPA 8260	2 U	2 U	2 U	2 U	5 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	2 U
7/23/2008	XX	BTXXXX73G	EPA 8260	2 U	2 U	2 U	2 U	5 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	2 U
7/20/2009	XX	BTXXXX7A8	EPA 8260	1 U	1 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/21/2009	XX	BTXXXX7A9	EPA 8260	1 U	1 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/22/2009	XX	BTXXXX7B8	EPA 8260	1 U	1 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/26/2010	XX	BTXXXX800	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/27/2010	XX	BTXXXX801	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/28/2010	XX	BTXXXX810	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
4/13/2011	XX	BTXXXX8B3	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	23	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/25/2011	XX	BTXXXX8EJ	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/26/2011	XX	BTXXXX8F4	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
7/27/2011	XX	BTXXXX8F5	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
10/18/2011	XX	BTXXXX8D1	EPA 8260	0.5 U	1 U	0.5 U	0.5 U	5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U
4/10/2012	XX	BTXXXX8J6	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/9/2012	XX	BTXXXX918	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/10/2012	XX	BTXXXX91D	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/2/2012	XX	BTXXXX938	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/2/2012	XX	BTXXXXHG8	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
4/8/2013	XX	BTXXXX95B	EPA 8260	1 U	2 U	1 U	1 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/8/2013	XX	BTXXXX97A	EPA 8260	2.5 U	1 U	1 U	1 U	3 U	5 U	5 U	0.5 U	0.75 U	0.75 U	0.75 U	0.5 U	5 U	0.5 U
7/10/2013	XX	BTXXXX97C	EPA 8260	2.5 U	1 U	1 U	1 U	3 U	5 U	5 U	0.5 U	0.75 U	0.75 U	0.75 U	0.5 U	5 U	0.5 U
10/22/2013	XX	BTXXXX9BD	EPA 624	5 U	2 U	2 U	5 U	5 U	50 U		1 U	2 U	2 U	2 U	2 U	10 U	2 U

REPORT PREPARED: 2/23/2022 14:11

FOR: Pinetree Landfill

SUMMARY REPORT

Leachate VOAs - Current Part 1 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT) Date	Type	Sample ID	Analytical Method (VOA) -	Chloromethane ug/L	Bromomethane ug/L	Vinyl Chloride ug/L	Chloroethane ug/L	Methylene Chloride ug/L	Acetone ug/L	Carbon Disulfide ug/L	1,1-Dichloroethene ug/L	1,1-Dichloroethane ug/L	trans-1,2-Dichloroethene ug/L	Chloroform ug/L	1,2-Dichloroethane ug/L	Methyl Ethyl Ketone ug/L	1,1,1-Trichloroethane ug/L
10/22/2013	XX	BTXXXX9B9	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
4/28/2014	XX	BTXXXX9DD	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/14/2014	XX	BTXXXX9FE	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
9/30/2014	XX	BTXXXX9HC	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/1/2014	XX	BTXXXX9HF	EPA 624	5 U	2 U	2 U	5 U	5 U	50 U		1 U	2 U	2 U	2 U	2 U	10 U	2 U
4/15/2015	XX	BTXXXXA37	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/20/2015	XX	BTXXXXA5B	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
7/22/2015	XX	BTXXXXA5D	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/20/2015	XX	BTXXXXA7G	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
4/25/2016	XX	BTXXXXA9F	EPA 8260	2 U	2 U	2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/17/2016	XX	BTXXXXADE	EPA 8260	2 U	2 U	0.2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/18/2016	XX	BTXXXXADF	EPA 8260	2 U	2 U	0.2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/19/2016	XX	BTXXXXADG	EPA 8260	2 U	2 U	0.2 U	5 U	5 U	10 U	5 U	1 U	2 U	2 U	2 U	2 U	10 U	2 U
4/24/2017	XX	BTXXXXAFE	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/2/2017	XX	BTXXXXAHC	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/3/2017	XX	BTXXXXAHD	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/4/2017	XX	BTXXXXAHE	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
7/18/2018	XX	BTXXXXAA6	E624	5 U	2 U	2 U	5 U	5 U	50 U		1 U	2 U	2 U	2 U	2 U	10 U	2 U
10/8/2018	XX	BTXXXXB1B	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/10/2018	XX	BTXXXXB1C	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
4/10/2019	XX	BTXXXXB3I	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/15/2019	XX	BTXXXXB5B	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/16/2019	XX	BTXXXXB5C	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/17/2019	XX	BTXXXXB5D	SW8260C	2 U	2 U	2 U	5 U	5 U	10 U	2 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U
10/13/2020	XX	BTXXXXB9B	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/14/2020	XX	BTXXXXB9C	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/15/2020	XX	BTXXXXB9D	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/25/2021	XX	BTXXXXBDI	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U
10/27/2021	XX	BTXXXXBDJ	SW8260C	2 U	2 U	1 U	2 U	1 U	10 U	2 U	0.5 U	1 U	1 U	1 U	1 U	10 U	1 U

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

U - Not Detected above the laboratory reporting limit.

REPORT PREPARED: 2/23/2022 14:11

FOR: Pinetree Landfill

SUMMARY REPORT

Leachate VOAs - Current Part 2 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-3C) Date	Type	Sample ID	Carbon Tetrachloride ug/L	Vinyl Acetate ug/L	Bromo dichloro methane ug/L	1,2-Dichloro propane ug/L	cis-1,3-Dichloro propene ug/L	Trichloroethene ug/L	Dibromo chloromethane ug/L	1,1,2-Trichloroethane ug/L	Benzene ug/L	trans-1,3-Dichloro propene ug/L	Bromoform ug/L	4-Methyl-2-Pentanone ug/L	2-Hexanone ug/L	Tetrachloro ethene ug/L	1,1,2,2-Tetrachloro ethane ug/L
LCS-3C																	
7/27/2011	XX	LTL3CX8E3	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	25 U	25 U	2.5 U	2.5 U
7/27/2011	XD	LTDP4X8F0	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	25 U	25 U	2.5 U	2.5 U
7/9/2012	XX	LTL3CX90D	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U
7/9/2012	XD	LTDP4X919	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U
7/8/2013	XX	LTL3CX96F	50 U	500 U	50 U	180 U	50 U	50 U	50 U	75 U	50 U	50 U	200 U	500 U	500 U	50 U	50 U
7/15/2014	XX	LTL3CX9EJ	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	3	2 U	2 U	20	10 U	2 U	2 U
7/21/2015	XX	LTL3CXA4G	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	7	2 U	2 U	20	10 U	2 U	2 U
10/18/2016	XX	LTLCSXAD3	10 U	100 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	100 U	100 U	10 U	10 U
10/4/2017	XX	LTLCSXAH1	10 U	100 U	5 U	10 U	5 U	10 U	10 U	10 U	10 U	5 U	20 U	100 U	100 U	10 U	10 U
10/9/2018	XX	LTLCSXB0J	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	4.3	0.5 U	2 U	10	10 U	1 U	1 U
10/17/2019	XX	LTLCSXB50	2 U	20 U	1 U	2 U	1 U	2 U	2 U	2 U	4.6	1 U	4 U	20 U	20 U	2 U	2 U
10/15/2020	XX	LTLCSXB90	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/26/2021	XX	LTLCSXBD7	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	2.5	0.5 U	2 U	10 U	10 U	1 U	1 U
LCS-6																	
7/23/2008	XX	LTLC6X71E	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	2	2 U	2 U	10 U	10 U	2 U	2 U
7/21/2009	XX	LTLC6X796	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	60	10 U	10 U	120	100 U	10 U	10 U
7/26/2010	XX	LTLC6X7II	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	15	5 U	5 U	50 U	50 U	5 U	5 U
7/26/2011	XX	LTLC6X8E2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	38	0.5 U	0.5 U	14	5 U	0.5 U	0.5 U
7/10/2012	XX	LTLC6X90C	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U
7/10/2013	XX	LTLC6X96E	5 U	50 U	5 U	18 U	5 U	5 U	5 U	7.5 U	5 U	5 U	20 U	50 U	50 U	5 U	5 U
7/16/2014	XX	LTLC6X9EI	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1	2 U	2 U	10 U	10 U	2 U	2 U
7/21/2015	XX	LTLC6XA4F	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2	2 U	2 U	10 U	20	2 U	2 U
10/29/2019	XX	LTXXXXB5H	2 U	20 U	1 U	2 U	1 U	2 U	2 U	2 U	2 U	1 U	4 U	20 U	20 U	2 U	2 U
LCS-7																	
10/18/2011	XX	LTS37X8C6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.2	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
10/2/2012	XX	LTS37X92G	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U
10/22/2013	XX	LTS37X9AF	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1	2 U	2 U	10 U	10 U	2 U	2 U
9/30/2014	XX	LTS37X9GJ	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	4	2 U	2 U	10 U	10 U	2 U	2 U
10/20/2015	XX	LTS37XA73	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	3	2 U	2 U	10 U	10 U	2 U	2 U
10/15/2020	XX	LTXXXXB9H	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	2.4	0.5 U	2 U	10 U	10 U	1 U	1 U
LCS-SI																	
4/13/2011	XX	LTSC1X8A7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U
4/10/2012	XX	LTSC1X8IA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	3 J	5 U	5 U	50 U	50 U	5 U	5 U
4/8/2013	XX	LTSC1X94F	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.1	1 U	1 U	10 U	10 U	1 U	1 U
4/29/2014	XX	LTSC1X9CH	5 U	50 U	3 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	50 U	50 U	5 U	5 U
4/15/2015	XX	LTSC1XA2C	10 U	100 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	100 U	100 U	10 U	10 U
10/18/2016	XX	LTXXXXAE0	10 U	100 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	100 U	100 U	10 U	10 U
10/26/2021	XX	LTXXXXBE4	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
LCS-SII																	
4/13/2011	XX	LTSC2X8A8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
4/10/2012	XX	LTSC2X8IB	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1	1 U	1 U	10 U	10 U	1 U	1 U
4/8/2013	XX	LTSC2X94G	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
4/29/2014	XX	LTSC2X9CI	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
4/15/2015	XX	LTSC2XA2D	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/4/2017	XX	LTXXXXAHI	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U

SUMMARY REPORT

Leachate VOAs - Current Part 2 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-SII) Date	Type	Sample ID	Carbon Tetrachloride ug/L	Vinyl Acetate ug/L	Bromo dichloro methane ug/L	1,2-Dichloro propane ug/L	cis-1,3-Dichloro propene ug/L	Trichloroethene ug/L	Dibromo chloromethane ug/L	1,1,2-Trichloroethane ug/L	Benzene ug/L	trans-1,3-Dichloro propene ug/L	Bromoform ug/L	4-Methyl-2-Pentanone ug/L	2-Hexanone ug/L	Tetrachloro ethene ug/L	1,1,2,2-Tetrachloro ethane ug/L
10/9/2018	XX	LTXXXXB1G	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
LCS-SIII																	
10/18/2011	XX	LTSC3X8C5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U
10/3/2012	XX	LTSC3X92F	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U
10/22/2013	XX	LTSC3X9AE	5 U	50 U	3 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	50 U	50 U	5 U	5 U
9/30/2014	XX	LTSC3X9GI	5 U	50 U	3 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	50 U	50 U	5 U	5 U
10/20/2015	XX	LTSC3XA72	5 U	50 U	3 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	50 U	50 U	5 U	5 U
4/10/2019	XX	LTXXXXB3G	10 U	100 U	5 U	10 U	5 U	10 U	10 U	10 U	10 U	5 U	20 U	100 U	100 U	10 U	10 U
PDPS																	
7/23/2008	XX	LTPDPX71F	20 U	150 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	100 U	100 U	20 U	20 U
7/21/2009	XX	LTPDPX797	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U
7/26/2010	XX	LTPDPX7IJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U
7/26/2011	XX	LTPDPX8E1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/9/2012	XX	LTPDPX90B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U
7/10/2013	XX	LTPDPX96D	5 U	50 U	5 U	18 U	5 U	5 U	5 U	7.5 U	5 U	5 U	20 U	50 U	50 U	5 U	5 U
7/15/2014	XX	LTPDPX9EH	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1	2 U	2 U	10 U	10 U	2 U	2 U
7/21/2015	XX	LTPDPXA4E	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/18/2016	XX	LTPDPXAD2	10 U	100 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	100 U	100 U	10 U	10 U
10/3/2017	XX	LTPDPXAH0	5 U	50 U	3 U	5 U	3 U	5 U	5 U	5 U	5 U	3 U	10 U	50 U	50 U	5 U	5 U
10/9/2018	XX	LTPDPXB0I	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1.2	0.5 U	2 U	10 U	10 U	1 U	1 U
10/16/2019	XX	LTPDPXB4J	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/15/2020	XX	LTPDPXB8J	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1	0.5 U	2 U	10 U	10 U	1 U	1 U
10/26/2021	XX	LTPDPXBD6	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
QCBT																	
5/21/2008	XX	BTXXXX71B	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/21/2008	XX	BTXXXX72G	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/22/2008	XX	BTXXXX72H	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/23/2008	XX	BTXXXX73G	2 U	15 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	10 U	2 U	2 U
7/20/2009	XX	BTXXXX7A8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/21/2009	XX	BTXXXX7A9	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/22/2009	XX	BTXXXX7B8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/26/2010	XX	BTXXXX800	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/27/2010	XX	BTXXXX801	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/28/2010	XX	BTXXXX810	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
4/13/2011	XX	BTXXXX8B3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/25/2011	XX	BTXXXX8EJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/26/2011	XX	BTXXXX8F4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
7/27/2011	XX	BTXXXX8F5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
10/18/2011	XX	BTXXXX8D1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	5 U	0.5 U	0.5 U
4/10/2012	XX	BTXXXX8J6	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/9/2012	XX	BTXXXX918	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/10/2012	XX	BTXXXX91D	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
10/2/2012	XX	BTXXXX938	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
10/2/2012	XX	BTXXXXHG8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
4/8/2013	XX	BTXXXX95B	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U
7/8/2013	XX	BTXXXX97A	0.5 U	5 U	0.5 U	1.8 U	0.5 U	0.5 U	0.5 U	0.75 U	0.5 U	0.5 U	2 U	5 U	5 U	0.5 U	0.5 U
7/10/2013	XX	BTXXXX97C	0.5 U	5 U	0.5 U	1.8 U	0.5 U	0.5 U	0.5 U	0.75 U	0.5 U	0.5 U	2 U	5 U	5 U	0.5 U	0.5 U
10/22/2013	XX	BTXXXX9BD	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U

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FOR: Pinetree Landfill

SUMMARY REPORT

Leachate VOAs - Current Part 2 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT) Date	Type	Sample ID	Carbon Tetrachloride ug/L	Vinyl Acetate ug/L	Bromo dichloro methane ug/L	1,2-Dichloro propane ug/L	cis-1,3-Dichloro propene ug/L	Trichloroethene ug/L	Dibromo chloromethane ug/L	1,1,2-Trichloroethane ug/L	Benzene ug/L	trans-1,3-Dichloro propene ug/L	Bromoform ug/L	4-Methyl-2-Pentanone ug/L	2-Hexanone ug/L	Tetrachloro ethene ug/L	1,1,2,2-Tetrachloro ethane ug/L
10/22/2013	XX	BTXXXX9B9	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
4/28/2014	XX	BTXXXX9DD	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
7/14/2014	XX	BTXXXX9FE	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
9/30/2014	XX	BTXXXX9HC	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/1/2014	XX	BTXXXX9HF	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
4/15/2015	XX	BTXXXXA37	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
7/20/2015	XX	BTXXXXA5B	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
7/22/2015	XX	BTXXXXA5D	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/20/2015	XX	BTXXXXA7G	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
4/25/2016	XX	BTXXXXA9F	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/17/2016	XX	BTXXXXADE	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/18/2016	XX	BTXXXXADF	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/19/2016	XX	BTXXXXADG	2 U	10 U	0.5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
4/24/2017	XX	BTXXXXAFE	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/2/2017	XX	BTXXXXAHC	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/3/2017	XX	BTXXXXAHD	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/4/2017	XX	BTXXXXAHE	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
7/18/2018	XX	BTXXXXAA6	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	10 U	10 U	2 U	2 U
10/8/2018	XX	BTXXXXB1B	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/10/2018	XX	BTXXXXB1C	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
4/10/2019	XX	BTXXXXB3I	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/15/2019	XX	BTXXXXB5B	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/16/2019	XX	BTXXXXB5C	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/17/2019	XX	BTXXXXB5D	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/13/2020	XX	BTXXXXB9B	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/14/2020	XX	BTXXXXB9C	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/15/2020	XX	BTXXXXB9D	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/25/2021	XX	BTXXXXBDI	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U
10/27/2021	XX	BTXXXXBDJ	1 U	10 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	2 U	10 U	10 U	1 U	1 U

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

U - Not Detected above the laboratory reporting limit.

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FOR: Pinetree Landfill

SUMMARY REPORT

Leachate VOAs - Current Part 3 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-3C) Date	Type	Sample ID	Toluene ug/L	Chlorobenzene ug/L	Ethylbenzene ug/L	Styrene ug/L	o-Xylene ug/L	m,p-Xylene ug/L	Tetra hydrofuran ug/L	Trichloro fluoromethane ug/L	cis-1,2-Dichloroethene ug/L	Bromochloro methane ug/L	Dibromo methane ug/L	1,2-Dibromoethane ug/L	1,1,1,2-Tetrachloro ethane ug/L	1,2,3-Trichloro propane ug/L	1,2-Dibromo-3-Chloropropane ug/L
LCS-3C																	
7/27/2011	XX	LTL3CX8E3	4.6 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
7/27/2011	XD	LTDP4X8F0	4.7 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
7/9/2012	XX	LTL3CX90D	10 U	10 U	10 U	10 U	10 U	10 U		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
7/9/2012	XD	LTDP4X919	10 U	10 U	10 U	10 U	10 U	10 U		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
7/8/2013	XX	LTL3CX96F	75 U	50 U	50 U	100 U	100 U	100 U		250 U	50 U	250 U	500 U	200 U	50 U	500 U	250 U
7/15/2014	XX	LTL3CX9EJ	25	2 U	7	1 U	4	7		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/21/2015	XX	LTL3CXA4G	59	2 U	16	2	9	17		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/18/2016	XX	LTLCSXAD3	30	10 U	10 U	10 U	10 U	10 U	400	50 U	10 U	10 U	10 U	20 U	10 U	10 U	20 U
10/18/2016	XX	LTLCSXAD3DL2SIM												0.5 U		0.5 U	0.5 U
10/4/2017	XX	LTLCSXAH1	60	10 U	20	10 U	10 U	20	300	50 U	10 U	10 U	10 U	20 U	10 U	5 U	20 U
10/9/2018	XX	LTLCSXB0J	34	1 U	8.9	1 U	5.2	9.3	340 H	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/17/2019	XX	LTLCSXB50	33	2 U	10	2 U	5.8	11	380	10 U	2 U	2 U	2 U	4 U	2 U	1 U	4 U
10/15/2020	XX	LTLCSXB90	4	1 U	1.5	1 U	1.1	2.1	92	2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U	2 U
10/26/2021	XX	LTLCSXBD7	16	1 U	4.7	1 U	4.4	8.2	290	2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U	2 U
LCS-6																	
7/23/2008	XX	LTLC6X71E	1 J	2 U	2	2 U	2	2		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/21/2009	XX	LTLC6X796	33	10 U	12	10 U	10 U	10 U		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
7/26/2010	XX	LTLC6X7II	5 U	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
7/26/2011	XX	LTLC6X8E2	20	0.5 U	11	5.1	4.7	12		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/10/2012	XX	LTLC6X90C	10	10 U	10 U	10 U	10 U	10 U		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
7/10/2013	XX	LTLC6X96E	7.5 U	5 U	5 U	10 U	10 U	10 U		25 U	5 U	25 U	50 U	20 U	5 U	50 U	25 U
7/16/2014	XX	LTLC6X9EI	1 U	2 U	1	1 U	1 U	1		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/21/2015	XX	LTLC6XA4F	1 U	2 U	3	1 U	1 U	2		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/29/2019	XX	LTXXXXB5H	2 U	2 U	2 U	2 U	2 U	2 U	29	10 U	2 U	2 U	2 U	4 U	2 U	1 U	4 U
LCS-7																	
10/18/2011	XX	LTS37X8C6	6.4	0.5 U	9.8	0.5 U	5.1	6.1		0.5 U	1.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
10/2/2012	XX	LTS37X92G	6.6	5 U	6.2	5 U	5 U	5.4		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
10/22/2013	XX	LTS37X9AF	2	2 U	2	1 U	1	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
9/30/2014	XX	LTS37X9GJ	8	2 U	6	1 U	4	5		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/20/2015	XX	LTS37XA73	8	2 U	7	1 U	4	6		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/15/2020	XX	LTXXXXB9H	4.6	1 U	3.8	1 U	1.9	2.9	200	2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U	2 U
LCS-SI																	
4/13/2011	XX	LTSC1X8A7	16	5 U	26	5 U	18	23		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4/10/2012	XX	LTSC1X8IA	17	5 U	26	5 U	21	22		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4/8/2013	XX	LTSC1X94F	11	1 U	19	1 U	13	14		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4/29/2014	XX	LTSC1X9CH	10	5 U	22	5 U	16	16		30 U	5 U	5 U	5 U	10 U	5 U	5 U	10 U
4/15/2015	XX	LTSC1XA2C	10 U	10 U	10 U	10 U	10 U	10 U		50 U	10 U	10 U	10 U	20 U	10 U	10 U	20 U
10/18/2016	XX	LTXXXXAE0	10 U	10 U	10 U	10 U	10 U	10 U	300	50 U	10 U	10 U	10 U	20 U	10 U	10 U	20 U
10/18/2016	XX	LTXXXXAE0DL3SIM												2.5 U		2.5 U	2.5 U
10/26/2021	XX	LTXXXXBE4	1 U	1 U	1 U	1 U	1 U	1 U	71	2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U	2 U
LCS-SII																	
4/13/2011	XX	LTSC2X8A8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4/10/2012	XX	LTSC2X8IB	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4/8/2013	XX	LTSC2X94G	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4/29/2014	XX	LTSC2X9CI	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U

SUMMARY REPORT

Leachate VOAs - Current Part 3 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-SII) Date	Type	Sample ID	Toluene ug/L	Chlorobenzene ug/L	Ethylbenzene ug/L	Styrene ug/L	o-Xylene ug/L	m,p-Xylene ug/L	Tetra hydrofuran ug/L	Trichloro fluoromethane ug/L	cis-1,2-Dichloroethene ug/L	Bromochloro methane ug/L	Dibromo methane ug/L	1,2-Dibromoethane ug/L	1,1,1,2-Tetrachloro ethane ug/L	1,2,3-Trichloro propane ug/L	1,2-Dibromo-3-Chloropropane ug/L
4/15/2015	XX	LTSC2XA2D	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/4/2017	XX	LTXXXXAHI	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/9/2018	XX	LTXXXXB1G	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
LCS-SIII																	
10/18/2011	XX	LTSC3X8C5	5 U	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
10/3/2012	XX	LTSC3X92F	5 U	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
10/22/2013	XX	LTSC3X9AE	5 U	5 U	5 U	5 U	5 U	5 U		30 U	5 U	5 U	5 U	10 U	5 U	5 U	10 U
9/30/2014	XX	LTSC3X9GI	5 U	5 U	5 U	5 U	5 U	5 U		30 U	5 U	5 U	5 U	10 U	5 U	5 U	10 U
10/20/2015	XX	LTSC3XA72	5 U	5 U	5 U	5 U	5 U	5 U		30 U	5 U	5 U	5 U	10 U	5 U	5 U	10 U
4/10/2019	XX	LTXXXXB3G	10 U	10 U	10 U	10 U	10 U	10 U	1200	50 U	10 U	10 U	10 U	20 U	10 U	5 U	20 U
PDPS																	
7/23/2008	XX	LTPDPX71F	20 U	20 U	20 U	20 U	20 U	20 U		20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
7/21/2009	XX	LTPDPX797	5 U	5 U	5 U	5 U	5 U	4.6 J		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
7/26/2010	XX	LTPDPX7IJ	6.2 J	5 U	7.4 J	5 U	5 U	10		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
7/26/2011	XX	LTPDPX8E1	1.8	0.84 J	1.1	0.5 U	1.2	2.7		0.5 U	0.52 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/9/2012	XX	LTPDPX90B	10 U	10 U	10 U	10 U	10 U	10 U		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
7/10/2013	XX	LTPDPX96D	7.5 U	5 U	5 U	10 U	10 U	10 U		25 U	5 U	25 U	50 U	20 U	5 U	50 U	25 U
7/15/2014	XX	LTPDPX9EH	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/21/2015	XX	LTPDPXA4E	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/18/2016	XX	LTPDPXAD2DL2SIM												0.5 U		0.5 U	0.5 U
10/18/2016	XX	LTPDPXAD2	10 U	10 U	10 U	10 U	10 U	10 U	100 U	50 U	10 U	10 U	10 U	20 U	10 U	10 U	20 U
10/3/2017	XX	LTPDPXAH0	5 U	5 U	5 U	5 U	5 U	5 U	60	30 U	5 U	5 U	5 U	10 U	5 U	3 U	10 U
10/9/2018	XX	LTPDPXB0I	1 U	1 U	2.2	1 U	1.5	3.8	50	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/16/2019	XX	LTPDPXB4J	1 U	1 U	1 U	1 U	1 U	1 U	20	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/15/2020	XX	LTPDPXB6J	1 U	1 U	1 U	1 U	1 U	1	40	2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U	2 U
10/26/2021	XX	LTPDPXBD6	1 U	1 U	1 U	1 U	1 U	1 U	27	2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U	2 U
QCBT																	
5/21/2008	XX	BTXXXX71B	2 U	2 U	2 U	2 U	2 U	2 U		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/21/2008	XX	BTXXXX72G	2 U	2 U	2 U	2 U	2 U	2 U		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/22/2008	XX	BTXXXX72H	2 U	2 U	2 U	2 U	2 U	2 U		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/23/2008	XX	BTXXXX73G	2 U	2 U	2 U	2 U	2 U	2 U		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/20/2009	XX	BTXXXX7A8	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/21/2009	XX	BTXXXX7A9	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/22/2009	XX	BTXXXX7B8	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/26/2010	XX	BTXXXX800	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/27/2010	XX	BTXXXX801	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/28/2010	XX	BTXXXX810	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4/13/2011	XX	BTXXXX8B3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/25/2011	XX	BTXXXX8EJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/26/2011	XX	BTXXXX8F4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
7/27/2011	XX	BTXXXX8F5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
10/18/2011	XX	BTXXXX8D1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4/10/2012	XX	BTXXXX8J6	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/9/2012	XX	BTXXXX918	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
7/10/2012	XX	BTXXXX91D	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
10/2/2012	XX	BTXXXXHG8	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
10/2/2012	XX	BTXXXX938	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4/8/2013	XX	BTXXXX95B	1 U	1 U	1 U	1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

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FOR: Pinetree Landfill

SUMMARY REPORT

Leachate VOAs - Current Part 3 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT)			Toluene	Chlorobenzene	Ethylbenzene	Styrene	o-Xylene	m,p-Xylene	Tetra hydrofuran	Trichloro fluoromethane	cis-1,2-Dichloroethene	Bromochloro methane	Dibromo methane	1,2-Dibromoethane	1,1,1,2-Tetrachloro ethane	1,2,3-Trichloro propane	1,2-Dibromo-3-Chloropropane
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	ug/L	ug/L	ug/L	ug/L
7/8/2013	XX	BTXXXX97A	0.75 U	0.5 U	0.5 U	1 U	1 U	1 U		2.5 U	0.5 U	2.5 U	5 U	2 U	0.5 U	5 U	2.5 U
7/10/2013	XX	BTXXXX97C	0.75 U	0.5 U	0.5 U	1 U	1 U	1 U		2.5 U	0.5 U	2.5 U	5 U	2 U	0.5 U	5 U	2.5 U
10/22/2013	XX	BTXXXX9B9	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/22/2013	XX	BTXXXX9BD	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U						
4/28/2014	XX	BTXXXX9DD	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/14/2014	XX	BTXXXX9FE	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
9/30/2014	XX	BTXXXX9HC	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/1/2014	XX	BTXXXX9HF	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U						
4/15/2015	XX	BTXXXXA37	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/20/2015	XX	BTXXXXA5B	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
7/22/2015	XX	BTXXXXA5D	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/20/2015	XX	BTXXXXA7G	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4/25/2016	XX	BTXXXXA9F	1 U	2 U	1 U	1 U	1 U	1 U	10 U	5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	BTXXXXADE	1 U	2 U	1 U	1 U	1 U	1 U	10 U	5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/17/2016	XX	BTXXXXADESIM												0.05 U		0.05 U	0.05 U
10/18/2016	XX	BTXXXXADF	1 U	2 U	1 U	1 U	1 U	1 U	10 U	5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/18/2016	XX	BTXXXXADFSIM												0.05 U		0.05 U	0.05 U
10/19/2016	XX	BTXXXXADG	1 U	2 U	1 U	1 U	1 U	1 U	10 U	5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
10/19/2016	XX	BTXXXXADGSIM												0.05 U		0.05 U	0.05 U
4/24/2017	XX	BTXXXXAFE	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/2/2017	XX	BTXXXXAHC	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/3/2017	XX	BTXXXXAHD	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/4/2017	XX	BTXXXXAHE	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
7/18/2018	XX	BTXXXXAA6	1 U	2 U	1 U	1 U	1 U	1 U		5 U	2 U						
10/8/2018	XX	BTXXXXB1B	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/10/2018	XX	BTXXXXB1C	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
4/10/2019	XX	BTXXXXB3I	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/15/2019	XX	BTXXXXB5B	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/16/2019	XX	BTXXXXB5C	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/17/2019	XX	BTXXXXB5D	1 U	1 U	1 U	1 U	1 U	1 U	10 U	5 U	1 U	1 U	1 U	2 U	1 U	0.5 U	2 U
10/13/2020	XX	BTXXXXB9B	1 U	1 U	1 U	1 U	1 U	1 U	10 U	2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U	2 U
10/14/2020	XX	BTXXXXB9C	1 U	1 U	1 U	1 U	1 U	1 U	10 U	2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U	2 U
10/15/2020	XX	BTXXXXB9D	1 U	1 U	1 U	1 U	1 U	1 U	10 U	2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U	2 U
10/25/2021	XX	BTXXXXBDI	1 U	1 U	1 U	1 U	1 U	1 U	10 U	2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U	2 U
10/27/2021	XX	BTXXXXBDJ	1 U	1 U	1 U	1 U	1 U	1 U	10 U	2 U	1 U	1 U	1 U	0.5 U	1 U	0.5 U	2 U

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

- H - Analyzed outside U.S.EPA's recommended hold time
- J - Analyte was positively identified/Associated value is an estimate.
- U - Not Detected above the laboratory reporting limit.

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FOR: Pinetree Landfill

SUMMARY REPORT

Leachate VOAs - Current Part 4 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(LCS-3C)

Date	Type	Sample ID	1,4-Dichloro benzene ug/L	1,2-Dichloro benzene ug/L	Acrylonitrile ug/L	Diethyl ether ug/L	trans-1,4-Dichloro-2-butene ug/L	Iodomethane ug/L
LCS-3C								
7/27/2011	XX	LTL3CX8E3	2.5 U	2.5 U	2.5 U		2.5 U	2.5 U
7/27/2011	XD	LTDP4X8F0	2.5 U	2.5 U	2.5 U		2.5 U	2.5 U
7/9/2012	XX	LTL3CX90D	10 U	10 U	10 U		10 U	10 U
7/9/2012	XD	LTDP4X919	10 U	10 U	10 U		10 U	10 U
7/8/2013	XX	LTL3CX96F	250 U	250 U	500 U		250 U	
7/15/2014	XX	LTL3CX9EJ	2	1 U	20 U		5 U	5 U
7/21/2015	XX	LTL3CXA4G	6	1 U	20 U		5 U	5 U
10/18/2016	XX	LTLCSXAD3	10 U	10 U	200 U	50 U	50 U	50 U
10/18/2016	XX	LTLCSXAD3DL2SIM			2.5 U			
10/4/2017	XX	LTLCSXAH1	10 U	10 U	200 U	50 U	50 U	50 U
10/9/2018	XX	LTLCSXB0J	2.8	1 U	20 U	5 U	5 U	5 U
10/17/2019	XX	LTLCSXB50	3.5	2 U	40 U	10 U	10 U	10 U
10/15/2020	XX	LTLCSXB90	1 U	1 U	20 U	2.6	5 U	5 U
10/26/2021	XX	LTLCSXBD7	2.6	1 U	20 U	2 U	5 U	5 U
LCS-6								
7/23/2008	XX	LTLC6X71E	2 U	2 U	2 U		2 U	2 U
7/21/2009	XX	LTLC6X796	10 U	10 U	10 U		10 U	10 U
7/26/2010	XX	LTLC6X7II	5 U	5 U	5 U		5 U	5 U
7/26/2011	XX	LTLC6X8E2	1	0.5 U	0.5 U		0.5 U	0.5 U
7/10/2012	XX	LTLC6X90C	10 U	10 U	10 U		10 U	10 U
7/10/2013	XX	LTLC6X96E	25 U	25 U	50 U		25 U	
7/16/2014	XX	LTLC6X9EI	1 U	1 U	20 U		5 U	5 U
7/21/2015	XX	LTLC6XA4F	1	1 U	20 U		5 U	5 U
10/29/2019	XX	LTXXXXB5H	2 U	2 U	40 U	10 U	10 U	10 U
LCS-7								
10/18/2011	XX	LTS37X8C6	2.1	0.5 U	0.5 U		0.5 U	0.5 U
10/2/2012	XX	LTS37X92G	5 U	5 U	5 U		5 U	5 U
10/22/2013	XX	LTS37X9AF	1 U	1 U	20 U		5 U	5 U
9/30/2014	XX	LTS37X9GJ	1	1 U	20 U		5 U	5 U
10/20/2015	XX	LTS37XA73	2	1 U	20 U		5 U	5 U
10/15/2020	XX	LTXXXXB9H	1 U	1 U	20 U	2 U	5 U	5 U
LCS-SI								
4/13/2011	XX	LTSC1X8A7	6.2 J	5 U	5 U		5 U	5 U
4/10/2012	XX	LTSC1X8IA	6.4	5 U	5 U		5 U	5 U
4/8/2013	XX	LTSC1X94F	4	1 U	1 U		1 U	1 U
4/29/2014	XX	LTSC1X9CH	5 U	5 U	100 U		30 U	30 U
4/15/2015	XX	LTSC1XA2C	10 U	10 U	200 U		50 U	50 U
10/18/2016	XX	LTXXXXAE0	10 U	10 U	200 U	50 U	50 U	50 U
10/18/2016	XX	LTXXXXAE0DL3SIM			12 U			
10/26/2021	XX	LTXXXXBE4	1 U	1 U	20 U	2 U	5 U	5 U
LCS-SII								
4/13/2011	XX	LTSC2X8A8	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
4/10/2012	XX	LTSC2X8IB	1 U	1 U	1 U		1 U	1 U
4/8/2013	XX	LTSC2X94G	1 U	1 U	1 U		1 U	1 U
4/29/2014	XX	LTSC2X9CI	1 U	1 U	20 U		5 U	5 U

SUMMARY REPORT

Leachate VOAs - Current Part 4 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	1,4-Dichloro benzene ug/L	1,2-Dichloro benzene ug/L	Acrylonitrile ug/L	Diethyl ether ug/L	trans-1,4-Dichloro-2-butene ug/L	Iodomethane ug/L
(LCS-SII)								
4/15/2015	XX	LTSC2XA2D	1 U	1 U	20 U		5 U	5 U
10/4/2017	XX	LTXXXXAHI	1 U	1 U	20 U	5 U	5 U	5 U
10/9/2018	XX	LTXXXXB1G	1 U	1 U	20 U	5 U	5 U	5 U
LCS-SIII								
10/18/2011	XX	LTSC3X8C5	5 U	5 U	5 U		5 U	5 U
10/3/2012	XX	LTSC3X92F	5 U	5 U	5 U		5 U	5 U
10/22/2013	XX	LTSC3X9AE	5 U	5 U	100 U		30 U	30 U
9/30/2014	XX	LTSC3X9GI	5 U	5 U	100 U		30 U	30 U
10/20/2015	XX	LTSC3XA72	5 U	5 U	100 U		30 U	30 U
4/10/2019	XX	LTXXXXB3G	10 U	10 U	200 U	50 U	50 U	50 U
PDPS								
7/23/2008	XX	LTPDPX71F	20 U	20 U	20 U		20 U	20 U
7/21/2009	XX	LTPDPX797	3 J	5 U	5 U		5 U	5 U
7/26/2010	XX	LTPDPX7IJ	5 U	5 U	5 U		5 U	5 U
7/26/2011	XX	LTPDPX8E1	3.2	0.57 J	0.5 U		0.5 U	0.5 U
7/9/2012	XX	LTPDPX90B	10 U	10 U	10 U		10 U	10 U
7/10/2013	XX	LTPDPX96D	25 U	25 U	50 U		25 U	
7/15/2014	XX	LTPDPX9EH	3	1 U	20 U		5 U	5 U
7/21/2015	XX	LTPDPXA4E	2	1 U	20 U		5 U	5 U
10/18/2016	XX	LTPDPXAD2DL2SIM			2.5 U			
10/18/2016	XX	LTPDPXAD2	10 U	10 U	200 U	50 U	50 U	50 U
10/3/2017	XX	LTPDPXAH0	5 U	5 U	100 U	30 U	30 U	30 U
10/9/2018	XX	LTPDPXB0I	1.9	1 U	20 U	11	5 U	5 U
10/16/2019	XX	LTPDPXB4J	1.6	1 U	20 U	7.1	5 U	5 U
10/15/2020	XX	LTPDPXB8J	3.2	1 U	20 U	15	5 U	5 U
10/26/2021	XX	LTPDPXBD6	2.3	1 U	20 U	11	5 U	5 U
QCBT								
5/21/2008	XX	BTXXXX71B	2 U	2 U	2 U		2 U	2 U
7/21/2008	XX	BTXXXX72G	2 U	2 U	2 U		2 U	2 U
7/22/2008	XX	BTXXXX72H	2 U	2 U	2 U		2 U	2 U
7/23/2008	XX	BTXXXX73G	2 U	2 U	2 U		2 U	2 U
7/20/2009	XX	BTXXXX7A8	1 U	1 U	1 U		1 U	1 U
7/21/2009	XX	BTXXXX7A9	1 U	1 U	1 U		1 U	1 U
7/22/2009	XX	BTXXXX7B8	1 U	1 U	1 U		1 U	1 U
7/26/2010	XX	BTXXXX800	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
7/27/2010	XX	BTXXXX801	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
7/28/2010	XX	BTXXXX810	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
4/13/2011	XX	BTXXXX8B3	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
7/25/2011	XX	BTXXXX8EJ	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
7/26/2011	XX	BTXXXX8F4	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
7/27/2011	XX	BTXXXX8F5	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
10/18/2011	XX	BTXXXX8D1	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U
4/10/2012	XX	BTXXXX8J6	1 U	1 U	1 U		1 U	1 U
7/9/2012	XX	BTXXXX918	1 U	1 U	1 U		1 U	1 U
7/10/2012	XX	BTXXXX91D	1 U	1 U	1 U		1 U	1 U
10/2/2012	XX	BTXXXXHG8	1 U	1 U	1 U		1 U	1 U
10/2/2012	XX	BTXXXX938	1 U	1 U	1 U		1 U	1 U
4/8/2013	XX	BTXXXX95B	1 U	1 U	1 U		1 U	1 U

SUMMARY REPORT

Leachate VOAs - Current Part 4 of 4

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT)

Date	Type	Sample ID	1,4-Dichloro benzene ug/L	1,2-Dichloro benzene ug/L	Acrylonitrile ug/L	Diethyl ether ug/L	trans-1,4-Dichloro-2-butene ug/L	Iodomethane ug/L
7/8/2013	XX	BTXXXX97A	2.5 U	2.5 U	5 U		2.5 U	
7/10/2013	XX	BTXXXX97C	2.5 U	2.5 U	5 U		2.5 U	
10/22/2013	XX	BTXXXX9B9	1 U	1 U	20 U		5 U	5 U
10/22/2013	XX	BTXXXX9BD	1 U	1 U	50 U			
4/28/2014	XX	BTXXXX9DD	1 U	1 U	20 U		5 U	5 U
7/14/2014	XX	BTXXXX9FE	1 U	1 U	20 U		5 U	5 U
9/30/2014	XX	BTXXXX9HC	1 U	1 U	20 U		5 U	5 U
10/1/2014	XX	BTXXXX9HF	1 U	1 U	50 U			
4/15/2015	XX	BTXXXXA37	1 U	1 U	20 U		5 U	5 U
7/20/2015	XX	BTXXXXA5B	1 U	1 U	20 U		5 U	5 U
7/22/2015	XX	BTXXXXA5D	1 U	1 U	20 U		5 U	5 U
10/20/2015	XX	BTXXXXA7G	1 U	1 U	20 U		5 U	5 U
4/25/2016	XX	BTXXXXA9F	1 U	1 U	20 U	5 U	5 U	5 U
10/17/2016	XX	BTXXXXADE	1 U	1 U	20 U	5 U	5 U	5 U
10/17/2016	XX	BTXXXXADESIM			0.25 U			
10/18/2016	XX	BTXXXXADF	1 U	1 U	20 U	5 U	5 U	5 U
10/18/2016	XX	BTXXXXADFSIM			0.25 U			
10/19/2016	XX	BTXXXXADG	1 U	1 U	20 U	5 U	5 U	5 U
10/19/2016	XX	BTXXXXADGSIM			0.25 U			
4/24/2017	XX	BTXXXXAFE	1 U	1 U	20 U	5 U	5 U	5 U
10/2/2017	XX	BTXXXXAHC	1 U	1 U	20 U	5 U	5 U	5 U
10/3/2017	XX	BTXXXXAHD	1 U	1 U	20 U	5 U	5 U	5 U
10/4/2017	XX	BTXXXXAHE	1 U	1 U	20 U	5 U	5 U	5 U
7/18/2018	XX	BTXXXXAA6	1 U	1 U	50 U			
10/8/2018	XX	BTXXXXB18	1 U	1 U	20 U	5 U	5 U	5 U
10/10/2018	XX	BTXXXXB1C	1 U	1 U	20 U	5 U	5 U	5 U
4/10/2019	XX	BTXXXXB3I	1 U	1 U	20 U	5 U	5 U	5 U
10/15/2019	XX	BTXXXXB5B	1 U	1 U	20 U	5 U	5 U	5 U
10/16/2019	XX	BTXXXXB5C	1 U	1 U	20 U	5 U	5 U	5 U
10/17/2019	XX	BTXXXXB5D	1 U	1 U	20 U	5 U	5 U	5 U
10/13/2020	XX	BTXXXXB9B	1 U	1 U	20 U	2 U	5 U	5 U
10/14/2020	XX	BTXXXXB9C	1 U	1 U	20 U	2 U	5 U	5 U
10/15/2020	XX	BTXXXXB9D	1 U	1 U	20 U	2 U	5 U	5 U
10/25/2021	XX	BTXXXXBDI	1 U	1 U	20 U	2 U	5 U	5 U
10/27/2021	XX	BTXXXXBDJ	1 U	1 U	20 U	2 U	5 U	5 U

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample.

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

J - Analyte was positively identified/Associated value is an estimate.

U - Not Detected above the laboratory reporting limit.

SUMMARY REPORT

Methane - Current

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(641)

Date	Type	Sample ID	Methane ug/L
641			
4/29/2008	XX	GW641X708	1270
7/21/2008	XX	GW641X72J	1280
10/7/2008	XX	GW641X75B	1030
4/20/2009	XX	GW641X782	1210
7/20/2009	XX	GW641X7AB	650
10/20/2009	XX	GW641X7F7	410
3/29/2010	XX	GW641X7HJ	350
8/10/2010	XX	GW641X803RE	3290
10/5/2010	XX	GW641X82B	2310
4/13/2011	XX	GW641X89C	1330
7/26/2011	XX	GW641X8D8	2400
4/10/2012	XX	GW641X8HF	159
7/10/2012	XX	GW641X8JI	41.6
4/9/2013	XX	GW641X940	160
7/9/2013	XX	GW641X960	1040
4/30/2014	XX	GW641X9C2	1800
7/16/2014	XX	GW641X9E4	420
4/15/2015	XX	GW641XA1H	30
7/22/2015	XX	GW641XA41	20 U
10/19/2016	XX	GW641XAC9	20 U
10/3/2017	XX	GW641XAG7	20 U
10/8/2018	XX	GW641XB05	88
10/16/2019	XX	GW641XB46	20 U
10/14/2020	XX	GW641XB86	510
10/27/2021	XX	GW641XBCD	28
DW04-109			
4/30/2008	XX	DW109X716	7320
7/21/2008	XX	DW109X740	5580
10/7/2008	XX	DW109X768	6650
4/22/2009	XX	DW109X78I	12700
7/21/2009	XX	DW109X7BA	11800
10/20/2009	XX	DW109X7G3	15000
3/31/2010	XX	DW109X7IC	441
8/10/2010	XX	DW109X812RE	3490
10/5/2010	XX	DW109X834	3590
4/11/2011	XX	DW109X8AJ	7590
7/25/2011	XX	DW109X8EF	6670
7/25/2011	XD	DWDP3X8EI	6200
10/18/2011	XX	DW109X8CH	6610
4/10/2012	XX	DW109X8J2	682
7/10/2012	XX	DW109X914	1830
7/10/2012	XD	DWDP3X917	616
10/2/2012	XX	DW109X934	913
4/9/2013	XX	DW109X957	901
7/10/2013	XX	DW109X976	180
7/10/2013	XD	DWDP3X979	138
10/21/2013	XX	DW109X9B3	1140

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(DW04-109)

Date	Type	Sample ID	Methane ug/L
4/29/2014	XX	DW109X9D9	830
7/14/2014	XX	DW109X9FA	740
7/14/2014	XD	DWDP3X9FD	550
9/29/2014	XX	DW109X9H7	110
4/13/2015	XX	DW109XA34	110
7/20/2015	XX	DW109XA57	190
7/20/2015	XD	DWDP3XA5A	220
10/19/2015	XX	DW109XA7B	300
4/25/2016	XX	DW109XA9C	20 U
10/17/2016	XX	DW109XADB	190
4/24/2017	XX	DW109XAFB	30
10/2/2017	XX	DW109XAH9	190
4/9/2018	XX	DW109XAJ7	20 U
10/9/2018	XX	DW109XB17	94
4/8/2019	XX	DW109XB35	70
10/15/2019	XX	DW109XB58	29
4/20/2020	XD	DWDP3XB78	20 U
4/20/2020	XX	DW109XB76	20 U
10/13/2020	XX	DW109XB98	20 U
4/26/2021	XD	DWDP3XBB7	20 U
4/26/2021	XX	DW109XBB5	20 U
10/26/2021	XX	DW109XBDF	24

DW-103

4/28/2008	XX	DW103X710	191
7/21/2008	XX	DW103X73B	181
10/8/2008	XX	DW103X763	213
4/20/2009	XX	DW103X78E	326
7/20/2009	XX	DW103X7B3	241
10/20/2009	XX	DW103X7FJ	280
3/29/2010	XX	DW103X7IB	332 M8
8/10/2010	XX	DW103X80FRE	223
10/4/2010	XX	DW103X833	252
4/11/2011	XX	DW103X8AI	460
4/11/2011	XD	DWDP3X8B2	411
7/25/2011	XX	DW103X8EE	306
10/18/2011	XX	DW103X8CG	149
4/9/2012	XX	DW103X8J1	417
4/9/2012	XD	DWDP3X8J5	290
7/9/2012	XX	DW103X913	396
10/24/2012	XX	DW103X933	380
4/8/2013	XX	DW103X956	96.4
4/8/2013	XD	DWDP3X95A	261
7/8/2013	XX	DW103X975	373
10/21/2013	XX	DW103X9B2	318
10/21/2013	XD	DWDP3X9B6	6.6 U
4/28/2014	XX	DW103X9D8	130
4/28/2014	XD	DWDP3X9DC	130
7/14/2014	XX	DW103X9F9	90
9/29/2014	XX	DW103X9H6	130

SUMMARY REPORT

Methane - Current

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Methane ug/L
(DW-103)			
4/13/2015	XX	DW103XA33	60
4/13/2015	XD	DWDP3XA36	70
7/20/2015	XX	DW103XA56	70
12/15/2015	XX	DW103XA7AX	50
12/15/2015	XX	DW103XA7A	A
4/25/2016	XX	DW103XA9B	40
4/25/2016	XD	DWDP3XA9E	50
10/17/2016	XD	DWDP3XADD	60
10/17/2016	XX	DW103XADA	50
4/24/2017	XD	DWDP3XAFD	30
4/24/2017	XX	DW103XAFA	30
10/2/2017	XD	DWDP3XAHB	50
10/2/2017	XX	DW103XAH8	60
4/9/2018	XD	DWDP3XAJ9	39
4/9/2018	XX	DW103XAJ6	37
10/9/2018	XD	DWDP3XB19	43
10/9/2018	XX	DW103XB16	33
4/8/2019	XD	DWDP3XB37	33
4/8/2019	XX	DW103XB34	30
10/17/2019	XD	DWDP3XB5A	29
10/17/2019	XX	DW103XB57	24
4/20/2020	XX	DW103XB75	40
10/13/2020	XD	DWDP3XB9A	40
10/13/2020	XX	DW103XB97	47
4/26/2021	XX	DW103XBB4	37
10/26/2021	XD	DWDP3XBDH	26
10/26/2021	XX	DW103XBDE	28
LCS-3C			
7/27/2011	XX	LTL3CX8E3	4010
7/27/2011	XD	LTDP4X8F0	3880
7/9/2012	XX	LTL3CX90D	1990
7/9/2012	XD	LTDP4X919	1790
7/8/2013	XX	LTL3CX96F	5560
7/15/2014	XX	LTL3CX9EJ	1300
7/21/2015	XX	LTL3CXA4G	1400
10/18/2016	XX	LTLCSXAD3	700
10/4/2017	XX	LTLCSXAH1	460
10/9/2018	XX	LTLCSXB0J	1500
10/17/2019	XX	LTLCSXB50	1600
10/15/2020	XX	LTLCSXB90	730
10/26/2021	XX	LTLCSXBD7	410
LCS-6			
4/29/2008	XX	LTLC6X6J2	2570
7/23/2008	XX	LTLC6X71E	1210
10/8/2008	XX	LTLC6X745	2450
4/21/2009	XX	LTLC6X76G	2090
7/21/2009	XX	LTLC6X796	6040
10/21/2009	XX	LTLC6X7E1	3200

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Methane ug/L
(LCS-6)			
3/29/2010	XX	LTLC6X7GD	9550
8/10/2010	XX	LTLC6X7IIRE	3090
10/6/2010	XX	LTLC6X815	3450
7/26/2011	XX	LTLC6X8E2	1410
7/10/2012	XX	LTLC6X90C	1930
7/10/2013	XX	LTLC6X96E	776
7/16/2014	XX	LTLC6X9EI	560
7/21/2015	XX	LTLC6XA4F	790
10/29/2019	XX	LTXXXXB5H	190
LCS-7			
10/15/2020	XX	LTXXXXB9H	960
LCS-SI			
4/13/2011	XX	LTSC1X8A7	8750
4/10/2012	XX	LTSC1X8IA	7110
4/8/2013	XX	LTSC1X94F	6500
4/29/2014	XX	LTSC1X9CH	1500
4/15/2015	XX	LTSC1XA2C	180
10/18/2016	XX	LTXXXXAE0	60
10/26/2021	XX	LTXXXXBE4	20 U
LCS-SII			
4/13/2011	XX	LTSC2X8A8	1140
4/10/2012	XX	LTSC2X8IB	2440
4/8/2013	XX	LTSC2X94G	782
4/29/2014	XX	LTSC2X9CI	490
4/15/2015	XX	LTSC2XA2D	200
10/4/2017	XX	LTXXXXAHI	190
10/9/2018	XX	LTXXXXB1G	500
MW02-801A			
4/30/2008	XX	GW801A709	2450
4/30/2008	XD	GWDP4X6JI	2300
7/22/2008	XX	GW801A730	2190
7/22/2008	XD	GWDP2X71D	2230
10/8/2008	XX	GW801A75C	948
10/8/2008	XD	GWDP4X751	1060
4/22/2009	XX	GW801A783	2380
4/22/2009	XD	GWDP4X77C	2320
7/22/2009	XX	GW801A7AC	3030
7/22/2009	XD	GWDP2X795	3470
10/21/2009	XX	GW801A7F8	3400
10/21/2009	XD	GWDP4X7EH	3600
3/30/2010	XX	GW801A7I0	3230
3/30/2010	XD	GWDP4X7H9	2820
8/11/2010	XX	GW801A804RE	1110
8/11/2010	XD	GWDP2X7IHRE	1160
10/4/2010	XX	GW801A82C	104
10/4/2010	XD	GWDP4X821	108
4/11/2011	XX	GW801A89F	1040

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(MW02-801A)			Methane ug/L
Date	Type	Sample ID	
7/25/2011	XX	GW801A8DB	1830
4/9/2012	XX	GW801A8HI	2050
7/9/2012	XX	GW801A901	2110
4/9/2013	XX	GW801A943	1950
7/8/2013	XX	GW801A963	2510
4/28/2014	XX	GW801A9C5	780
7/14/2014	XX	GW801A9E7	1100
4/13/2015	XX	GW801AA20	1000
7/20/2015	XX	GW801AA44	710
10/17/2016	XX	GW801AACC	730
10/2/2017	XX	GW801AAGA	540
10/9/2018	XX	GW801AB08	660
10/15/2019	XX	GW801AB49	330
10/14/2020	XX	GW801AB89	270
10/27/2021	XX	GW801ABCG	630
MW03-802A			
4/29/2008	XX	GW802A70A	6510
7/22/2008	XX	GW802A731	4720
10/6/2008	XX	GW802A75D	2930
4/21/2009	XX	GW802A784	3880
7/21/2009	XX	GW802A7AD	5250
10/19/2009	XX	GW802A7F9	5100
3/30/2010	XX	GW802A7I1	5680 M8
8/10/2010	XX	GW802A805RE	5530
10/4/2010	XX	GW802A82D	4560
4/11/2011	XX	GW802A89G	5510
4/11/2011	XD	GWDP1X89D	6120
7/26/2011	XX	GW802A8DC	9010
4/9/2012	XX	GW802A8HJ	4240
4/9/2012	XD	GWDP1X8HG	4820
7/9/2012	XX	GW802A902	4740
4/8/2013	XX	GW802A944	6890
4/8/2013	XD	GWDP1X941	6180
7/8/2013	XX	GW802A964	6760
7/8/2013	XD	GWDP4X97B	8700
4/28/2014	XX	GW802A9C6	3200
4/28/2014	XD	GWDP1X9C3	4900
7/14/2014	XX	GW802A9E8	3100
7/14/2014	XD	GWDP4X9FF	3500
4/13/2015	XX	GW802AA21	3000
4/13/2015	XD	GWDP1XA1I	2400
7/20/2015	XX	GW802AA45	420
7/20/2015	XD	GWDP4XA5C	480
10/17/2016	XX	GW802AACD	50
10/2/2017	XX	GW802AAGB	470
10/9/2018	XX	GW802AB09	560
10/15/2019	XX	GW802AB4A	26
10/13/2020	XX	GW802AB8A	260
10/25/2021	XX	GW802ABCH	20 U

SEVEE & MAHER ENGINEERS, INC.
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(MW03-802B)

Date	Type	Sample ID	Methane ug/L
MW03-802B			
4/29/2008	XX	GW802B6JD	3780
7/22/2008	XX	GW802B725	3190
10/6/2008	XX	GW802B74G	2720
4/21/2009	XX	GW802B777	3920
7/21/2009	XX	GW802B79H	4670
10/19/2009	XX	GW802B7EC	3400
3/30/2010	XX	GW802B7H4	4390 M8
8/10/2010	XX	GW802B7J9RE	3260
10/4/2010	XX	GW802B81G	6740
4/11/2011	XX	GW802B8AE	6600
4/9/2012	XX	GW802B8IH	1760
4/8/2013	XX	GW802B952	4010
4/28/2014	XX	GW802B9D4	2000
4/13/2015	XX	GW802BA2J	710
4/25/2016	XX	GW802BA97	700
10/17/2016	XX	GW802BAD6	1300
4/24/2017	XX	GW802BAF6	340
10/2/2017	XX	GW802BAH4	2300
10/9/2018	XX	GW802BB12	890
10/15/2019	XX	GW802BB53	1400
10/13/2020	XX	GW802BB93	2200
10/25/2021	XX	GW802BBDA	590
MW03-803A			
4/29/2008	XX	GW803A6JE	539
7/22/2008	XX	GW803A726	2030
10/6/2008	XX	GW803A74H	1490
4/21/2009	XX	GW803A778	811
7/21/2009	XX	GW803A79I	2010
10/19/2009	XX	GW803A7ED	570
3/30/2010	XX	GW803A7H5	1240 M8
8/10/2010	XX	GW803A7JARE	912
10/4/2010	XX	GW803A81H	331
4/11/2011	XX	GW803A8AF	896
4/9/2012	XX	GW803A8II	438
4/8/2013	XX	GW803A953	251
4/28/2014	XX	GW803A9D5	140
4/13/2015	XX	GW803AA30	90
4/25/2016	XX	GW803AA98	90
7/27/2016	XX	GW803AABB	40
10/17/2016	XX	GW803AAD7	30
4/24/2017	XX	GW803AAF7	50
10/2/2017	XX	GW803AAH5	30
10/9/2018	XX	GW803AB13	22
10/15/2019	XX	GW803AB54	32
10/13/2020	XX	GW803AB94	58
10/25/2021	XX	GW803ABDB	20
MW03-803B			

SEVEE & MAHER ENGINEERS, INC.
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CUMBERLAND CENTER, ME 04021

(MW03-803B)

Date	Type	Sample ID	Methane ug/L
4/29/2008	XX	GW803B6JF	5540
7/22/2008	XX	GW803B727	3330
10/6/2008	XX	GW803B74I	4080
10/6/2008	XD	GWDP2X744	5740
4/21/2009	XX	GW803B779	5260
7/21/2009	XX	GW803B79J	5970
10/19/2009	XX	GW803B7EE	830
3/30/2010	XX	GW803B7H6	7160 M8
8/10/2010	XX	GW803B7JBRE	3480
10/4/2010	XX	GW803B81I	1770
4/11/2011	XX	GW803B89H	4240
7/26/2011	XX	GW803B8DD	6490
4/9/2012	XX	GW803B8I0	2460
7/9/2012	XX	GW803B903	4710
4/8/2013	XX	GW803B945	5620
7/8/2013	XX	GW803B965	7100
4/28/2014	XX	GW803B9C7	4200
7/14/2014	XX	GW803B9E9	3800
4/13/2015	XX	GW803BA22	1300
7/20/2015	XX	GW803BA46	800
10/17/2016	XD	GWDP1XACA	310
10/17/2016	XX	GW803BACE	250
10/2/2017	XD	GWDP1XAG8	590
10/2/2017	XX	GW803BAGC	1200
10/9/2018	XD	GWDP1XB06	430
10/9/2018	XX	GW803BB0A	370
10/15/2019	XD	GWDP1XB47	1800
10/15/2019	XX	GW803BB4B	1600
10/13/2020	XD	GWDP1XB87	460
10/13/2020	XX	GW803BB8B	360
10/25/2021	XD	GWDP1XBCE	160
10/25/2021	XX	GW803BBCI	64

MW-916

Date	Type	Sample ID	Methane ug/L
4/30/2008	XX	GW916X70H	8360
7/21/2008	XX	GW916X738	6390
10/7/2008	XX	GW916X760	8800
4/20/2009	XX	GW916X78B	10100
7/21/2009	XX	GW916X7B0	708
10/20/2009	XX	GW916X7FG	5600
3/31/2010	XX	GW916X7I8	10 U
3/31/2010	XD	GWDP2X7GC	10 U
8/11/2010	XX	GW916X80CRE	10 U
10/5/2010	XX	GW916X830	2180
4/12/2011	XX	GW916X89A	179
7/26/2011	XX	GW916X8D6	502
4/10/2012	XX	GW916X8HD	600
7/10/2012	XX	GW916X8JG	138
4/8/2013	XX	GW916X93I	6.6 U
7/9/2013	XX	GW916X95I	89.6

SUMMARY REPORT

Methane - Current

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

Date	Type	Sample ID	Methane ug/L
(MW-916)			
4/29/2014	XX	GW916X9C0	530
7/15/2014	XX	GW916X9E2	170
4/29/2015	XX	GW916XA1F	20 U
7/21/2015	XX	GW916XA3J	140
10/18/2016	XX	GW916XAC7	20
10/3/2017	XX	GW916XAG5	140
10/10/2018	XX	GW916XB03	20 U
10/16/2019	XX	GW916XB44	120
10/14/2020	XX	GW916XB84	20 U
10/26/2021	XX	GW916XBCB	20 U
MW-917			
4/30/2008	XX	GW917X70I	5630
7/21/2008	XX	GW917X739	6920
10/7/2008	XX	GW917X761	6390
4/20/2009	XX	GW917X78C	5780
7/21/2009	XX	GW917X7B1	8160
10/20/2009	XX	GW917X7FH	9400
3/31/2010	XX	GW917X7I9	2720
8/11/2010	XX	GW917X80DRE	1860
10/5/2010	XX	GW917X831	3500
4/12/2011	XX	GW917X89I	2120
7/26/2011	XX	GW917X8DE	1020
4/10/2012	XX	GW917X8I1	630
7/10/2012	XX	GW917X904	677
4/8/2013	XX	GW917X946	535
7/9/2013	XX	GW917X966	587
4/29/2014	XX	GW917X9C8	220
7/15/2014	XX	GW917X9EA	170
4/14/2015	XX	GW917XA23	130
7/21/2015	XX	GW917XA47	100
10/18/2016	XX	GW917XACF	20
10/3/2017	XX	GW917XAGD	30
10/10/2018	XX	GW917XB0B	280
10/16/2019	XX	GW917XB4C	50
10/14/2020	XX	GW917XB8C	53
10/26/2021	XX	GW917XBCJ	54
PDPS			
4/30/2008	XX	LTPDPX6J3	2120
7/23/2008	XX	LTPDPX71F	1960
10/8/2008	XX	LTPDPX746	1590
4/22/2009	XX	LTPDPX76H	1850
7/21/2009	XX	LTPDPX797	1310
10/21/2009	XX	LTPDPX7E2	6100
3/30/2010	XX	LTPDPX7GE	4310
8/10/2010	XX	LTPDPX7IJRE	4640
10/6/2010	XX	LTPDPX816	1740
7/26/2011	XX	LTPDPX8E1	4200
7/9/2012	XX	LTPDPX90B	3390

SEVEE & MAHER ENGINEERS, INC.
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(PDPS)			Methane ug/L
Date	Type	Sample ID	
7/10/2013	XX	LTPDPX96D	6960
7/15/2014	XX	LTPDPX9EH	340
7/21/2015	XX	LTPDPXA4E	290
10/18/2016	XX	LTPDPXAD2	290
10/3/2017	XX	LTPDPXAH0	250
10/9/2018	XX	LTPDPXB0I	840
10/16/2019	XX	LTPDPXB4J	120
10/15/2020	XX	LTPDPXB8J	440
10/26/2021	XX	LTPDPXBD6	130
QCBT			
4/28/2008	XX	BTXXXX705	7 U
4/29/2008	XX	BTXXXX706	7 U
4/30/2008	XX	BTXXXX717	7 U
7/21/2008	XX	BTXXXX72G	7 U
7/22/2008	XX	BTXXXX72H	7 U
7/23/2008	XX	BTXXXX73G	7 U
10/6/2008	XX	BTXXXX758	7 U
10/7/2008	XX	BTXXXX759	7 U
10/8/2008	XX	BTXXXX769	7 U
4/20/2009	XX	BTXXXX77J	7 U
4/21/2009	XX	BTXXXX780	7 U
4/22/2009	XX	BTXXXX78J	7 U
7/20/2009	XX	BTXXXX7A8	7 U
7/21/2009	XX	BTXXXX7A9	7 U
7/22/2009	XX	BTXXXX7B8	7 U
8/20/2009	XX	BTXXXX7CG	7 U
10/19/2009	XX	BTXXXX7F4	10 U
10/20/2009	XX	BTXXXXHG5	10 U
10/20/2009	XX	BTXXXX7F5	10 U
10/21/2009	XX	BTXXXX7G4	10 U
3/29/2010	XX	BTXXXX7HG	10 U
3/30/2010	XX	BTXXXX7HH	10 UM8
3/31/2010	XX	BTXXXX7ID	10 U
8/10/2010	XX	BTXXXX801RE	10 U
10/4/2010	XX	BTXXXX828	10 U
10/5/2010	XX	BTXXXX829	10 U
10/6/2010	XX	BTXXXX835	10 U
4/11/2011	XX	BTXXXXHG6	10 U
4/12/2011	XX	BTXXXXHG7	10 U
4/13/2011	XX	BTXXXX8B3	10 U
7/25/2011	XX	BTXXXX8EJ	10 U
7/26/2011	XX	BTXXXX8F4	10 U
7/27/2011	XX	BTXXXX8F5	10 U
10/18/2011	XX	BTXXXX8D1	10 U
4/9/2012	XX	BTXXXX8J8	6.6 U
4/10/2012	XX	BTXXXX8J6	6.6 U
7/9/2012	XX	BTXXXX918	6.6 U
7/10/2012	XX	BTXXXX91D	6.6 U
10/2/2012	XX	BTXXXX938	6.6 U

SUMMARY REPORT

Methane - Current

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT)

Date	Type	Sample ID	Methane ug/L
10/24/2012	XX	BTXXXX93D	6.6 U
4/8/2013	XX	BTXXXX95B	6.6 U
7/8/2013	XX	BTXXXX97A	6.6 U
7/10/2013	XX	BTXXXX97C	6.6 U
10/21/2013	XX	BTXXXX9BA	6.6 U
4/28/2014	XX	BTXXXX9DD	20 U
4/30/2014	XX	BTXXXX9DG	20 U
7/14/2014	XX	BTXXXX9FE	20 U
9/29/2014	XX	BTXXXX9HD	20 U
4/13/2015	XX	BTXXXXA39	20 U
4/15/2015	XX	BTXXXXA37	20 U
10/19/2015	XX	BTXXXXA7F	20 U
4/25/2016	XX	BTXXXXA9F	20 U
10/17/2016	XX	BTXXXXADE	20 U
10/18/2016	XX	BTXXXXADF	20 U
10/19/2016	XX	BTXXXXADG	20 U
4/24/2017	XX	BTXXXXAFE	20 U
10/2/2017	XX	BTXXXXAHC	20 U
10/3/2017	XX	BTXXXXAHD	20 U
10/4/2017	XX	BTXXXXAHE	20 U
4/9/2018	XX	BTXXXXAJB	20 U
10/8/2018	XX	BTXXXXB1B	20 U
10/10/2018	XX	BTXXXXB1C	20 U
4/8/2019	XX	BTXXXXB38	20 U
4/10/2019	XX	BTXXXXB3H	20 U
10/15/2019	XX	BTXXXXB5B	20 U
10/16/2019	XX	BTXXXXB5C	20 U
10/17/2019	XX	BTXXXXB5D	20 U
4/20/2020	XX	BTXXXXB7A	20 U
10/13/2020	XX	BTXXXXB9B	20 U
10/14/2020	XX	BTXXXXB9C	20 U
10/15/2020	XX	BTXXXXB9D	20 U
4/26/2021	XX	BTXXXXBB8	20 U
4/27/2021	XX	BTXXXXBB9	20 U
10/25/2021	XX	BTXXXXBDI	20 U
10/27/2021	XX	BTXXXXBDJ	20 U

SEVEE & MAHER ENGINEERS, INC.
4 BLANCHARD ROAD
CUMBERLAND CENTER, ME 04021

(QCBT)		Methane
		ug/L
Date	Type	Sample ID

Notes: TYPE - Sample Type Qualifier where D = Duplicate Sample

Blank Cells appear when a parameter was not analyzed.

Concentration Qualifier Notes:

A - The sampling location was Inaccessible

M8 - Final laboratory CCV values for methane analysis failed low on this sample, therefore the methane value on this sample is considered to have a low bias.

U - Not Detected above the laboratory reporting limit.

UM8 - Non detect. Final laboratory CCV values for methane analysis failed low on this sample, therefore the methane value on this sample is considered to have a low bias.

APPENDIX B

2021 WATER QUALITY SUMMARY REPORTS

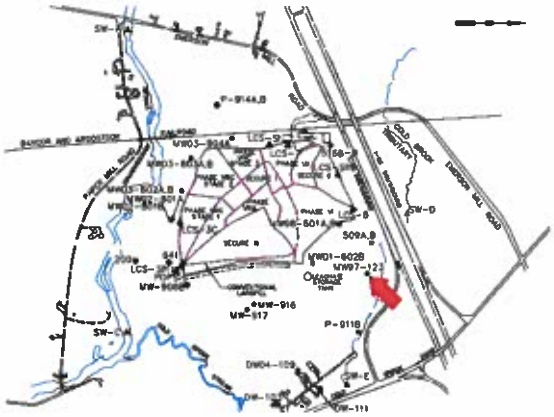
SME
SEVEE & MAHER
ENGINEERS

NORTHEAST ON-SITE MONITORING LOCATIONS

SME
SEVEE & MAHER
ENGINEERS

Well Description

Well located downgradient (northeast) from the northeastern edge of the Conventional Landfill.



Screen Interval:	**34 ft. to 176 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Jan-98**
Material Screened:	**Bedrock (6-inch open hole)**
Well Condition:	**Good**
Sampling Method:	**Low Flow**

Chemical Summary

Indicator Parameters	2021 Q1	2021 Q2	2021 Q3	2021 Q4	Historical (1/1/1990 - 12/31/2021) Min		Max	Mean		SE	n
Specific Conductance (µmhos/cm @25°C)		1119		1085	780	to	1834	1400	±	37	60
pH (STU)		7.2		7.1	6.5	to	8	7.2	±	0.035	60
Temperature (Deg C)		8.1		8.8	5.5	to	16.3	9.5	±	0.32	60
Water Level Depth (Feet)		15.31		15.71	13.82	to	18.78	16	±	0.15	60
Water Level Elevation (Feet)		110.41		110.01	106.94	to	112.3	110	±	0.15	60
Eh (mV)		154		143	-62	to	277	120	±	9.9	58
Dissolved Oxygen (mg/L)		0.3		0.3	0.1 U	to	2	0.62	±	0.047	60
Arsenic (mg/L)		0.005 U		0.005 U	0.001 U	to	0.078	0.014	±	0.002	54
Calcium (mg/L)		130		140	35.3	to	200	150	±	4.5	60
Cobalt (mg/L)				0.01 U	0.003 U	to	0.016	0.0063	±	0.000	32
Iron (mg/L)		1.4		0.8	0.16	to	17	3.2	±	0.5	60
Lead (mg/L)				0.003 U	0.001 U	to	0.012	0.0029	±	0.000	26
Magnesium (mg/L)		40		41	24.5	to	70	43	±	1.2	60
Manganese (mg/L)				1.9	0.0209	to	5.1	2.6	±	0.15	45
Nickel (mg/L)				0.015	0.002	to	0.081	0.011	±	0.002	36
Potassium (mg/L)		3.6		3.8	2.5	to	8	4.4	±	0.17	60
Sodium (mg/L)		85		87	37.3	to	120	79	±	2.4	60
Total Dissolved Solids (mg/L)		791		799	449	to	1097	850	±	25	51
Sulfate (mg/L)		55		44	10 U	to	281	100	±	5.6	60
Bicarbonate Alkalinity (CaCO3) (mg/L)		400		380	100	to	458	360	±	9.4	60
Organic Carbon (mg/L)		4.9		4.6	3.1	to	9.7	5.7	±	0.15	58
Chloride (mg/L)		170		150	70	to	478	200	±	9.2	60
Turbidity (field) (NTU)		0.6		0.3	0	to	91	3	±	1.5	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.

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

See summary report in Appendix for specific sample dates.

Q2= 4 - 2021 U = Not Detected above the laboratory reporting limit.

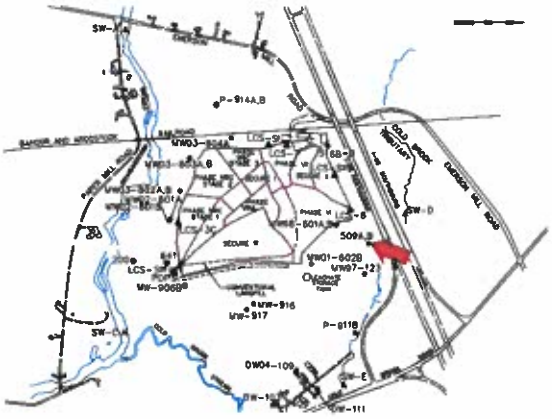
Q4= 10 - 2021

Data Group: 445
Printed: 3/29/2022 07:24

SME SEVEE & MAHER ENGINEERS

Well Description

Well located downgradient (northeast) from the northeastern edge of the Conventional Landfill.



Screen Interval:	**19.5 ft. to 24.5 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**2011**
Material Screened:	**Shallow Bedrock**
Well Condition:	**Good**
Sampling Method:	**Low Flow**

Chemical Summary

Indicator Parameters	2021 Q1	2021 Q2	2021 Q3	2021 Q4	Historical (1/1/1990 - 12/31/2021) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		739		917	357	1234	970	33	27
pH (STU)		↑7.4		6.7	6.2	7.2	6.9	0.039	27
Temperature (Deg C)		7.5		10.7	3.5	13.7	9.4	0.58	27
Water Level Depth (Feet)		7.95		8.13	4.7	13.52	8.2	0.27	27
Water Level Elevation (Feet)		109		108.82	103.43	112.25	110	0.27	27
Eh (mV)		158		165	-48	237	120	16	26
Dissolved Oxygen (mg/L)		0.2		0.4	0.2	2.2	0.55	0.076	26
Turbidity (field) (NTU)		3		4.1	0	5.3	1.4	0.28	26

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

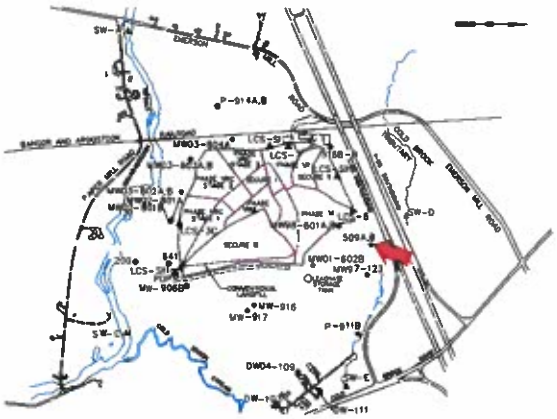
See summary report in Appendix for specific sample dates.

Q2= 4 - 2021

Q4= 10 - 2021

Well Description

Well located downgradient (northeast) from the northeastern edge of the Conventional Landfill.



Screen Interval:	**12.5 ft. to 17.5 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**2011**
Material Screened:	**Soil Overburden**
Well Condition:	**Good**
Sampling Method:	**Low Flow**

Chemical Summary

Indicator Parameters	2021 Q1	2021 Q2	2021 Q3	2021 Q4	Historical (1/1/1990 - 12/31/2021) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		698		853	580	1249	950	± 30	27
pH (STU)		↑7.2		6.6	6.1	7.1	6.7	± 0.035	27
Temperature (Deg C)		6.7		11.3	3.4	13.6	9.2	± 0.68	27
Water Level Depth (Feet)		8.2		8.43	6.6	11.2	8.2	± 0.16	27
Water Level Elevation (Feet)		108.91		108.68	105.91	110.51	110	± 0.16	27
Eh (mV)		143		147	13	351	190	± 16	26
Dissolved Oxygen (mg/L)		0.3		0.2	0.1	3.6	0.69	± 0.16	26
Arsenic (mg/L)		0.006		0.005	0.005 U	0.063	0.017	± 0.003	24
Calcium (mg/L)		92		95	79.2	141	110	± 3.5	26
Cobalt (mg/L)				0.01 U	0.008	0.01 U	0.0098	± 0.000	10
Iron (mg/L)		5.1		4.7	0.04	5.1	1.1	± 0.33	25
Lead (mg/L)				0.004	0.001 U	0.006	0.0032	± 0.000	10
Magnesium (mg/L)		21		20	11.3	30.9	23	± 0.78	26
Manganese (mg/L)				7.1	0.02 U	10.8	7.9	± 1	10
Nickel (mg/L)				0.005 U	0.002 U	0.005 U	0.0047	± 0.000	10
Potassium (mg/L)		3.7		4.4	1.7	10	5.5	± 0.29	26
Sodium (mg/L)		33		33	22.9	73	46	± 2	26
Total Dissolved Solids (mg/L)		454		481	396	745	570	± 20	25
Sulfate (mg/L)		9.9		7.9	5	58.4	21	± 2.8	26
Bicarbonate Alkalinity (CaCO3) (mg/L)		260		280	247	355	300	± 5.6	27
Organic Carbon (mg/L)		2.7		3.5	0.7 U	5.8	3.4	± 0.18	25
Chloride (mg/L)		78		76	13.1	194	100	± 8.4	27
Turbidity (field) (NTU)		1.2		1.8	0	2.6	1	± 0.16	26

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

See summary report in Appendix for specific sample dates.

Q2= 4 - 2021 U = Not Detected above the laboratory reporting limit.

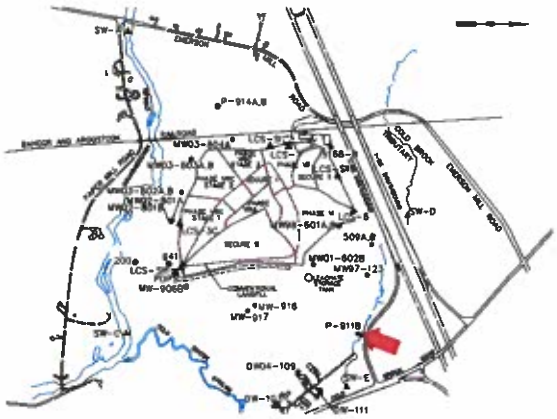
Q4= 10 - 2021

Data Group: 445
Printed: 3/29/2022 07:23

SME SEVEE & MAHER ENGINEERS

Well Description

Well located downgradient (east) from the conventional landfill and Secure III Landfill.



Screen Interval:	**17.9 ft. to 22.9 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**2011**
Material Screened:	**Soil Overburden**
Well Condition:	**Good**
Sampling Method:	**Low Flow**

Chemical Summary

Indicator Parameters	2021 Q1	2021 Q2	2021 Q3	2021 Q4	Historical (1/1/1990 - 12/31/2021) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		↓691		↓670	702	to 1249	970	± 25	27
pH (STU)		7		7	6.5	to 7.5	7	± 0.046	27
Temperature (Deg C)		8.8		10.8	5.1	to 13.1	9.5	± 0.4	27
Water Level Depth (Feet)		4.33		3.31	1.88	to 5.82	3.8	± 0.24	26
Water Level Elevation (Feet)		101.34		102.36	99.85	to 103.79	100	± 0.24	26
Eh (mV)		138		126	73	to 301	140	± 8.7	26
Dissolved Oxygen (mg/L)		0.6		1.9	0.1	to 2.2	0.47	± 0.099	26
Turbidity (field) (NTU)		1.5		2.3	0	to 12.2	3.9	± 0.69	26

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

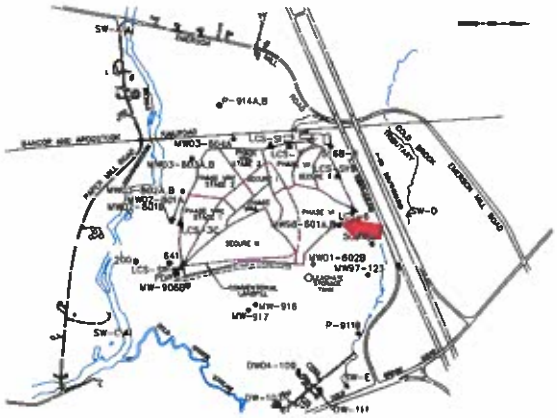
See summary report in Appendix for specific sample dates.

Q2= 4 - 2021

Q4= 10 - 2021

Well Description

Well located downgradient (north) from the Conventional Landfill and (east) from the Secure III Landfill.



Screen Interval:	**23.6 ft. to 28.6 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Oct-98**
Material Screened:	**Shallow Bedrock**
Well Condition:	**Good**
Sampling Method:	**Low Flow**

Chemical Summary

Indicator Parameters	2021 Q1	2021 Q2	2021 Q3	2021 Q4	Historical (1/1/1990 - 12/31/2021) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		↓1672		1973	1789	to 4140	2400	± 55	59
pH (STU)		6.9		6.3	5.5	to 7.4	6.5	± 0.032	59
Temperature (Deg C)		12.6		13.3	5.5	to 18.8	12	± 0.39	59
Water Level Depth (Feet)		6.55		7.35	5.2	to 11.03	7.5	± 0.2	59
Water Level Elevation (Feet)		112.26		111.46	107.78	to 113.54	110	± 0.2	59
Eh (mV)		189		177	-11	to 353	250	± 8.6	58
Dissolved Oxygen (mg/L)		0.5		0.9	0.3	to 5.1	1.3	± 0.16	58
Turbidity (field) (NTU)		2.2		2.1	0	to 4	0.49	± 0.099	58

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

See summary report in Appendix for specific sample dates.

Q2= 4 - 2021

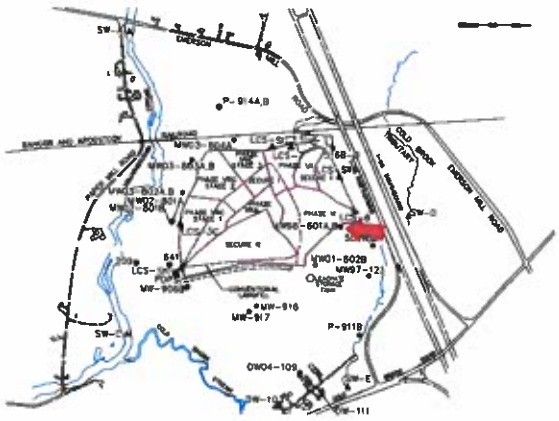
Q4= 10 - 2021

Data Group: 445
Printed: 3/29/2022 07:24

SME SEVEE & MAHER ENGINEERS

Well Description

Well located downgradient (north) from the Conventional Landfill and (east) from the Secure III Landfill.



Screen Interval:	**9.6 ft. to 14.6 ft.**
Sampled:	**2 Times Annually**
Sampled Since:	**Oct-98**
Material Screened:	**Overburden**
Well Condition:	**Good**
Sampling Method:	**Low Flow**

Chemical Summary

Indicator Parameters	2021 Q1	2021 Q2	2021 Q3	2021 Q4	Historical (1/1/1990 - 12/31/2021) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		1434		1510	628	to 2840	1600	± 48	59
pH (STU)		6.7		6.2	5.8	to 7.2	6.4	± 0.026	59
Temperature (Deg C)		14		13.8	4.7	to 19	12	± 0.48	59
Water Level Depth (Feet)		6.4		7.2	5.13	to 10.97	7.5	± 0.2	59
Water Level Elevation (Feet)		112.39		111.59	107.82	to 113.62	110	± 0.2	59
Eh (mV)		106		108	-38	to 400	160	± 12	58
Dissolved Oxygen (mg/L)		0.7		2	0	to 6.3	1.3	± 0.19	58
Turbidity (field) (NTU)		3		1.6	0	to 4.6	0.86	± 0.15	58

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

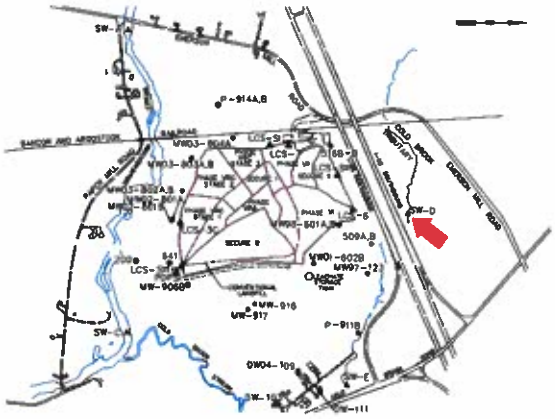
See summary report in Appendix for specific sample dates.

Q2= 4 - 2021

Q4= 10 - 2021

Well Description

Sample point located on Cold Brook Stream, upstream and to the north of the SERF site across Interstate 95.



Sampled: **2 Times Annually**

Sampled Since: **Sept-96**

Sampling Method: **Grab**

Chemical Summary

Indicator Parameters	2021 Q1	2021 Q2	2021 Q3	2021 Q4	Historical (1/1/1990 - 12/31/2021) Min		Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		421		271	60	to	938	430	± 29	66
pH (STU)		7.7		7.2	6	to	8.4	7.4	± 0.067	66
Temperature (Deg C)		7.8		8.2	0.1	to	23.8	9.5	± 0.68	66
Eh (mV)		329		409	96	to	616	320	± 11	65
Dissolved Oxygen (mg/L)		10.6		7.2	4	to	13.2	6.5	± 0.26	66
Arsenic (mg/L)		0.005 U		0.005 U	0.001	to	0.014	0.0064	± 0.000	26
Calcium (mg/L)		30		23	7.2	to	109	41	± 3.2	66
Iron (mg/L)		0.29		0.33	0.02	to	2.11	0.37	± 0.037	66
Magnesium (mg/L)		7.9		5.7	2	to	13.7	7.4	± 0.42	64
Manganese (mg/L)				0.05 U	0.02 U	to	0.59	0.097	± 0.013	51
Potassium (mg/L)		1.3		1.3	0.4	to	23	2.3	± 0.35	66
Sodium (mg/L)		51		33	7.1	to	89	37	± 2.4	66
Total Dissolved Solids (mg/L)		297		206	117	to	566	310	± 25	25
Sulfate (mg/L)		4 U		10 U	2	to	29	8.3	± 0.66	66
Bicarbonate Alkalinity (CaCO3) (mg/L)		71		71	15.1	to	251	110	± 8.9	66
Organic Carbon (mg/L)		8.7		11	0.7	to	18.4	7.6	± 0.58	65
Chloride (mg/L)		97		48	12.3	to	180	67	± 4.6	66
Turbidity (field) (NTU)		0.7		0.6	0	to	23.6	3.8	± 0.54	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:
Chloride MFCCC=230 mg/L, Arsenic MFCCC=0.15 mg/L, Iron MFCCC=1 mg/L, Lead MFCCC=0.00041 mg/L, Nickel MFCCC=0.0134 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

See summary report in Appendix for specific sample dates.

Q2= 4 - 2021 U = Not Detected above the laboratory reporting limit.

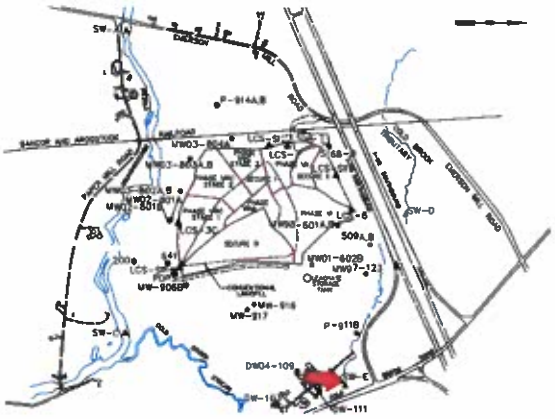
Q4= 10 - 2021

Data Group: 445
Printed: 2/24/2022 13:38

SME SEVEE & MAHER ENGINEERS

Well Description

Sample point located on Cold Brook Stream, downgradient and to the ortheast of the SERF site and on the same side of Interstate 95.



Sampled: **2 Times Annually**

Sampled Since: **Sept-96**

Sampling Method: **Grab**

Chemical Summary

Indicator Parameters	2021 Q1	2021 Q2	2021 Q3	2021 Q4	Historical (1/1/1990 - 12/31/2021) Min		Max	Mean		SE	n
Specific Conductance (µmhos/cm @25°C)		687		495	180	to	1046	600	±	27	65
pH (STU)		7.8		7.4	6.1	to	8.3	7.6	±	0.064	65
Temperature (Deg C)		9.4		8.6	0.2	to	20.4	9.5	±	0.6	65
Eh (mV)		339		397	86	to	543	320	±	11	65
Dissolved Oxygen (mg/L)		9.2		7.6	4	to	17.2	7.4	±	0.3	65
Arsenic (mg/L)		0.005		0.005 U	0.001 U	to	0.03	0.0089	±	0.001	26
Calcium (mg/L)		69		55	12.3	to	109	64	±	3.5	65
Iron (mg/L)		0.2		0.31	0.09	to	1.74	0.33	±	0.032	65
Magnesium (mg/L)		11		9	2.9	to	17	9.9	±	0.45	63
Manganese (mg/L)				0.11	0.06	to	0.93	0.28	±	0.026	50
Potassium (mg/L)		1.8		1.7	1	to	3.8	2.2	±	0.081	65
Sodium (mg/L)		68		56	13.2	to	110	47	±	2.4	65
Total Dissolved Solids (mg/L)		467		348	155	to	582	400	±	24	25
Sulfate (mg/L)		10 U		10 U	3.4	to	25.5	11	±	0.63	65
Bicarbonate Alkalinity (CaCO3) (mg/L)		180		150	35	to	272	170	±	9.7	65
Organic Carbon (mg/L)		4.8		6.7	1.4	to	16.6	5.3	±	0.39	65
Chloride (mg/L)		150		90	16.9	to	180	87	±	4.4	65
Turbidity (field) (NTU)		2.1		0.4	0	to	37.2	3.3	±	0.62	65

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, Arsenic MFCCC=0.15 mg/L, Iron MFCCC=1 mg/L, Lead MFCCC=0.00041 mg/L, Nickel MFCCC=0.0134 mg/L

↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

Comments

See summary report in Appendix for specific sample dates.

Q2= 4 - 2021 U = Not Detected above the laboratory reporting limit.

Q4= 10 - 2021

Data Group: 445
Printed: 2/24/2022 13:38

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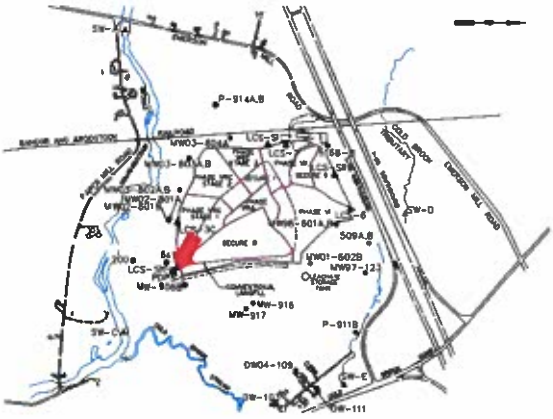
LEACHATE

SME
SEVEE & MAHER
ENGINEERS

Well Description

Sample collected from perimeter drain at the southeastern toe of the Conventional Landfill.



Sampled: **2 Times Annually**

Sampled Since: **June-91**

Sampling Method: **Grab**

Chemical Summary

Indicator Parameters	2021 Q1	2021 Q2	2021 Q3	2021 Q4	Historical (1/1/1990 - 12/31/2021) Min		Max	Mean		SE	n
Specific Conductance (µmhos/cm @25°C)		1810		3240	880	to	20000	4800	±	320	86
pH (STU)		6.8		7.4	5.5	to	7.8	6.8	±	0.041	86
Temperature (Deg C)		17.9		16.1	2.2	to	26.6	15	±	0.59	86
Eh (mV)		131		81	-21	to	357	160	±	8.3	86
Dissolved Oxygen (mg/L)		1.6		2.7	0.1	to	7.6	2	±	0.15	85
Arsenic (mg/L)		0.21		0.19	0.012	to	1.31	0.23	±	0.031	49
Calcium (mg/L)		110		100	72	to	1250	190	±	17	84
Cobalt (mg/L)				0.01	0.01 U	to	0.05 U	0.023	±	0.005	11
Iron (mg/L)		9.7		2.3	1.25	to	1900	79	±	26	85
Lead (mg/L)				0.003 U	0.001	to	0.09	0.011	±	0.003	32
Magnesium (mg/L)		45		52	24	to	220	93	±	4.6	80
Manganese (mg/L)				0.48	0.19	to	16	3.3	±	0.38	67
Nickel (mg/L)				0.076	0.04 U	to	0.303	0.14	±	0.021	14
Potassium (mg/L)		44		77	11	to	3000	180	±	36	83
Sodium (mg/L)		160		300	22	to	2500	530	±	42	85
Total Dissolved Solids (mg/L)		1018		1510	380	to	7100	2000	±	210	42
Sulfate (mg/L)		20 U		18	0.2 U	to	1390	66	±	19	85
Bicarbonate Alkalinity (CaCO3) (mg/L)		760		1100	450	to	4300	1600	±	80	83
Organic Carbon (mg/L)		38		76	0.5 U	to	5450	310	±	69	85
Chloride (mg/L)		200		360	8.1	to	7940	990	±	110	85
Turbidity (field) (NTU)		16.3		1.9	0	to	104	17	±	2.6	70
Methane (ug/L)				130	120	to	6960	2100	±	340	28

underlined/bold - values exceed a regulatory standard listed below.

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↑ indicates a value greater than the historical maximum value; ↓ indicates a value less than the historical minimum value.

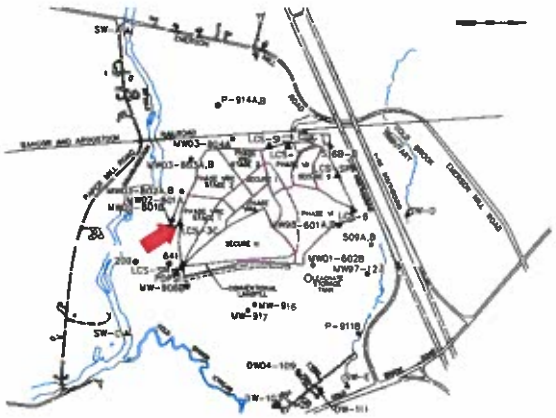
Comments

See summary report in Appendix for specific sample dates.

Q2= 4 - 2021 U = Not Detected above the laboratory reporting limit.
Q4= 10 - 2021

Well Description

Sample collected from the leachate collection system beneath Secure III Phase VIII-C stage 1.



Sampled: **2 Times Annually**

Sampled Since: **2011**

Sampling Method: **Grab**

Chemical Summary

Indicator Parameters	2021 Q1	2021 Q2	2021 Q3	2021 Q4	Historical (1/1/1990 - 12/31/2021) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)		↓12190		32200	14396	to 47600	35000	± 2700	16
pH (STU)		7.5		7.6	6.4	to 7.8	7.2	± 0.11	16
Temperature (Deg C)		16.7		16.4	16	to 30.3	23	± 1.2	16
Eh (mV)		-315		-167	-101	to 220	100	± 23	16
Dissolved Oxygen (mg/L)		2.2		1.7	0.4	to 6	1.8	± 0.45	13
Arsenic (mg/L)		↓0.17		0.46	0.22	to 0.66	0.47	± 0.033	15
Calcium (mg/L)		110		140	110	to 522	230	± 38	15
Cobalt (mg/L)				0.1 U	0.01 U	to 0.1 U	0.047	± 0.01	10
Iron (mg/L)		↓3.1		7.4	4.7	to 23.4	10	± 1.5	15
Lead (mg/L)				0.03 U	0.003 U	to 0.03 U	0.016	± 0.004	10
Magnesium (mg/L)		↓42		110	64	to 376	190	± 23	15
Manganese (mg/L)				0.5 U	0.16	to 3 U	0.85	± 0.29	10
Nickel (mg/L)				0.12	0.058	to 0.175	0.097	± 0.012	10
Potassium (mg/L)		↓440		1300	520	to 2668	1700	± 130	15
Sodium (mg/L)		↓1400		3900	1600	to 7005	4700	± 350	15
Total Dissolved Solids (mg/L)		↓7160		↓6360	9270	to 25640	20000	± 1000	15
Sulfate (mg/L)		100 U		42	26	to 5100	1500	± 390	15
Bicarbonate Alkalinity (CaCO3) (mg/L)		1800		1700	1500	to 5500	4300	± 340	15
Organic Carbon (mg/L)		18		960	2 U	to 3100	1200	± 200	15
Chloride (mg/L)		↓2700		↓2500	8210	to 32600	17000	± 1800	15
Turbidity (field) (NTU)		1.4		↓1	1.2	to 1946	230	± 140	15
Methane (ug/L)				↓410	460	to 5560	1900	± 510	10

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

See summary report in Appendix for specific sample dates.

Q2= 4 - 2021 U = Not Detected above the laboratory reporting limit.

Q4= 10 - 2021

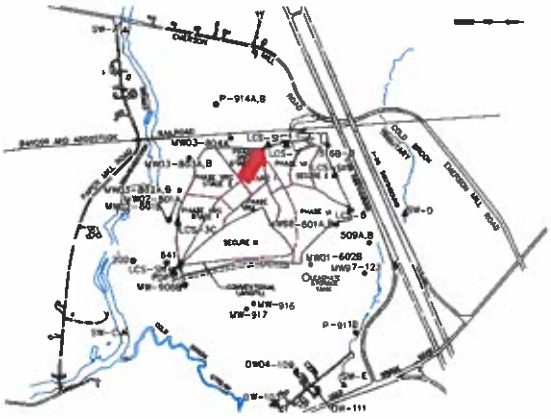
Data Group: 445

Printed: 2/28/2022 07:12

SME SEVEE & MAHER ENGINEERS

Well Description

Sample collected from the leachate collection system beneath Secure I.



Sampled: **Once every five years**

Sampled Since: **2011**

Sampling Method: **Grab**

Chemical Summary

Indicator Parameters	2021 Q1	2021 Q2	2021 Q3	2021 Q4	Historical (1/1/1990 - 12/31/2021) Min	Max	Mean	SE	n
Specific Conductance (µmhos/cm @25°C)				↓11140	14900	to 18130	16000	± 510	6
pH (STU)				↑8.8	6.7	to 8.4	7.6	± 0.23	6
Temperature (Deg C)				13.2	6.7	to 15.5	9	± 1.4	6
Eh (mV)				-81	-153	to 279	26	± 66	6
Dissolved Oxygen (mg/L)				1.5	No historical data for Dissolved Oxygen.				
Arsenic (mg/L)				0.14	0.095	to 0.213	0.14	± 0.023	6
Calcium (mg/L)				36	30.8	to 56.5	45	± 3.8	6
Cobalt (mg/L)				↑0.08	0.032	to 0.066	0.05	± 0.007	5
Iron (mg/L)				6.3	0.52	to 14.5	4	± 2.3	6
Lead (mg/L)				↑0.025	0.002	to 0.024	0.011	± 0.004	6
Magnesium (mg/L)				↓28	311	to 772	590	± 71	6
Manganese (mg/L)				↓0.06	0.16	to 0.7	0.52	± 0.078	6
Nickel (mg/L)				0.29	0.184	to 0.425	0.28	± 0.041	6
Potassium (mg/L)				↓360	401	to 692	520	± 42	6
Sodium (mg/L)				↓1600	1887	to 2756	2300	± 140	6
Total Dissolved Solids (mg/L)				↓6220	9078	to 10410	9500	± 200	6
Sulfate (mg/L)				↓20 U	979	to 3340	1800	± 430	6
Bicarbonate Alkalinity (CaCO3) (mg/L)				↓3400	5630	to 6870	6100	± 190	6
Organic Carbon (mg/L)				530	31	to 1510	640	± 200	6
Chloride (mg/L)				1800	1710	to 11400	3900	± 1500	6
Turbidity (field) (NTU)				↓0.1	0.6	to 8.9	4.8	± 1.3	6
Methane (ug/L)				↓20 U	60	to 8750	4000	± 1600	6

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

See summary report in Appendix for specific sample dates.

Q2= 4 - 2021 U = Not Detected above the laboratory reporting limit.

Q4= 10 - 2021

Data Group: 445

Printed: 2/28/2022 07:12

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APPENDIX C

MANN-KENDALL TREND ANALYSIS RESULTS

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Summary of Mann-Kendall Trend Analysis
95% Confidence (alpha=0.05)
Pinetree Landfill 2021

M-K 3-Year post-closure: 5/1/2018 to 5/1/2021 M-K 5-Year post-closure: 5/1/2016 to 5/1/2021

	Increasing Trends		Decreasing Trends		NoTrends	
LOCATION	3 Year	5 Year	3 Year	5 Year	3 Year	5 Year
200		K	Spec Cond		OC, Cl, HCO3, SO4, TDS, Na, K, Mg, Ca, As, DO, Eh, Water Elev., WLE NGVD29ft, pH, Temp, Fe	HCO3, Spec Cond, OC, SO4, TDS, Na, Ni, Mn, Mg, Pb, Co, Ca, As, DO, Eh, Water Elev., WLE NGVD29ft, pH, Temp, Cl, Fe
509A		pH		DO	WLE NGVD29ft, DO, Spec Cond, Water Elev., Temp, pH, Eh	WLE NGVD29ft, Water Elev., Temp, Spec Cond, Eh
509B		Fe	Eh	Mn, HCO3, Eh, Na	Mg, Spec Cond, Cl, OC, HCO3, SO4, TDS, Na, K, pH, Ca, As, DO, Water Elev., WLE NGVD29ft, Fe,	pH, Cl, OC, SO4, TDS, K, Ni, Spec Cond, Pb, Co, Ca, As, DO, Water Elev., Temp, Mg, WLE NGVD29ft
516B-B			TDS, DO	Ca, DO, Spec Cond	Na, SO4, HCO3, OC, Ca, K, Cl, Mg, Fe, Spec Cond, As, Eh, Temp, pH	Cl, OC, HCO3, Ni, SO4, TDS, Na, Mn, K, Mg, pH, Pb, Fe, Co, As, Eh, Temp
641					Mg, K, Na, TDS, SO4, Fe, Cl, OC, HCO3, As, DO, Eh, Water Elev., WLE NGVD29ft, Temp, pH, Spec Cond, Ca	Mg, Ni, K, Na, TDS, SO4, HCO3, Methane, Cl, Pb, OC, pH, Co, Spec Cond, Ca, As, DO, Eh, Water Elev., WLE NGVD29ft, Temp, Fe, Mn
DW04-109			Methane	Methane, Cl	Spec Cond, DO, Eh, WLE NGVD29ft, Temp, pH, Water Elev.	Mg, OC, HCO3, SO4, TDS, Na, K, Ni, Mn, Spec Cond, Fe, Co, Ca, As, DO, Eh, Water Elev., WLE NGVD29ft, Temp, Pb, pH
DW-103		TDS			Methane, pH, Temp, Eh, DO, Spec Cond	Methane, Cl, OC, HCO3, SO4, K, Ni, Mn, Mg, pH, Pb, Temp, Eh, DO, As, Ca, Spec Cond, Co, Fe, Na
LCS-3C			Na, TDS, SO4, As, OC, Cl, Spec Cond, K, Mg	Cl, Ca, Mg, Spec Cond, K, TDS, Na	HCO3, Ca, pH, DO, Eh, Temp, Fe	Ni, SO4, OC, HCO3, Mn, Pb, Fe, As, Methane, DO, Eh, Temp, pH, Co
MW01-602B					Water Elev., Eh, WLE NGVD29ft, Temp, pH, Spec Cond, DO	Water Elev., DO, Eh, Temp, WLE NGVD29ft, Spec Cond, pH
MW02-801A			Mg, Spec Cond, TDS, Na	HCO3, Ni, K, Na, TDS, Mg, Spec Cond, Methane	Fe, Cl, OC, HCO3, SO4, Ca, pH, As, DO, Eh, Water Elev., WLE NGVD29ft, Temp, K	OC, Cl, Mn, SO4, Fe, Co, Ca, As, DO, Eh, Water Elev., WLE NGVD29ft, Temp, pH, Pb
MW02-801B					Temp, DO, Eh, WLE NGVD29ft, pH, Spec Cond, Water Elev.	WLE NGVD29ft, Eh, Water Elev., pH, Spec Cond, DO, Temp
MW03-802A	Na		Temp	Temp, SO4	Fe, Cl, OC, HCO3, SO4, TDS, Mg, Spec Cond, Ca, As, DO, Eh, Water Elev., WLE NGVD29ft, pH, K	K, Methane, Cl, OC, HCO3, Na, Ni, Mn, Mg, Water Elev., TDS, Pb, Spec Cond, WLE NGVD29ft, Eh, DO, As, Ca, Co, Fe, pH
MW03-802B				Mg, Spec Cond, Ca, Eh, DO	Eh, Water Elev., WLE NGVD29ft, Temp, Spec Cond, DO, pH	K, Na, Methane, TDS, SO4, HCO3, Cl, Ni, OC, Pb, Fe, As, Water Elev., WLE NGVD29ft, Temp, pH, Co, Mn
MW03-803A				DO, Temp	Water Elev., DO, Eh, WLE NGVD29ft, Temp, Spec Cond, pH	OC, Mg, Mn, Ni, K, Pb, TDS, Na, Fe, Co, Ca, As, Water Elev., WLE NGVD29ft, pH, Spec Cond, HCO3, Eh, Cl, Methane, SO4
MW03-803B		K, pH, TDS, Na, Mg		Temp	Mg, Cl, OC, Spec Cond, HCO3, SO4, TDS, Na, K, pH, Ca, As, DO, Eh, Water Elev., WLE NGVD29ft, Fe, Temp	Methane, Cl, OC, HCO3, SO4, Mn, Eh, Spec Cond, Ni, Water Elev., Pb, DO, As, Ca, Co, Fe, WLE NGVD29ft
MW03-804A					DO, Eh, Water Elev., WLE NGVD29ft, Temp, pH, Spec Cond	Spec Cond, pH, Temp, WLE NGVD29ft, Water Elev., Eh, DO
MW-906B				Na, Spec Cond	pH, TDS, Spec Cond, Cl, OC, SO4, Na, K, Mg, WLE NGVD29ft, HCO3, Temp, Fe, Water Elev., Eh, DO, As,	Cl, OC, HCO3, pH, TDS, K, Ni, Mn, Mg, Temp, Fe, Co, Ca, As, DO, Eh, Water Elev., WLE NGVD29ft, Pb, SO4

MW-916		DO, pH			Mg, Water Elev., OC, HCO3, SO4, TDS, Na, K, Cl, pH, DO, Spec Cond, Fe, Temp, WLE NGVD29ft, Eh, As, Ca	Methane, Cl, OC, HCO3, Ni, SO4, TDS, Na, K, Pb, Temp, Mg, WLE NGVD29ft, Water Elev., Eh, As, Co, Fe, Mn, Spec Cond, Ca
MW-917			Fe, TDS, As	Cl, Fe, As	SO4, HCO3, Na, K, Mg, Cl, pH, Ca, OC, Temp, Spec Cond, WLE NGVD29ft, Water Elev., Eh, DO	OC, Ni, K, Na, TDS, Methane, HCO3, Mn, SO4, WLE NGVD29ft, Mg, Temp, Spec Cond, Water Elev., Eh, DO, Ca, Co, Pb, pH
MW97-123					Eh, Mg, OC, HCO3, SO4, TDS, Na, K, Cl, Fe, Ca, DO, Water Elev., WLE NGVD29ft, Temp, pH, Spec Cond, As	Na, Spec Cond, Mn, Ni, K, TDS, SO4, HCO3, Cl, Fe, OC, Co, Ca, As, DO, Eh, Water Elev., WLE NGVD29ft, Temp, pH, Pb, Mg
MW98-601A			Spec Cond	Spec Cond, Eh	Water Elev., Eh, DO, pH, Temp, WLE NGVD29ft	DO, Water Elev., WLE NGVD29ft, Temp, pH
MW98-601B					Spec Cond, pH, Temp, WLE NGVD29ft, Water Elev., Eh, DO	DO, Eh, Water Elev., Spec Cond, WLE NGVD29ft, pH, Temp
P-911B					Temp, DO, Eh, WLE NGVD29ft, pH, Spec Cond, Water Elev.	DO, Eh, Water Elev., WLE NGVD29ft, Temp, pH, Spec Cond
P-914A	TDS, K	Ca, Mg, TDS			Mg, Cl, OC, HCO3, SO4, Na, Eh, Ca, DO, As, Water Elev., WLE NGVD29ft, Temp, pH, Spec Cond, Fe	OC, HCO3, SO4, Na, K, Ni, Mn, Cl, Pb, Fe, As, DO, Eh, Water Elev., WLE NGVD29ft, Temp, pH, Spec Cond, Co
P-914B		Spec Cond, DO			Temp, DO, Eh, WLE NGVD29ft, pH, Spec Cond, Water Elev.	Eh, pH, Temp, WLE NGVD29ft, Water Elev.
PDPS		Ca	OC	As	Mg, Fe, Cl, HCO3, SO4, TDS, Na, Spec Cond, Ca, As, DO, Eh, Temp, pH, K	Ni, Methane, Cl, OC, HCO3, SO4, TDS, K, Mn, Spec Cond, Pb, Fe, Co, DO, Eh, Temp, pH, Mg, Na
SW-A	DO		Spec Cond		K, HCO3, SO4, TDS, Na, OC, Mg, Fe, Ca, Eh, Cl, Temp, pH, As	K, Na, Cl, TDS, Eh, SO4, HCO3, Mn, OC, As, Mg, Spec Cond, pH, Temp, DO, Ca, Fe
SW-C			Spec Cond		TDS, pH, Cl, OC, SO4, Na, K, Temp, Fe, Ca, As, DO, Eh, Mg, HCO3	Mg, Mn, OC, HCO3, SO4, TDS, Na, Cl, pH, Fe, Ca, As, DO, Eh, Temp, K, Spec Cond
SW-D					Mg, Cl, Na, TDS, SO4, OC, Fe, HCO3, As, DO, Eh, Temp, pH, Spec Cond, K, Ca	K, Na, Cl, TDS, SO4, OC, Eh, Mn, HCO3, Fe, Ca, DO, Temp, pH, Spec Cond, As,
SW-E			Spec Cond, TDS		Na, SO4, K, OC, Eh, HCO3, Mg, Fe, Ca, DO, Temp, pH, Cl, As	OC, K, Na, TDS, Mn, HCO3, Eh, SO4, Mg, Fe, Ca, DO, Temp, pH, Spec Cond, Cl, As

Key

As = Arsenic
Co = Cobalt
Fe = Iron
Methane = Methane
Na = Sodium
Pb = Lead
Spec Cond = Specific Conductance
Turb = Turbidity

Ca = Calcium
DO = Dissolved Oxygen
HCO3 = Bicarbonate Alkalinity (CaCO3)
Mg = Magnesium
Ni = Nickel
pH = pH
TDS = Total Dissolved Solids
Water Elev. = Water Level Elevation

Cl = Chloride
Eh = Eh
K = Potassium
Mn = Manganese
OC = Organic Carbon
SO4 = Sulfate
Temp = Temperature

- Values below the laboratory PQL (non-detects) are divided by 2. All other data qualifiers are ignored but any associated value is used.

- Samples collected for data quality control are not analyzed.

- Data sets with less than 5 data points are not analyzed.

- Data sets with a period shorter than the intended period of analysis (e.g. 3-yr analysis or 5-yr analysis) are not analyzed.

- Significant events in historical data can affect the distribution in a way that compromises the assumption of a monotonic data set. Events could include the cessation of filtering, a spill, changing sampling protocols or analytical method changes that alter the detection limit.

REFERENCES:

State of Wisconsin, Department of Natural Resources, Remediation and Redevelopment Program Mann-Kendall Statistical Test, Form 4400-215 (2/2001)

Gilbert, R.O., Statistical Methods for Environmental Pollution Monitoring, Van Nostrand Reinhold, 1987, pp. 204 – 240 and 272.

Hollander, M. and Wolfe, A.M Nonparameteric Statistical Methods, John Wiley Sons, 1999

APPENDIX D

LEAK DETECTION DATA

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Pine Tree Landfill Total Flows 2021 (Gallons)															
Month	Secure	Secure	Secure III		Perimeter	Phase VI		Phase VII		Phase 8-C		VIIIA		Bangor	Bangor Airport
	I	II	LC	LD	Drain	LC	LD **	LC	LD *	LC	LD	LD-(E)	LD-(W)	System	Rainfall (inches)
January	0	188,606	31,321	285	447,151	24,396	325	13,109	3,106	88,650	3,121	0	0	929,499	1.39
February	0	142,149	28,085	475	124,448	13,855	160	8,474	250	73,952	0	0	0	636,464	1.99
March	0	171,877	31,729	558	490,820	24,309	531	14,715	4,849	89,503	6,253	0	0	799,701	1.76
April	0	165,361	29,411	449	449,663	23,315	120	14,064	4,902	94,674	3,193	0	0	896,415	3.63
May	0	163,084	27,696	287	251,196	21,420	114	10,780	2,523	77,244	3,145	0	0	725,135	1.82
June	0	131,396	26,501	440	128,599	14,568	696	8,843	85	65,728	0	0	0	548,617	0.97
July	527	113,866	28,850	413	289,208	20,751	1,354	10,922	1,890	68,046	3,125	0	0	597,834	7.67
August	0	92,763	27,405	389	87,216	14,073	163	9,075	212	65,028	0	0	0	301,011	1.78
September	293	98,791	24,386	745	225,880	15,082	62	11,545	3,197	76,300	9,324	0	0	739,419	9.42
October	0	112,708	14	17	208,385	16,780	13	10,996	1,937	63,419	0	0	0	499,204	4.45
November	0	175,421	35,359	733	667,316	19,796	497	16,826	7,930	78,074	422	0	0	1,106,274	3.44
December	0	210,400	29,852	508	666,058	21,886	899	15,633	6,330	86,417	8,292	0	0	1,195,005	2.53
Total Flows (gal)	820	1,766,422	320,609	5,299	4,035,940	230,231	4,934	144,982	37,211	927,035	36,875	0	0	8,974,578	40.85
Daily Average Flow (gpd)	2	4,840	878	15	11,057	631	14	397	102	2,540	101	0	0	24,588	

* Low pump flows for Secure III LC in October were a result of a pump failure. The pump was replaced in November after a longer than expected lead time due to unavailability.

**Some monthly flows are above ALR1, but not daily flows. Exceedances of ALR1 of 130 gpd did not occur for 4 straight weeks in March, April, November, or December.

2020 Flow Totals															
Total Flows (gal)	1,719	1,923,095	351,915	10,390	3,811,390	239,440	10,844	157,566	42,115	1,099,526	33,674	0	0	8,723,714	52.00
Daily Average Flow (gpd)	5	5,254	962	28	10,414	654	30	431	115	3,004	92	0	0	23,835	

Areas		
	Phase VI=10.5	ALR1 = 210 gpd
	PhaseVII=6.5	ALR1 = 130 gpd
	PhaseVIII-C Stge1,2,3= 16.8	ALR1 = 336 gpd
	Phases I-V and VIII-A=13.52	ALR1 = 676 gpd

APPENDIX E

2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING RESULTS

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SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
EAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
MW-916	Mar-13	1.1	0.0	0.1	20.6	79.3
	Apr-13	-1.1	0.0	0.0	20.5	79.5
	Aug-13	0.2	0.0	0.0	20.2	79.8
	Dec-13	-15.2	4.8	1.0	15.1	79.1
	Mar-14	0.010	13.6	3.8	15.3	67.3
	Jun-14	0.026	0.0	0.0	20.8	79.2
	Sep-14	0.003	0.0	0.1	20.0	79.9
	Dec-14	0.1	0.1	0.0	20.2	79.6
	Mar-15	0.1	0.0	0.0	22.1	77.9
	May-15	-0.013	0.2	0.0	20.7	79.2
	Aug-15	0.2	0.0	0.0	21.5	78.5
	Dec-15	0	0.1	0.1	21.3	78.5
	Jan-16	0.3	0.2	0.2	15.9	83.7
	Sep-16	0	0.0	0.0	21.2	78.8
	Dec-16	NR	0.0	0.2	20.5	79.3
	Mar-17	-97.2	0.0	0.1	21.1	78.8
	Jun-17	-0.04	2.2	0.9	17.1	79.8
	Sep-17	0	25.2	5.8	6.4	62.6
	Dec-17	0.1	0.1	0.0	23.1	76.8
	Jan-18	-0.02	5.4	1.4	20.0	73.2
	May-18	-0.04	0.4	0.1	19.1	80.4
	Jul-18	-0.12	0.0	0.0	18.9	81.1
	Oct-18	0.02	0.1	0.1	21.6	78.3
	Mar-19	0.3	0.0	0.0	20.3	79.7
	May-19	-0.4	0.0	0.0	20.9	79.1
	Sep-19	0.5	0.0	0.0	21.6	78.4
	Dec-19	-0.1	0.0	0.1	21.5	78.4
	Mar-20	0	0.0	0.1	20.8	79.1
	May-20	0.1	0.0	0.1	20.8	79.1
	Jul-20	-0.002	0.0	0.0	21.6	78.4
	Dec-20	-0.048	0.0	0.1	21.8	78.1
	Jan-21	-0.13	0.0	0.1	21.5	78.4
	May-21	-0.05	0.0	0.0	21.6	78.3
	Aug-21	-0.02	0.0	0.0	20.5	79.5
	Dec-21	0	0.0	0.0	22.0	78.0

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
EAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
MW-917	Mar-13	NR	NR	NR	NR	NR
	Apr-13	NR	NR	NR	NR	NR
	Aug-13	NR	NR	NR	NR	NR
	Dec-13	NR	NR	NR	NR	NR
	Mar-14	NR	NR	NR	NR	NR
	Jun-14	NR	NR	NR	NR	NR
	Sep-14	NR	NR	NR	NR	NR
	Dec-14	NR	NR	NR	NR	NR
	Mar-15	NR	NR	NR	NR	NR
	May-15	NR	NR	NR	NR	NR
	Aug-15	NR	NR	NR	NR	NR
	Dec-15	NR	NR	NR	NR	NR
	Jan-16	NR	NR	NR	NR	NR
	Sep-16	NR	NR	NR	NR	NR
	Dec-16	NR	NR	NR	NR	NR
	Mar-17	NR	NR	NR	NR	NR
	Jun-17	NR	NR	NR	NR	NR
	Sep-17	NR	NR	NR	NR	NR
	Dec-17	NR	NR	NR	NR	NR
	Jan-18	NR	NR	NR	NR	NR
	May-18	NR	NR	NR	NR	NR
	Jul-18	NR	NR	NR	NR	NR
	Oct-18	NR	NR	NR	NR	NR
	Mar-19	NR	NR	NR	NR	NR
	May-19	NR	NR	NR	NR	NR
	Sep-19	NR	NR	NR	NR	NR
	Dec-19	NR	NR	NR	NR	NR
	Mar-20	NR	NR	NR	NR	NR
	May-20	NR	NR	NR	NR	NR
	Jul-20	NR	NR	NR	NR	NR
	Dec-20	NR	NR	NR	NR	NR
	Jan-21	NR	NR	NR	NR	NR
	May-21	NR	NR	NR	NR	NR
	Aug-21	NR	NR	NR	NR	NR
	Dec-21	NR	NR	NR	NR	NR

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
EAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
P04-707	Mar-13	0.5	0.0	6.5	0.0	93.5
	Apr-13	0.4	0.0	6.0	0.0	94.0
	Aug-13	0.16	0.0	3.2	17.3	79.5
	Dec-13	-14.4	0.2	8.3	1.0	90.5
	Mar-14	-0.976	17.2	7.9	0.1	74.8
	Jun-14	1.477	0.0	6.1	12.9	81.0
	Sep-14	0.005	0.0	1.9	17.7	80.4
	Dec-14	-5.2	0.0	4.3	2.6	93.0
	Mar-15	-0.8	0.0	1.5	18.2	80.3
	May-15	8.53	0.2	4.2	2.0	93.7
	Aug-15	-0.9	0.0	1.4	19.9	78.7
	Dec-15	0.3	0.1	4.1	8.4	87.4
	Jan-16	-0.3	0.0	3.7	2.8	93.5
	Sep-16	NR	0.0	2.5	19.8	NR
	Dec-16	NR	0.0	NR	15.9	NR
	Mar-17	-16.5	0.0	2.9	8.1	89.0
	Jun-17	-0.67	2.3	4.5	2.9	90.3
	Sep-17	0.02	0.0	4.3	16.2	79.5
	Dec-17	-0.2	0.2	5.7	10.2	83.9
	Jan-18	0.06	0.0	6.7	4.1	89.1
	May-18	-17.01	0.0	3.0	0.7	96.3
	Jul-18	-0.15	0.0	3.0	15.8	81.2
	Oct-18	0.02	0.0	3.6	16.6	79.7
	Mar-19	-1.4	0.0	4.5	7.5	88.0
	May-19	-14.7	0.0	4.1	4.2	91.7
	Sep-19	0.3	0.0	5.5	13.3	81.2
	Dec-19	-18.2	0.0	2.9	7.3	89.8
	Mar-20	-15.6	0.1	1.7	13.4	84.8
	May-20	0.1	0.0	2.0	3.8	94.2
	Jul-20	0.016	0.0	2.3	17.9	79.8
	Dec-20	0.005	0.1	3.0	18.7	78.2
	Jan-21	-8.27	0.0	4.0	10.8	85.2
	May-21	-4.10	0.4	2.0	9.4	88.1
	Aug-21	-0.03	0.1	2.8	16.1	80.9
	Dec-21	-10.4	0.0	4.2	7.1	88.7

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
EAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
P04-709	Mar-13	-0.2	0.2	0.9	17.1	81.8
	Apr-13	0.1	0.1	0.8	17.3	81.8
	Aug-13	0.01	0.0	0.4	18.8	80.8
	Dec-13	NR	0.2	3.6	4.6	91.6
	Mar-14	-52.9	0.0	0.6	18.0	81.4
	Jun-14	29.0	0.0	0.1	20.6	79.3
	Sep-14	NR	0.0	0.4	17.8	81.8
	Dec-14	-54.1	0.7	0.5	17.7	81.0
	Mar-15	0	0.0	0.4	18.0	81.6
	May-15	17.3	0.1	0.2	18.5	81.8
	Aug-15	0	0.0	0.4	19.6	80.0
	Dec-15	-0.1	1.7	1.8	8.3	88.2
	Jan-16	-1.2	1.2	0.9	17.1	80.8
	Sep-16	-0.4	0.0	NR	NR	78.7
	Dec-16	NR	0.0	NR	NR	NR
	Mar-17	-0.8	50.7	14.1	1.1	34.1
	Jun-17	0.01	73.4	19.0	0.3	7.3
	Sep-17	0.16	60.4	39.8	0.0	0.0
	Dec-17	-65.9	14.6	2.9	5.6	76.9
	Jan-18	-0.02	73.7	23.4	0.0	2.9
	May-18	-0.1	0.0	0.1	19.1	80.8
	Jul-18	-0.05	0.0	0.0	18.4	81.6
	Oct-18	0.02	0.1	0.1	20.6	79.3
	Mar-19	-0.1	0.0	0.0	19.8	80.2
	May-19	0.1	0.0	0.0	20.9	79.1
	Sep-19	0.3	0.0	0.0	21.4	78.6
	Dec-19	0	0.0	0.1	21.9	78.0
	Mar-20	0.1	0.1	0.1	21.5	78.3
	May-20	-0.1	0.0	0.1	20.6	79.3
	Jul-20	0.028	0.0	0.1	19.9	80.1
	Dec-20	0.002	0.0	0.1	21.5	78.4
	Jan-21	0.01	0.0	0.1	20.3	79.6
	May-21	-0.06	0.0	0.1	21.1	78.7
	Aug-21	-0.01	0.0	0.1	19.0	80.9
	Dec-21	0	0.0	0.0	22.3	77.7

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
EAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
05-GS-4	Mar-13	0.9	3.2	11.3	0.3	85.2
	Apr-13	0	0.3	10.5	1.1	88.0
	Aug-13	0	22.3	10.4	0.1	67.2
	Dec-13	NR	25.1	13.6	0.0	61.4
	Mar-14	-6.25	30.3	11.7	0.1	57.9
	Jun-14	0.061	36.4	12.7	0.2	50.7
	Sep-14	0.181	21.1	11.7	0.3	66.9
	Dec-14	-0.7	9.3	13.9	0.1	76.5
	Mar-15	0	0.1	9.8	0.6	89.5
	May-15	0.076	1.8	11.3	0.3	86.7
	Aug-15	0.1	0.1	10.9	0.4	88.6
	Dec-15	0	0.3	10.6	0.3	88.8
	Jan-16	-0.2	0.1	9.4	10.1	80.4
	Sep-16	0	0.0	0.3	2.0	NR
	Dec-16	NR	0.0	9.1	3.5	87.4
	Mar-17	-0.1	0.0	8.3	4.4	87.3
	Jun-17	0.07	2.2	9.8	2.0	86.0
	Sep-17	0.07	0.1	8.1	4.6	87.2
	Dec-17	0	0.1	8.9	3.6	87.4
	Jan-18	0.02	0.0	10.8	1.2	88.0
	May-18	0.83	0.5	8.5	0.5	90.5
	Jul-18	-0.1	0.0	8.4	0.4	91.2
	Oct-18	0.03	0.1	9.5	3.0	87.4
	Mar-19	0.3	0.0	5.3	7.4	87.3
	May-19	-0.3	0.0	5.7	4.0	90.3
	Sep-19	0.1	0.0	3.4	16.4	80.2
	Dec-19	-0.8	0.0	5.3	8.3	86.4
	Mar-20	0.2	0.0	5.8	8.0	86.2
	May-20	0.1	0.0	5.0	13.4	81.5
	Jul-20	-0.011	0.0	5.5	12.4	82.1
	Dec-20	0.228	0.0	7.1	4.5	88.4
	Jan-21	-0.28	0.0	7.9	4.8	87.3
	May-21	-0.33	0.0	0.0	21.3	78.7
	Aug-21	-0.14	0.0	0.1	20.2	79.8
	Dec-21	0	0.1	0.0	22.3	77.6

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
EAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
05-GS-5	Mar-13	0.8	0.0	0.1	21.0	78.9
	Apr-13	0	0.0	5.0	13.0	82.0
	Aug-13	0	0.0	3.5	15.5	81.0
	Dec-13	NR	6.0	10.6	0.0	83.4
	Mar-14	-0.800	5.2	9.8	0.8	84.2
	Jun-14	0.148	7.7	7.5	6.2	78.6
	Sep-14	0.218	4.2	8.7	2.4	84.7
	Dec-14	-1.0	0.1	7.2	9.2	83.4
	Mar-15	0.1	0.0	0.1	22.8	77.1
	May-15	0.117	0.1	6.8	13.7	79.4
	Aug-15	0.1	0.0	0.3	20.8	78.9
	Dec-15	-0.1	0.1	6.7	14.4	78.8
	Jan-16	-0.1	0.1	2.3	20.3	77.3
	Sep-16	-0.1	0.0	1.5	20.5	NR
	Dec-16	NR	0.0	7.5	10.5	NR
	Mar-17	-0.2	0.0	9.9	7.3	82.8
	Jun-17	-10.7	2.1	8.4	11.0	78.2
	Sep-17	-0.1	0.0	6.1	12.9	81.0
	Dec-17	0.0	0.1	3.3	19.3	77.3
	Jan-18	0.3	0.0	8.8	5.2	86.0
	May-18	-15.1	0.0	6.9	12.6	80.5
	Jul-18	-0.2	0.0	4.9	12.4	82.7
	Oct-18	-0.3	0.1	3.0	17.8	79.1
	Mar-19	0.1	0.0	4.0	15.5	80.5
	May-19	-6.1	0.0	4.8	15.4	79.8
	Sep-19	-0.2	0.0	4.0	16.0	80.0
	Dec-19	-11.2	0.0	5.2	9.8	85.0
	Mar-20	0.2	0.0	1.9	17.2	80.9
	May-20	0.1	0.0	3.9	14.4	81.6
	Jul-20	0.0	0.0	4.0	15.6	80.3
	Dec-20	0.1	0.0	3.3	16.3	80.4
	Jan-21	-14.46	0.0	4.5	16.7	78.8
	May-21	-22.5	0.0	4.1	16.2	79.7
	Aug-21	-0.2	0.0	4.4	13.3	82.3
	Dec-21	-12.6	0.1	4.7	17.0	78.2

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
EAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
05-GS-6	Mar-13	NR	NR	NR	NR	NR
	Apr-13	NR	NR	NR	NR	NR
	Aug-13	NR	NR	NR	NR	NR
	Dec-13	NR	NR	NR	NR	NR
	Mar-14	NR	NR	NR	NR	NR
	Jun-14	NR	NR	NR	NR	NR
	Sep-14	NR	NR	NR	NR	NR
	Dec-14	NR	NR	NR	NR	NR
	Mar-15	NR	NR	NR	NR	NR
	May-15	NR	NR	NR	NR	NR
	Aug-15	NR	NR	NR	NR	NR
	Dec-15	NR	NR	NR	NR	NR
	Jan-16	NR	NR	NR	NR	NR
	Sep-16	NR	NR	NR	NR	NR
	Dec-16	NR	NR	NR	NR	NR
	Mar-17	NR	NR	NR	NR	NR
	Jun-17	NR	NR	NR	NR	NR
	Sep-17	NR	NR	NR	NR	NR
	Dec-17	NR	NR	NR	NR	NR
	Jan-18	NR	NR	NR	NR	NR
	May-18	NR	NR	NR	NR	NR
	Jul-18	NR	NR	NR	NR	NR
	Oct-18	NR	NR	NR	NR	NR
	Mar-19	NR	NR	NR	NR	NR
	May-19	NR	NR	NR	NR	NR
	Sep-19	NR	NR	NR	NR	NR
	Dec-19	NR	NR	NR	NR	NR
	Mar-20	NR	NR	NR	NR	NR
	May-20	NR	NR	NR	NR	NR
	Jul-20	NR	NR	NR	NR	NR
	Dec-20	NR	NR	NR	NR	NR
	Jan-21	NR	NR	NR	NR	NR
	May-21	NR	NR	NR	NR	NR
	Aug-21	NR	NR	NR	NR	NR
	Dec-21	NR	NR	NR	NR	NR

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
EAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
05-GS-7	Mar-13	2.8	0.0	0.1	21.0	78.9
	Apr-13	-3.3	0.0	0.0	20.2	79.8
	Aug-13	1	0.0	0.0	20.2	79.8
	Dec-13	-14.8	26.7	0.7	5.2	67.4
	Mar-14	-0.306	64.1	35.7	0.0	0.1
	Jun-14	1.622	0.0	0.0	21.3	78.7
	Sep-14	2.313	0.0	0.0	19.6	80.4
	Dec-14	-1.7	0.0	0.0	19.9	80.0
	Mar-15	0.1	0.0	0.0	22.4	77.6
	May-15	0.022	0.1	0.0	20.3	79.6
	Aug-15	0.2	0.0	0.0	21.7	78.3
	Dec-15	0	0.1	0.1	21.8	78.0
	Jan-16	-0.3	0.1	0.0	20.7	79.2
	Sep-16	0.1	0.0	0.0	22.2	77.8
	Dec-16	NR	0.0	0.0	22.1	NR
	Mar-17	0	0.0	0.0	21.7	78.3
	Jun-17	0	48.4	21.6	0.0	30.0
	Sep-17	0	65.1	35.0	0.0	0.0
	Dec-17	0	51.2	24.4	5.2	19.2
	Jan-18	-0.01	15.1	10.0	17.0	58.0
	May-18	-0.01	1.2	0.1	18.5	80.2
	Jul-18	-0.09	0.0	0.0	18.8	81.2
	Oct-18	-0.04	0.1	0.1	21.2	78.7
	Mar-19	0.1	0.0	0.0	20.0	80.0
	May-19	-0.3	0.0	0.0	21.1	78.9
	Sep-19	0.1	0.0	0.0	20.6	79.4
	Dec-19	0	0.0	0.1	23.0	76.9
	Mar-20	0	0.0	0.1	20.5	79.4
	May-20	-0.1	0.0	0.1	20.8	79.1
	Jul-20	0.005	0.0	0.0	21.2	78.8
	Dec-20	-0.017	0.0	0.1	21.4	78.5
	Jan-21	-0.02	0.0	0.1	20.8	79.1
	May-21	-0.04	0.0	0.1	21.4	78.4
	Aug-21	-0.04	0.0	0.0	20.4	79.6
	Dec-21	0	0.0	0.0	21.6	78.4

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
EAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
05-GS-8	Mar-13	-0.3	0.0	0.1	20.7	79.2
	Apr-13	-1	0.0	0.0	20.2	79.8
	Aug-13	0	0.0	0.0	19.8	80.2
	Dec-13	-15.1	0.2	0.1	20.4	79.3
	Mar-14	0.001	0.0	0.1	20.3	79.6
	Jun-14	0.050	0.0	0.0	20.9	79.1
	Sep-14	0.384	0.0	0.0	19.6	80.4
	Dec-14	-0.9	0.1	0.0	19.9	79.9
	Mar-15	0.2	0.0	0.0	23.4	76.6
	May-15	0.024	0.2	0.0	21.1	78.8
	Aug-15	-0.6	0.0	0.0	22.3	77.7
	Dec-15	0	0.1	0.1	22.1	77.7
	Jan-16	-0.1	0.1	0.0	20.9	79.0
	Sep-16	-0.3	0.0	0.0	22.1	77.9
	Dec-16	NR	0.0	0.1	22.0	77.9
	Mar-17	0	0.0	0.1	21.5	78.4
	Jun-17	0.01	2.1	0.2	20.4	77.3
	Sep-17	0.02	15.0	5.0	14.8	65.2
	Dec-17	-0.1	0.1	2.0	24.0	73.8
	Jan-18	0.01	1.4	1.7	17.5	79.4
	May-18	-0.04	0.0	0.0	19.5	80.5
	Jul-18	-0.06	0.0	0.0	19.0	81.0
	Oct-18	0.01	0.1	0.1	21.6	78.3
	Mar-19	0.2	0.0	0.0	20.2	79.8
	May-19	-0.2	0.0	0.0	21.1	78.9
	Sep-19	0.5	0.0	0.0	21.5	78.5
	Dec-19	-0.1	0.0	0.1	21.5	78.4
	Mar-20	0	0.0	0.1	21.0	78.9
	May-20	-0.1	0.0	0.1	20.7	79.2
	Jul-20	-0.004	0.0	0.0	21.4	78.5
	Dec-20	0.001	0.0	0.1	22.5	77.4
	Jan-21	-0.06	0.0	0.1	21.2	78.7
	May-21	-0.05	0.1	0.2	21.2	78.5
	Aug-21	0.01	0.0	0.1	18.9	81.0
	Dec-21	0	0.0	0.0	21.6	78.4

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
EAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
05-GS-9	Mar-13	-0.3	0.0	0.1	20.7	79.2
	Apr-13	-0.9	26.8	25.0	3.8	46.5
	Aug-13	0.2	26.8	18.6	1.6	53.0
	Dec-13	-13.1	61.7	36.1	0.0	2.2
	Mar-14	-0.199	55.3	21.7	0.0	23.0
	Jun-14	0.453	26.8	19.6	1.5	52.1
	Sep-14	1.29	9.3	10.9	7.4	72.4
	Dec-14	-3.6	5.4	6.0	15.0	73.4
	Mar-15	-0.5	1.6	2.4	22.5	73.5
	May-15	0.946	11.3	16.7	5.0	67.1
	Aug-15	-0.8	1.8	2.5	21.0	74.7
	Dec-15	-0.2	0.7	2.3	18.8	78.2
	Jan-16	-1.7	2.8	5.8	14.3	77.1
	Sep-16	-1.4	2.3	4.5	7.3	NR
	Dec-16	NR	26.0	23.1	1.9	49.0
	Mar-17	-0.9	2.7	7.9	12.2	77.2
	Jun-17	0.16	15.6	15.7	0.1	68.6
	Sep-17	0.8	27.1	14.9	0.0	58.0
	Dec-17	0.4	52.1	13.6	0.1	34.2
	Jan-18	0.94	69.3	17.8	0.0	12.9
	May-18	1.67	34.9	23.5	0.1	41.5
	Jul-18	-0.77	23.6	21.7	0.6	54.1
	Oct-18	-1.13	25.0	25.7	1.0	48.2
	Mar-19	-0.4	0.0	0.0	20.5	79.5
	May-19	-1.4	0.0	0.0	20.9	79.1
	Sep-19	0	14.2	10.7	4.0	71.1
	Dec-19	-1.2	14.9	16.3	1.4	67.4
	Mar-20	0	2.4	6.5	11.0	80.1
	May-20	0.1	15.2	16.1	2.4	66.2
	Jul-20	0.173	24.8	20.0	0.3	54.9
	Dec-20	1.198	1.1	4.2	18.4	76.3
	Jan-21	-0.69	30.8	23.9	0.6	44.6
	May-21	-1.36	29.8	24.0	1.1	45.1
	Aug-21	-1.55	22.6	17.7	5.9	53.7
	Dec-21	0	0.0	0.0	22.0	78.0

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
EAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
05-GS-10	Mar-13	0	0.0	0.4	19.3	80.3
	Apr-13	-0.1	0.0	0.6	17.8	81.6
	Aug-13	0.4	0.0	1.3	11.9	86.8
	Dec-13	-12.4	0.2	2.2	13.7	83.9
	Mar-14	0.561	0.0	1.7	14.6	83.2
	Jun-14	0.470	0.0	1.1	14.4	84.5
	Sep-14	0.498	0.0	0.6	13.5	85.9
	Dec-14	-3.0	0.1	0.5	18.2	81.1
	Mar-15	0.1	0.0	0.5	16.0	83.5
	May-15	0.021	0.1	0.7	16.2	83.1
	Aug-15	0.2	0.0	0.6	15.8	83.6
	Dec-15	1.0	0.1	2.2	16.6	81.1
	Jan-16	-1.6	0.2	0.1	20.6	79.1
	Sep-16	-0.1	NR	1.3	18.3	80.4
	Dec-16	NR	0.0	2.7	15.9	81.4
	Mar-17	-1.2	0.0	1.2	17.2	81.6
	Jun-17	0.2	2.5	2.8	11.1	83.6
	Sep-17	0.4	0.0	2.6	10.4	87.0
	Dec-17	0.7	0.1	3.8	13.0	83.1
	Jan-18	0.3	0.0	3.5	8.9	87.5
	May-18	2.7	0.0	1.9	8.7	89.4
	Jul-18	-0.5	0.0	1.5	7.5	91.0
	Oct-18	-0.2	0.1	2.2	15.6	82.1
	Mar-19	0.2	0.0	0.8	16.4	82.8
	May-19	-1.0	0.0	1.4	14.9	83.7
	Sep-19	0.1	0.0	0.0	20.0	80.0
	Dec-19	Frozen	Frozen	Frozen	Frozen	Frozen
	Mar-20	0	0.0	0.2	20.9	78.9
	May-20	3.4	0.0	0.6	10.7	88.7
	Jul-20	0.7	0.0	0.6	13.0	86.4
	Dec-20	0.6	0.0	1.4	18.6	80.0
	Jan-21	-0.10	0.0	2.4	13.6	83.9
	May-21	-1.52	0.0	1.3	12.5	86.2
	Aug-21	-0.89	0.0	1.0	13.3	85.7
	Dec-21	0	0.0	0.0	21.9	78.1

Notes: NR = not reported
Gas measurements were reported to SME by New England Waste Services of Maine, Inc.
GEM 2000 multi-gas meter accuracy is ±0.5% for detections ranging 0-5%,
and ±1.0% for detections ranging 5-15%.

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
SOUTH OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
MW02-801B	Mar-13	0	0.0	0.1	20.0	79.9
	Apr-13	0	0.0	0.1	20.0	79.0
	Aug-13	0	0.0	1.4	13.4	85.2
	Dec-13	-15.2	0.2	0.1	20.5	79.2
	Mar-14	-0.11	0.0	0.1	19.4	80.5
	Jun-14	0.010	0.0	0.0	21.3	78.7
	Sep-14	-0.001	0.0	0.1	19.8	80.1
	Dec-14	0	0.2	0.0	20.2	79.5
	Mar-15	0	0.0	0.0	22.2	77.8
	May-15	0.003	0.1	0.0	20.3	79.6
	Aug-15	0.1	0.0	0.0	21.2	78.8
	Dec-15	0	0.0	0.1	21.7	78.2
	Jan-16	0.4	0.2	0.1	21.7	78.0
	Sep-16	NR	0.0	0.0	22.0	78.0
	Dec-16	NR	0.0	0.1	NR	NR
	Mar-17	-32.8	0.0	0.1	21.2	78.7
	Jun-17	-0.01	2.2	0.2	20.7	76.9
	Sep-17	-0.02	0.0	0.1	20.9	79.0
	Dec-17	0	0.1	0.0	23.1	76.8
	Jan-18	0	0.0	0.1	21.6	78.3
	May-18	-0.03	0.0	0.0	19.5	80.5
	Jul-18	-0.06	0.1	0.1	19.0	80.8
	Oct-18	0.04	0.1	0.1	20.7	79.2
	Mar-19	0.1	0.0	0.0	20.5	79.5
	May-19	0.1	0.0	0.0	21.1	78.9
	Sep-19	0.3	0.0	0.0	21.0	79.0
	Dec-19	-0.1	0.0	0.1	21.8	78.1
	Mar-20	0	0.0	0.1	21.7	78.2
	May-20	0.1	0.1	1.0	22.0	76.9
	Jul-20	0.002	0.0	0.9	17.3	81.8
	Dec-20	-0.059	0.0	0.1	21.5	78.4
	Jan-21	-0.03	0.0	0.1	21.7	78.2
	May-21	-0.12	0.0	0.0	21.6	78.4
	Aug-21	0	0.0	0.0	19.7	80.3
	Dec-21	0	0.1	0.0	22.0	77.9

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
SOUTH OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
MW03-802B	Mar-13	0.7	3.8	3.2	19.7	73.3
	Apr-13	0.9	58.0	46.5	0.1	1.5
	Aug-13	-0.6	24.5	15.2	11.6	48.7
	Dec-13	NR	54.9	33.6	0.1	11.4
	Mar-14	20.543	71.9	16.7	0.2	11.2
	Jun-14	-0.002	3.4	2.4	19.8	78.4
	Sep-14	-0.060	4.4	2.2	18.7	74.7
	Dec-14	0.1	0.0	0.0	20.2	79.7
	Mar-15	0	0.1	0.0	22.1	77.8
	May-15	-0.02	0.1	0.0	20.2	79.7
	Aug-15	0	0.1	0.0	21.4	78.5
	Dec-15	0	5.2	4.3	16.2	74.3
	Jan-16	0	0.1	0.1	20.5	79.3
	Sep-16	0	0.0	0.1	21.9	78.0
	Dec-16	NR	7.4	NR	NR	NR
	Mar-17	-124.4	10.7	8.3	17.4	63.6
	Jun-17	0.05	57.9	42.2	0.0	0.0
	Sep-17	0.07	58.3	41.8	0.0	0.0
	Dec-17	-0.1	0.1	0.0	23.8	76.1
	Jan-18	-0.03	4.1	2.9	19.8	73.2
	May-18	1.22	39.0	30.0	0.2	30.8
	Jul-18	-0.05	45.3	33.9	0.7	20.1
	Oct-18	-0.17	0.1	0.1	21.1	78.7
	Mar-19	0	0.0	0.2	21.8	78.0
	May-19	-0.3	5.0	7.1	14.7	73.2
	Sep-19	0	0.0	0.0	20.7	79.3
	Dec-19	0.2	52.5	35.4	0.5	11.6
	Mar-20	-0.1	0.6	2.8	16.5	80.1
	May-20	-0.1	30.1	29.6	1.3	43.0
	Jul-20	0.032	58.5	41.1	0.1	0.3
	Dec-20	0.01	0.0	0.1	22.7	77.2
	Jan-21	-0.15	49.6	35.0	2.4	13.1
	May-21	0.19	0.0	0.0	21.4	78.6
	Aug-21	0	0.0	0.0	19.8	80.2
	Dec-21	0	0.1	0.0	22.0	77.9

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
SOUTH OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
MW03-803B	Mar-13	0.1	47.0	38.8	0.0	14.2
	Apr-13	0.1	52.6	40.5	0.2	6.6
	Aug-13	0.2	58.6	41.0	0.0	0.3
	Dec-13	-15.1	58.4	41.5	0.0	0.1
	Mar-14	-0.259	59.5	40.4	0.0	0.1
	Jun-14	-0.121	57.0	42.8	0.1	0.1
	Sep-14	-0.075	44.6	37.9	1.2	16.3
	Dec-14	-2.9	0.1	0.0	20.4	79.5
	Mar-15	0.1	24.6	32.3	1.3	41.8
	May-15	-0.079	38.0	36.9	0.1	24.6
	Aug-15	0.1	22.6	34.3	1.3	41.8
	Dec-15	0.2	0.6	0.7	21.7	77.0
	Jan-16	0	0.1	0.1	20.8	79.0
	Sep-16	0	0.0	0.1	21.9	NR
	Dec-16	NR	23.3	34.9	0.0	41.8
	Mar-17	0	0.1	0.0	20.7	79.2
	Jun-17	0.19	57.3	42.8	0.0	0.0
	Sep-17	0.01	57.6	42.6	0.0	0.0
	Dec-17	-0.2	0.1	0.0	23.3	76.6
	Jan-18	0.17	22.2	33.1	0.0	44.7
	May-18	0.42	55.1	41.0	0.1	3.8
	Jul-18	0.08	50.1	40.2	0.1	9.6
	Oct-18	0.02	0.1	0.2	21.2	78.5
	Mar-19	0.1	1.8	3.3	19.1	75.8
	May-19	-1.5	2.5	2.7	19.7	75.1
	Sep-19	0.1	4.2	3.8	20.0	72.0
	Dec-19	-1.4	7.5	7.3	16.9	68.3
	Mar-20	0	0.0	0.4	21.0	78.6
	May-20	0.1	0.2	0.4	20.4	79.0
	Jul-20	0.011	0.0	1.5	20.4	78.0
	Dec-20	0.341	0.0	0.1	22.4	77.5
	Jan-21	-0.67	1.0	3.6	19.7	75.7
	May-21	-0.06	0.1	0.2	21.4	78.4
	Aug-21	0.02	0.0	0.2	20.2	79.6
	Dec-21	0	0.1	18.0	5.4	76.5

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
SOUTH OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
P04-713A	Mar-13	-0.7	0.0	1.1	20.4	78.5
	Apr-13	0	0.0	0.1	20.2	79.6
	Aug-13	-5.8	0.2	0.6	19.0	80.2
	Dec-13	NR	0.4	1.3	20.5	77.8
	Mar-14	26.623	0.2	1.5	18.9	79.4
	Jun-14	10.942	0.0	0.2	21.0	78.8
	Sep-14	13.6	0.0	0.2	20.0	79.8
	Dec-14	-16.9	0.3	2.1	18.3	79.2
	Mar-15	-0.1	0.0	0.2	21.0	78.8
	May-15	13.896	0.1	0.1	20.7	79.0
	Aug-15	-0.1	0.0	0.2	21.1	78.7
	Dec-15	-5.7	0.1	1.0	20.9	78.0
	Jan-16	-1.9	0.1	1.1	20.5	78.3
	Sep-16	-12.3	0.0	0.5	NR	78.8
	Dec-16	NR	NR	NR	NR	NR
	Mar-17	-17.2	0.1	1.2	20.6	78.1
	Jun-17	-2.45	2.2	0.0	20.6	76.9
	Sep-17	-7.98	0.0	0.3	21.2	78.5
	Dec-17	-15.4	0.1	1.3	22.8	75.8
	Jan-18	-26.9	0.1	0.9	21.2	77.7
	May-18	-14.34	0.0	0.2	19.2	80.6
	Jul-18	-8.08	0.0	1.4	16.9	81.7
	Oct-18	-16.01	0.1	1.4	18.7	79.8
	Mar-19	-15.0	0.0	1.5	19.1	79.4
	May-19	0.1	0.0	0.4	20.6	79.0
	Sep-19	-0.4	0.0	0.5	20.8	78.7
	Dec-19	-22.5	0.0	0.8	20.5	78.7
	Mar-20	-22.0	0.1	0.7	20.7	78.5
	May-20	-8.0	0.0	0.3	20.4	79.3
	Jul-20	NR	0.0	1.0	18.9	80.1
	Dec-20	27.6	0.0	1.0	20.0	79.0
	Jan-21	-34.54	0.0	1.0	20.7	78.3
	May-21	-14.5	0.0	0.2	21.2	78.6
	Aug-21	-16.88	0.0	0.2	19.3	80.5
	Dec-21	-26.1	0.1	0.5	22.2	77.2

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
SOUTH OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
P04-713B	Mar-13	0.7	13.8	14.9	0.0	71.3
	Apr-13	0	15.0	13.5	0.1	71.3
	Aug-13	0.2	13.8	13.3	0.0	72.9
	Dec-13	-15.9	10.1	15.0	6.2	68.7
	Mar-14	-0.176	21.8	14.3	0.0	63.9
	Jun-14	0.270	27.2	13.6	0.2	59.0
	Sep-14	0.013	0.6	4.0	15.5	79.9
	Dec-14	-2.0	7.1	16.1	0.0	76.6
	Mar-15	-0.2	0.0	3.4	17.2	79.4
	May-15	0.452	3.4	13.4	0.1	83.1
	Aug-15	0.1	0.0	3.3	16.9	79.8
	Dec-15	0.0	0.1	7.5	11.2	81.2
	Jan-16	-1.1	0.1	8.7	7.5	83.7
	Sep-16	0.0	0.0	0.6	21.0	78.4
	Dec-16	NR	0.0	NR	NR	NR
	Mar-17	-0.8	0.0	5.2	14.0	80.8
	Jun-17	0.1	2.2	5.5	13.3	79.0
	Sep-17	0.1	0.0	3.7	16.9	79.4
	Dec-17	-0.5	0.1	4.3	15.7	76.9
	Jan-18	0.2	0.1	5.4	14.8	79.7
	May-18	0.5	0.0	12.0	1.9	86.1
	Jul-18	-0.1	0.0	8.0	10.4	81.6
	Oct-18	-0.1	0.1	1.6	18.7	79.6
	Mar-19	-0.1	0.0	7.0	11.0	82.0
	May-19	-0.3	0.0	7.8	6.0	86.2
	Sep-19	0.4	0.0	5.3	14.3	80.4
	Dec-19	-0.1	0.0	0.4	21.0	78.6
	Mar-20	-10.0	0.1	1.0	22.1	76.8
	May-20	0.1	0.0	2.8	16.0	81.2
	Jul-20	NR	0.0	3.5	15.9	80.6
	Dec-20	0.1	0.0	4.9	13.8	81.3
	Jan-21	-0.1	0.0	5.8	13.8	80.4
	May-21	-0.4	0.0	6.9	7.4	85.7
	Aug-21	-0.2	0.0	0.8	18.7	80.4
	Dec-21	-107.1	0.1	0.0	21.8	78.1

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
SOUTH OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
P04-714	Mar-13	0.7	52.9	36.4	0.0	10.7
	Apr-13	0.9	39.7	33.5	0.1	27.1
	Aug-13	1.4	47.8	37.9	0.0	14.3
	Dec-13	-14.14	45.9	38.0	0.0	16.1
	Mar-14	-1.417	58.2	36.3	0.0	5.5
	Jun-14	-0.599	43.7	36.3	0.0	20.0
	Sep-14	-0.388	7.0	8.1	13.3	71.6
	Dec-14	-0.9	35.7	34.0	0.2	29.9
	Mar-15	0.1	12.5	18.5	1.5	67.5
	May-15	-0.271	14.2	25.6	0.2	60.0
	Aug-15	0.3	11.4	20.5	1.3	66.8
	Dec-15	0.4	16.6	23.6	0.1	59.7
	Jan-16	-1.8	0.2	0.3	21.1	78.4
	Sep-16	NR	0.0	0.8	20.9	78.3
	Dec-16	NR	31.8	32.7	NR	NR
	Mar-17	-1.3	30.3	28.8	1.2	39.7
	Jun-17	0.49	33.0	28.3	0.0	38.7
	Sep-17	0.15	58.6	38.7	0.0	2.7
	Dec-17	-0.6	0.2	3.9	22.6	73.3
	Jan-18	0.82	37.6	33.4	0.0	29.0
	May-18	2.15	30.2	28.1	0.0	41.8
	Jul-18	0.52	36.0	29.4	0.0	34.6
	Oct-18	-0.15	0.1	5.4	17.1	77.4
	Mar-19	0.4	9.7	23.8	1.1	65.4
	May-19	0.1	20.7	24.4	0.2	54.7
	Sep-19	0.8	36.4	27.9	0.0	35.7
	Dec-19	0.5	23.9	25.6	0.1	50.4
	Mar-20	0	5.4	22.3	1.0	71.3
	May-20	0.5	6.6	18.9	0.0	74.4
	Jul-20	-0.203	48.4	31.6	0.0	20.0
	Dec-20	0.309	11.1	16.8	10.0	62.1
	Jan-21	0.24	29.0	28.3	0.0	42.8
	May-21	-0.55	22.2	22.9	0.4	54.5
	Aug-21	-0.71	25.3	24.8	0.3	49.6
	Dec-21	0.1	5.4	18.3	3.5	72.8

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
SOUTH OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
P04-715	Mar-13	-0.2	58.2	35.6	0.0	6.2
	Apr-13	-0.2	57.9	36.5	0.1	5.5
	Aug-13	0.1	56.6	40.9	0.0	2.5
	Dec-13	-15.2	59.0	40.9	0.0	0.1
	Mar-14	-0.225	60.8	39.0	0.0	0.2
	Jun-14	-0.085	56.4	43.4	0.1	0.1
	Sep-14	-0.075	17.1	32.7	0.2	50.0
	Dec-14	-10.4	39.2	30.8	0.2	29.6
	Mar-15	0	7.8	32.6	0.2	59.4
	May-15	-0.8	52.1	35.4	0.2	11.8
	Aug-15	0	8.3	31.2	0.1	60.4
	Dec-15	-0.2	20.9	25.1	1.8	52.2
	Jan-16	-0.2	22.9	29.0	0.7	47.4
	Sep-16	0	0.0	0.9	21.2	77.9
	Dec-16	NR	0.7	14.1	11.3	73.9
	Mar-17	-0.3	21.3	25.3	3.1	50.3
	Jun-17	0.01	57.3	42.3	0.0	0.4
	Sep-17	-0.01	4.2	14.6	2.1	79.1
	Dec-17	0	0.2	0.5	22.7	76.6
	Jan-18	-0.15	18.5	28.5	0.0	53.0
	May-18	0.02	40.9	30.1	0.5	28.5
	Jul-18	-0.07	50.6	39.6	0.1	9.7
	Oct-18	0.01	0.1	10.3	13.4	76.3
	Mar-19	-5.4	30.6	27.9	0.0	41.5
	May-19	-5.6	29.9	22.7	0.1	47.4
	Sep-19	0.1	52.0	37.4	0.6	10.0
	Dec-19	-12.0	8.1	19.3	5.0	67.6
	Mar-20	0.0	2.5	6.6	15.1	75.8
	May-20	0.1	39.5	27.6	0.5	32.4
	Jul-20	0.0	55.8	42.4	0.0	1.8
	Dec-20	0.0	0.2	0.4	22.7	76.7
	Jan-21	0.0	0.0	0.1	21.4	78.5
	May-21	-1.8	37.1	30.9	2.4	29.7
	Aug-21	-0.4	0.0	5.5	15.9	78.7
	Dec-21	-0.1	0.1	0.1	22.4	77.4

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
SOUTH OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
P04-716	Mar-13	NR	NR	NR	NR	NR
	Apr-13	NR	NR	NR	NR	NR
	Aug-13	NR	NR	NR	NR	NR
	Dec-13	NR	NR	NR	NR	NR
	Mar-14	NR	NR	NR	NR	NR
	Jun-14	NR	NR	NR	NR	NR
	Sep-14	NR	NR	NR	NR	NR
	Dec-14	NR	NR	NR	NR	NR
	Mar-15	NR	NR	NR	NR	NR
	May-15	NR	NR	NR	NR	NR
	Aug-15	NR	NR	NR	NR	NR
	Dec-15	NR	NR	NR	NR	NR
	Jan-16	NR	NR	NR	NR	NR
	Sep-16	NR	NR	NR	NR	NR
	Dec-16	NR	NR	NR	NR	NR
	Mar-17	NR	NR	NR	NR	NR
	Jun-17	NR	NR	NR	NR	NR
	Sep-17	NR	NR	NR	NR	NR
	Dec-17	NR	NR	NR	NR	NR
	Jan-18	NR	NR	NR	NR	NR
	May-18	NR	NR	NR	NR	NR
	Jul-18	NR	NR	NR	NR	NR
	Oct-18	NR	NR	NR	NR	NR
	Mar-19	NR	NR	NR	NR	NR
	May-19	NR	NR	NR	NR	NR
	Sep-19	NR	NR	NR	NR	NR
	Dec-19	NR	NR	NR	NR	NR
	Mar-20	NR	NR	NR	NR	NR
	May-20	NR	NR	NR	NR	NR
	Jul-20	NR	NR	NR	NR	NR
	Dec-20	NR	NR	NR	NR	NR
	Jan-21	NR	NR	NR	NR	NR
	May-21	NR	NR	NR	NR	NR
	Aug-21	NR	NR	NR	NR	NR
	Dec-21	NR	NR	NR	NR	NR

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
SOUTH OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
05-GS-16	Mar-13	-0.2	0.0	3.3	18.1	78.6
	Apr-13	0	0.0	2.7	18.1	79.2
	Aug-13	0.3	0.0	3.7	15.9	80.4
	Dec-13	-15	0.2	4.9	14.6	80.3
	Mar-14	0.027	0.0	0.1	20.6	79.3
	Jun-14	0.156	0.0	3.4	17.5	79.0
	Sep-14	-0.093	0.0	3.4	16.6	80.0
	Dec-14	-0.6	0.2	3.2	19.1	77.5
	Mar-15	0	0.0	3.2	19.9	76.9
	May-15	0.144	0.2	2.4	18.9	78.5
	Aug-15	0.1	0.0	2.3	18.5	79.2
	Dec-15	0.3	0.1	3.5	18.0	78.4
	Jan-16	0.1	0.1	3.1	17.9	78.9
	Sep-16	0	0.0	0.4	22.1	77.5
	Dec-16	NR	0.0	4.2	16.9	78.9
	Mar-17	-0.3	0.0	3.7	18.8	77.5
	Jun-17	-0.04	2.1	3.3	17.5	77.1
	Sep-17	0	0.0	3.2	17.9	78.9
	Dec-17	-0.3	0.1	4.8	19.4	75.7
	Jan-18	-0.22	0.1	4.5	18.0	77.4
	May-18	0.4	0.0	2.9	16.2	80.9
	Jul-18	-0.23	0.0	3.4	15.7	80.9
	Oct-18	-0.04	0.1	2.6	15.1	82.2
	Mar-19	0.4	0.0	3.6	16.6	79.8
	May-19	0.1	0.0	2.1	17.8	80.1
	Sep-19	0.1	0.0	2.0	17.0	81.0
	Dec-19	-0.3	0.0	3.6	16.6	79.8
	Mar-20	0.2	0.0	2.5	17.8	79.7
	May-20	0.1	0.0	1.8	17.2	81.0
	Jul-20	NR	NR	NR	NR	NR
	Dec-20	-0.151	0.0	4.5	17.7	77.8
	Jan-21	0.11	0.0	5.8	15.4	78.8
	May-21	-0.33	0.0	4.6	15.3	80.2
	Aug-21	0	0.0	2.5	17.3	80.2
	Dec-21	0	0.0	3.5	18.4	78.1

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
SOUTH OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
05-GS-17	Mar-13	0	0.4	0.6	20.0	79.0
	Apr-13	0	0.4	0.2	19.9	79.4
	Aug-13	0.2	3.2	3.4	17.3	76.1
	Dec-13	-15.2	52.9	26.4	3.9	16.8
	Mar-14	-0.5	52.6	23.4	4.2	19.8
	Jun-14	0.039	11.8	7.9	11.9	68.4
	Sep-14	-0.025	0.1	7.1	14.0	78.8
	Dec-14	0.1	0.1	0.0	20.2	79.7
	Mar-15	-0.1	51.2	26.1	3.2	19.2
	May-15	0.035	0.2	3.3	14.9	81.7
	Aug-15	NR	NR	NR	NR	NR
	Dec-15	0	4.3	6.9	10.3	78.5
	Jan-16	NR	NR	NR	NR	NR
	Sep-16	NR	NR	NR	NR	NR
	Dec-16	NR	1.6	8.7	8.3	81.4
	Mar-17	-0.1	0.0	0.2	22.2	77.6
	Jun-17	NR	NR	NR	NR	NR
	Sep-17	NR	NR	NR	NR	NR
	Dec-17	NR	NR	NR	NR	NR
	Jan-18	-0.11	19.2	17.1	1.1	62.6
	May-18	-0.5	2.2	4.8	13.7	79.3
	Jul-18	-0.18	9.7	4.1	6.9	79.3
	Oct-18	0.01	0.1	8.0	14.2	77.7
	Mar-19	0.1	14.8	6.1	1.4	77.7
	May-19	0.1	1.2	1.8	19.1	77.9
	Sep-19	0.1	0.0	6.0	14.0	80.0
	Dec-19	-0.3	0.4	0.8	19.9	78.9
	Mar-20	-0.1	0.0	0.8	19.4	79.7
	May-20	-0.3	0.0	0.2	20.7	79.1
	Jul-20	-0.035	55.0	15.6	2.0	27.4
	Dec-20	-0.007	0.0	4.1	13.2	82.7
	Jan-21	-0.66	17.2	9.3	11.9	61.7
	May-21	-0.69	0.0	0.1	21.3	78.6
	Aug-21	-0.06	0.0	2.4	18.5	79.1
	Dec-21	-0.1	0.1	1.7	18.7	79.5

Notes: NR = not reported
Gas measurements were reported to SME by New England Waste Services of Maine, Inc.
GEM 2000 multi-gas meter accuracy is ±0.5% for detections ranging 0-5%,
and ±1.0% for detections ranging 5-15%.

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
NORTHEAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
05-GS-18	Mar-13	-0.8	24.5	8.5	11.0	56.0
	Apr-13	0.1	67.3	29.4	0.1	3.2
	Aug-13	0.1	67.6	28.7	0.3	3.4
	Dec-13	NR	67.1	29.1	0.1	3.7
	Mar-14	-1.150	72.2	25.3	1.0	1.5
	Jun-14	1.167	30.7	15.4	5.2	48.7
	Sep-14	0.094	0.9	0.6	19.0	79.5
	Dec-14	-44.4	11.2	12.7	8.0	67.9
	Mar-15	-0.1	62.7	32.4	0.1	4.8
	May-15	1.9	4.6	3.1	16.7	75.6
	Aug-15	0	65.7	33.6	0.2	0.5
	Dec-15	0.6	65.0	23.9	11.0	0.1
	Jan-16	-2.3	1.7	1.4	19.5	77.4
	Sep-16	0	44.7	30.1	5.3	19.9
	Dec-16	NR	61.0	26.8	0.6	11.6
	Mar-17	-9.5	5.4	2.7	19.0	72.9
	Jun-17	-7.12	2.2	0.2	21.1	76.5
	Sep-17	-2.3	0.0	0.2	21.0	78.8
	Dec-17	-4.9	63.7	30.3	1.7	4.3
	Jan-18	-0.35	48.0	25.4	1.3	25.3
	May-18	-4.84	3.7	1.4	16.9	78.0
	Jul-18	0.23	75.3	20.7	0.4	3.6
	Oct-18	-0.02	58.5	40.5	1.0	0.0
	Mar-19	-49.0	18.8	5.4	14.3	61.5
	May-19	-20.0	6.4	2.6	17.8	73.2
	Sep-19	0.1	3.4	3.2	17.4	76.0
	Dec-19	-20.0	3.1	3.0	14.7	79.2
	Mar-20	-5.0	0.0	0.2	20.9	78.9
	May-20	-0.1	0.7	0.8	18.5	80.0
	Jul-20	0.015	8.7	5.4	15.0	71.0
	Dec-20	-0.005	10.3	5.4	15.9	68.4
	Jan-21	-3.860	1.4	1.2	19.7	77.7
	May-21	-0.040	0.0	0.0	21.1	78.8
	Aug-21	-14.790	0.0	0.0	20.1	79.8
	Dec-21	0	0.1	0.0	21.6	78.3

SUMMARY OF 2021 AND HISTORICAL SUBSURFACE LANDFILL GAS MONITORING
NORTHEAST OF CONVENTIONAL LANDFILL
PINE TREE LANDFILL

Location	Date	Gas Pressure (inches-H2O, static)	Methane %	Carbon Dioxide %	Oxygen %	Balance %
05-GS-19	Mar-13	0.3	0.0	0.2	20.0	79.8
	Apr-13	0.1	0.5	3.5	10.7	85.3
	Aug-13	0.1	0.0	5.5	11.2	83.3
	Dec-13	NR	0.3	3.5	10.7	85.4
	Mar-14	0.400	7.1	1.9	10.1	80.9
	Jun-14	-0.077	0.0	2.6	15.1	82.2
	Sep-14	0.004	0.0	1.3	17.7	81.0
	Dec-14	-13.1	0.0	1.7	13.6	84.5
	Mar-15	-0.1	0.0	1.3	20.1	78.6
	May-15	-0.015	0.3	3.8	9.2	86.7
	Aug-15	0.1	0.0	1.3	19.7	79.0
	Dec-15	0	0.2	1.8	19.6	78.4
	Jan-16	-0.1	0.1	1.2	17.7	81.0
	Sep-16	0	0.3	1.1	20.8	77.8
	Dec-16	NR	0.0	1.6	14.9	83.5
	Mar-17	0	0.0	2.7	9.5	87.8
	Jun-17	-0.1	2.2	3.3	17.0	77.5
	Sep-17	-0.1	0.2	0.3	20.8	78.7
	Dec-17	-0.1	0.1	0.0	21.3	78.6
	Jan-18	-0.33	0.1	1.8	18.3	79.9
	May-18	-0.03	0.0	2.8	14.2	83.0
	Jul-18	-0.74	0.0	5.2	12.7	82.1
	Oct-18	0.04	0.2	0.4	20.5	78.9
	Mar-19	-24.0	0.0	0.6	11.9	87.5
	May-19	0.1	0.0	1.8	19.6	78.6
	Sep-19	0.8	0.0	4.3	16.3	79.4
	Dec-19	0	0.0	3.2	16.0	80.8
	Mar-20	-0.2	0.0	1.1	18.0	81.0
	May-20	-0.1	0.2	0.9	21.2	77.7
	Jul-20	-0.005	0.0	3.8	14.3	81.9
	Dec-20	-0.03	0.0	0.6	19.9	79.5
	Jan-21	-0.06	0.0	0.8	20.0	79.2
	May-21	-0.05	0.0	2.0	14.9	83.1
	Aug-21	0.05	0.0	0.0	20.2	79.8
	Dec-21	0	0.1	0.0	22.4	77.5

Notes: NR = not reported
Gas measurements were reported to SME by New England Waste Services of Maine, Inc.
GEM 2000 multi-gas meter accuracy is ±0.5% for detections ranging 0-5%,
and ±1.0% for detections ranging 5-15%.

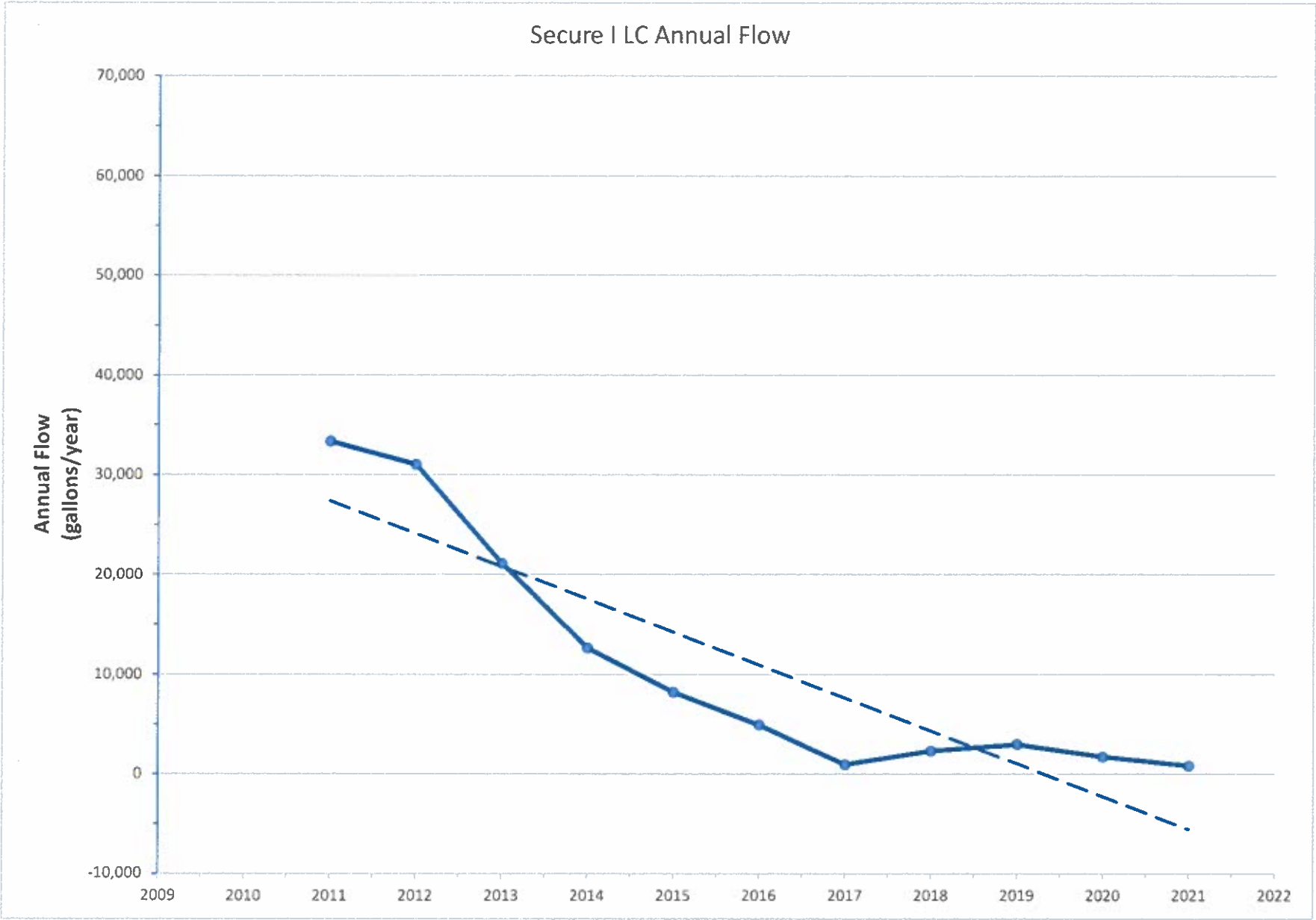
APPENDIX F

2021 AND HISTORICAL PUMP STATION FLOWS

SME
SEVEE & MAHER
ENGINEERS

LEACHATE COLLECTION

SME
SEVEE & MAHER
ENGINEERS



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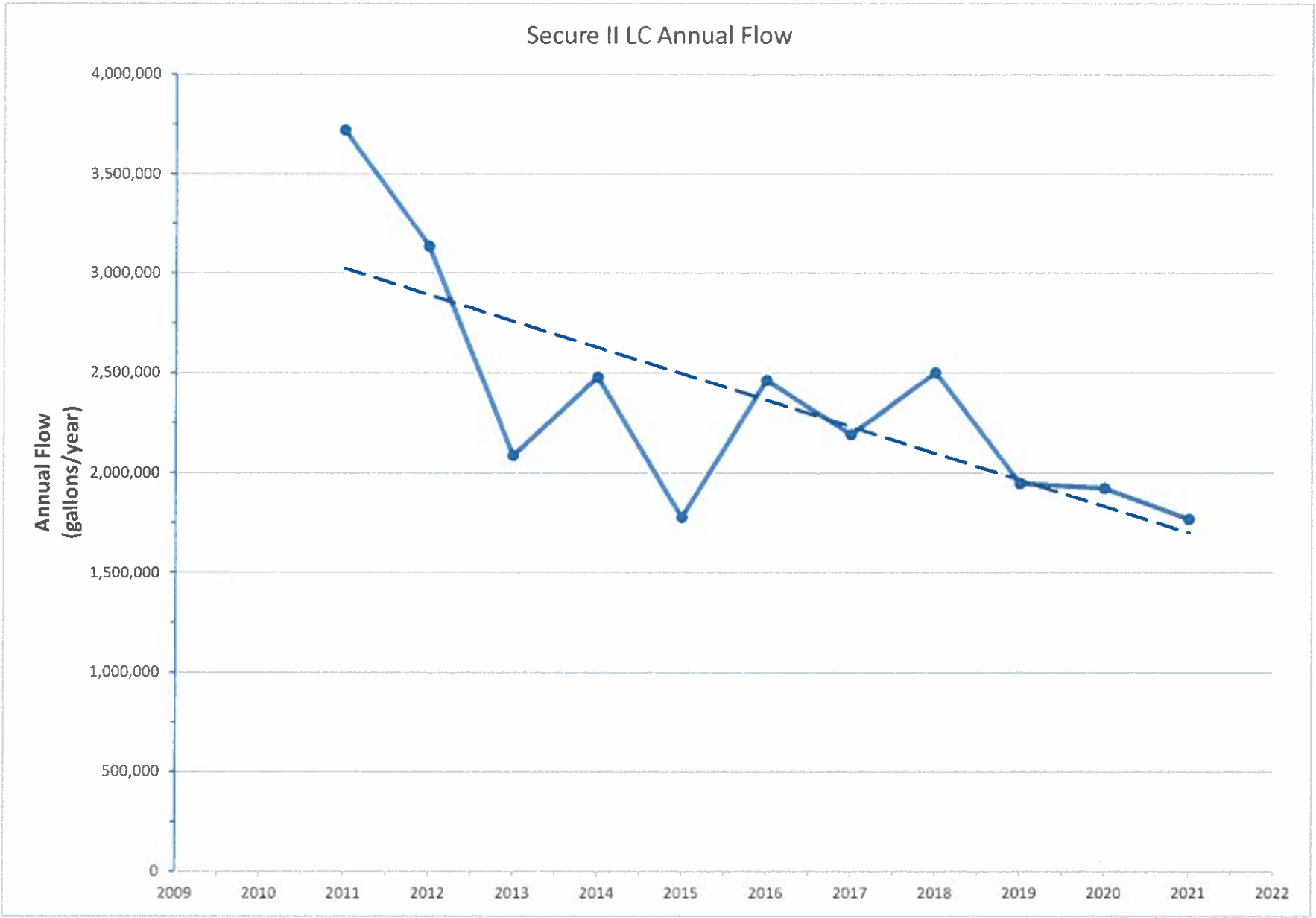

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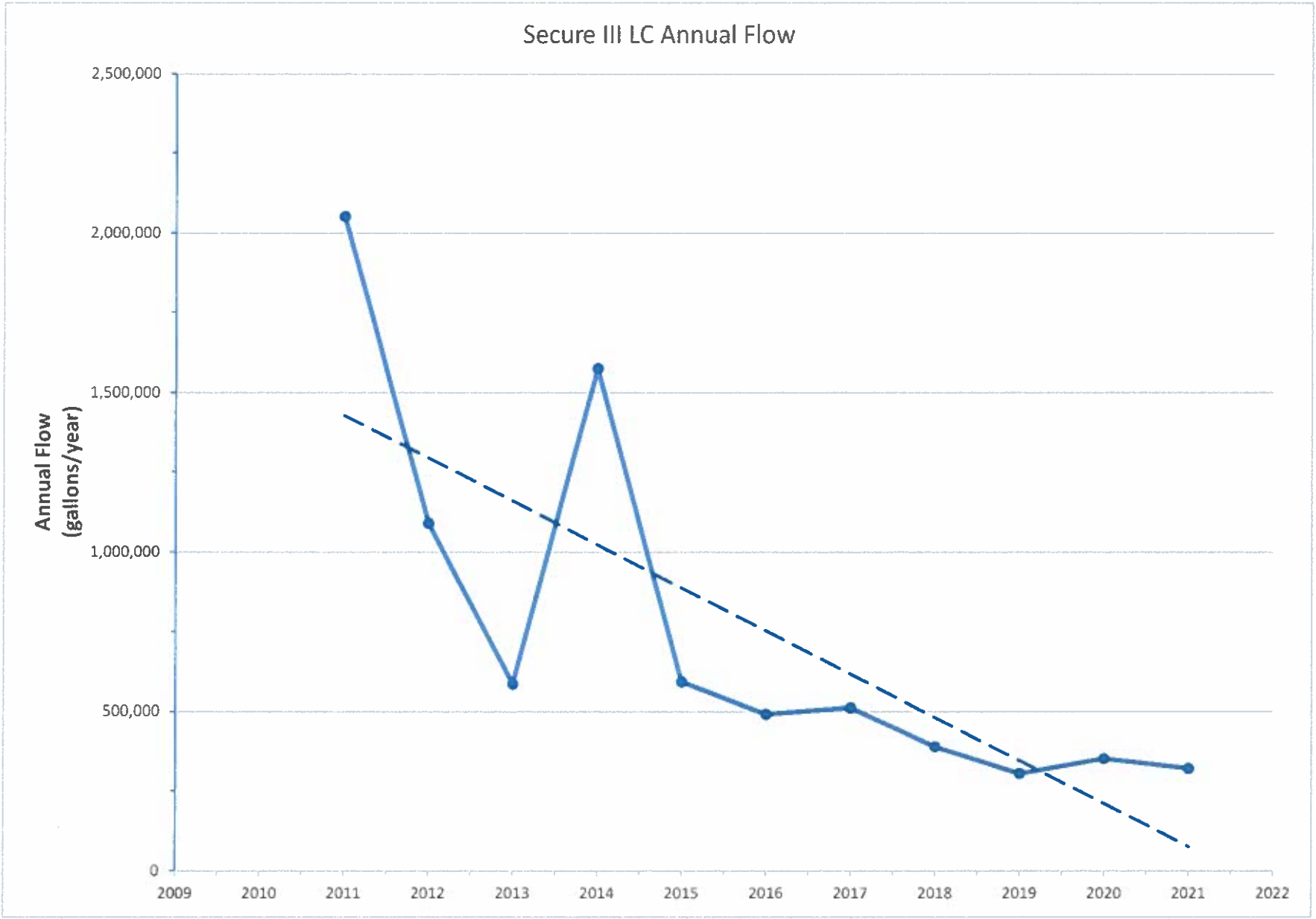

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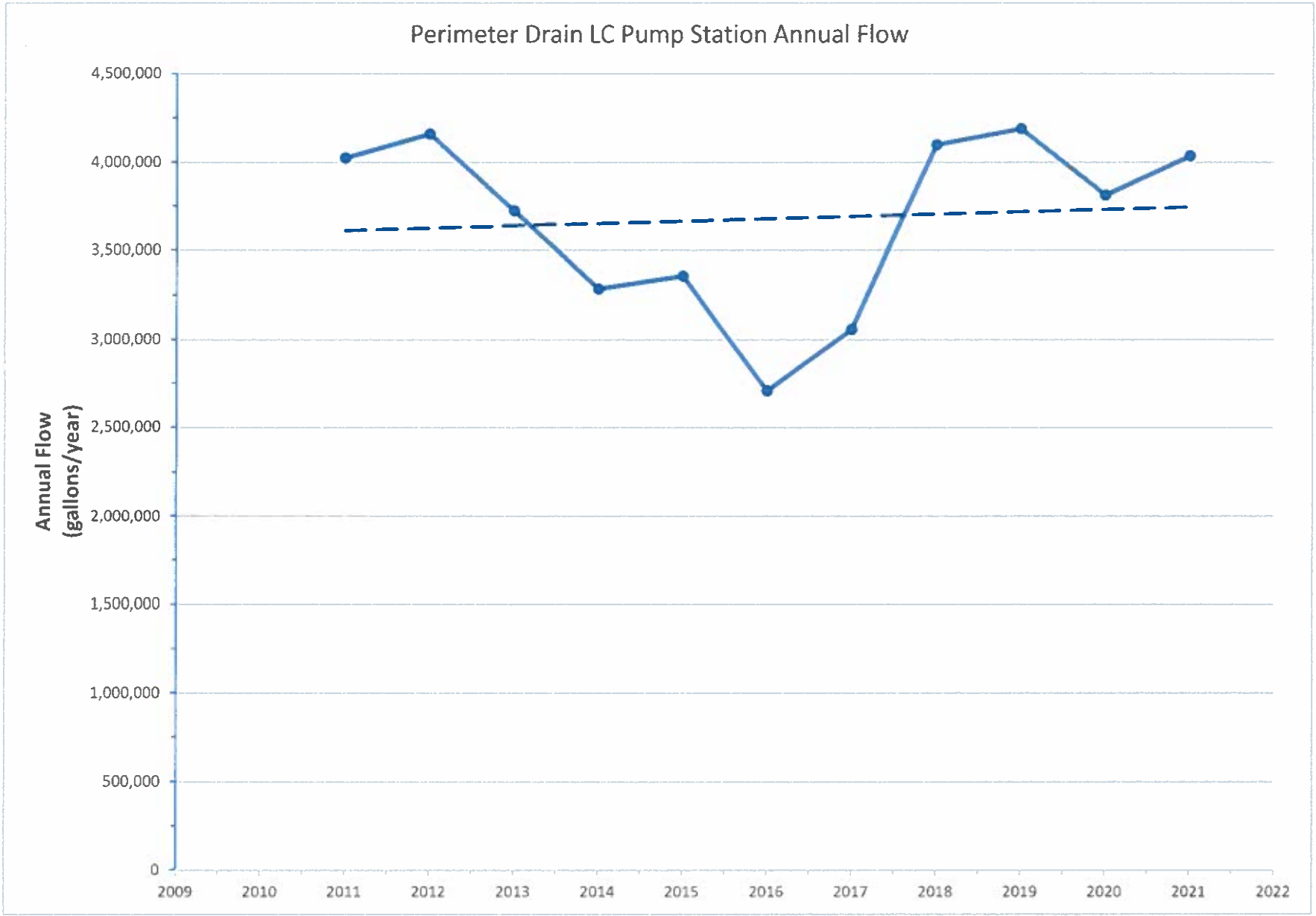

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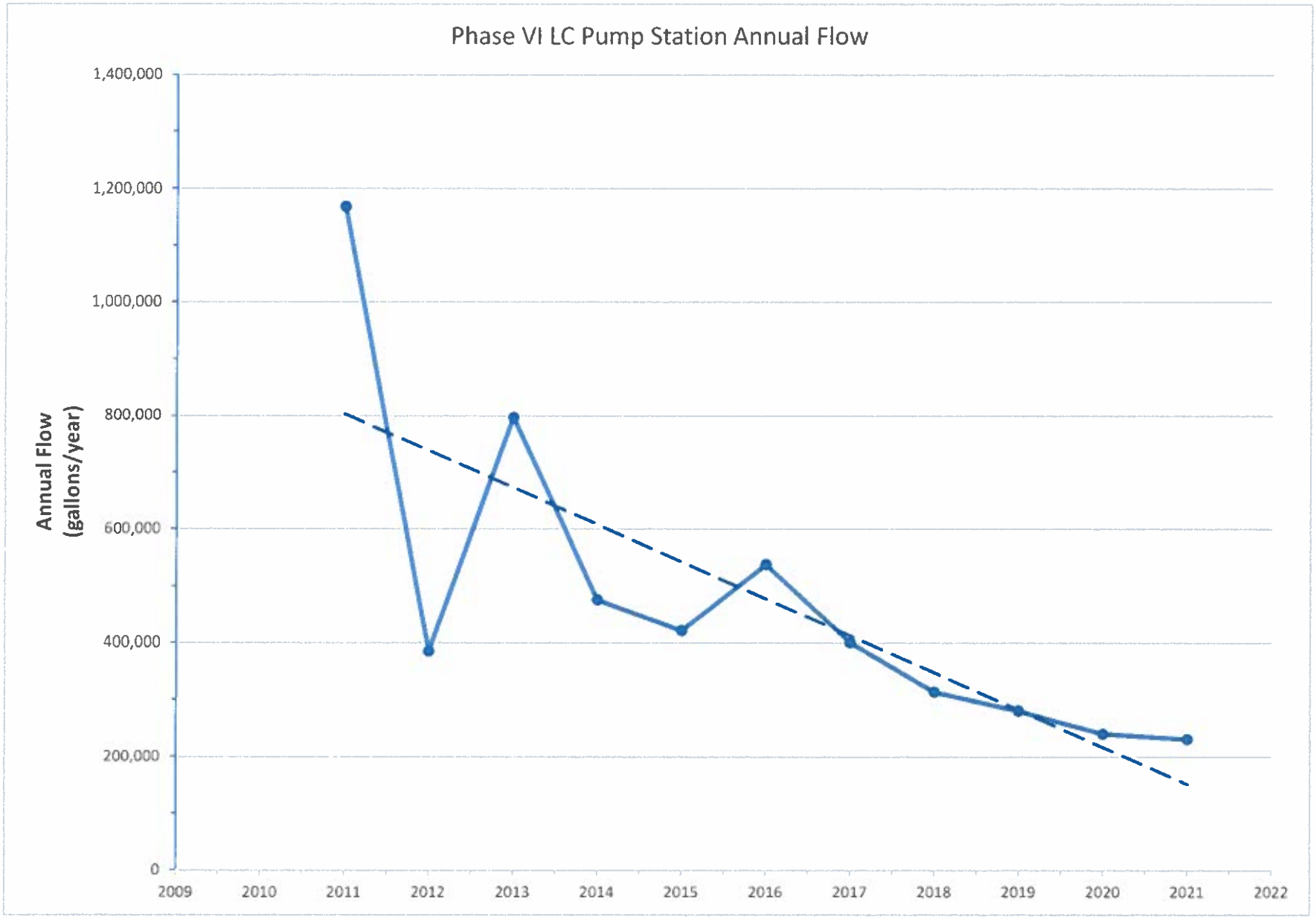

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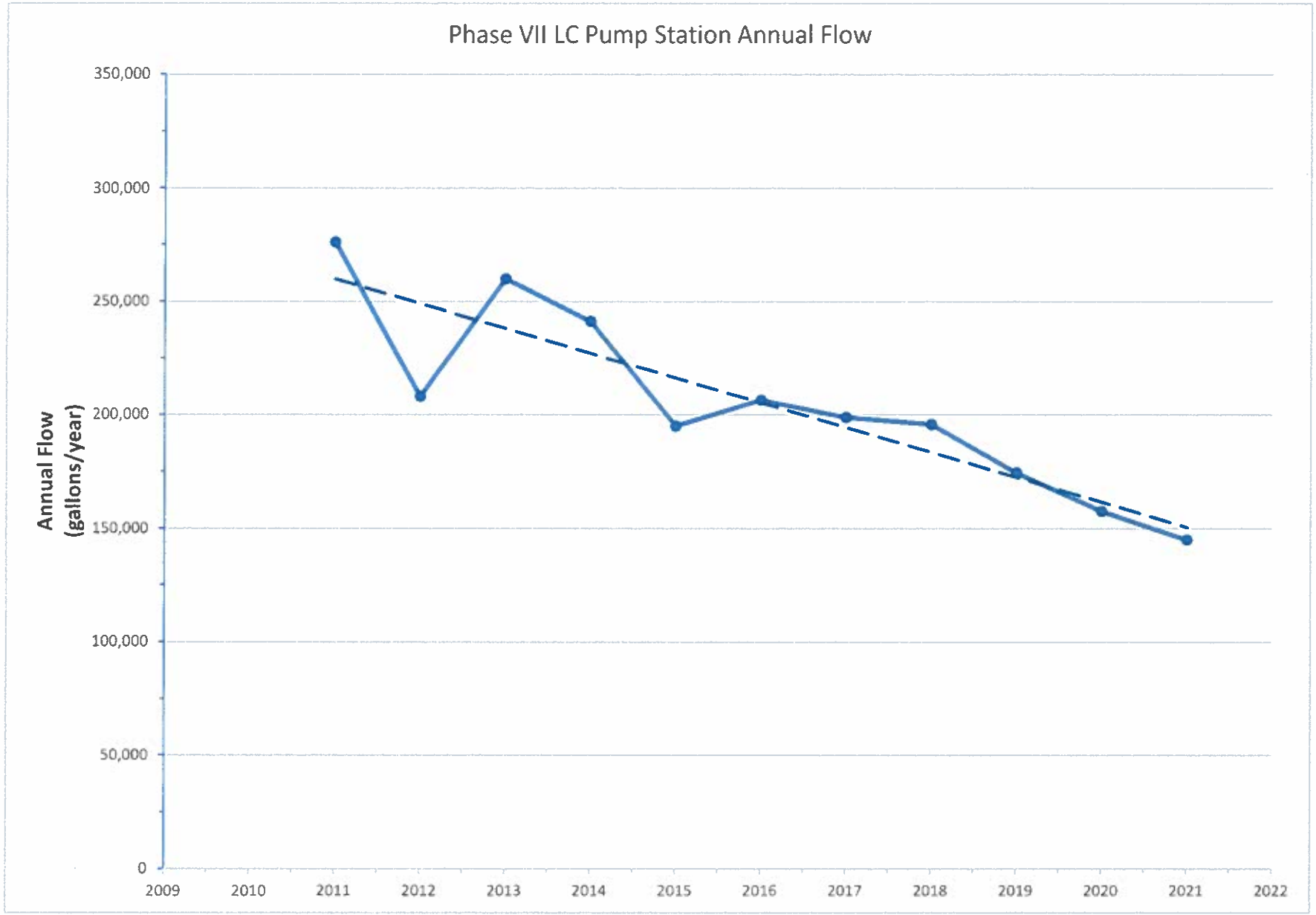

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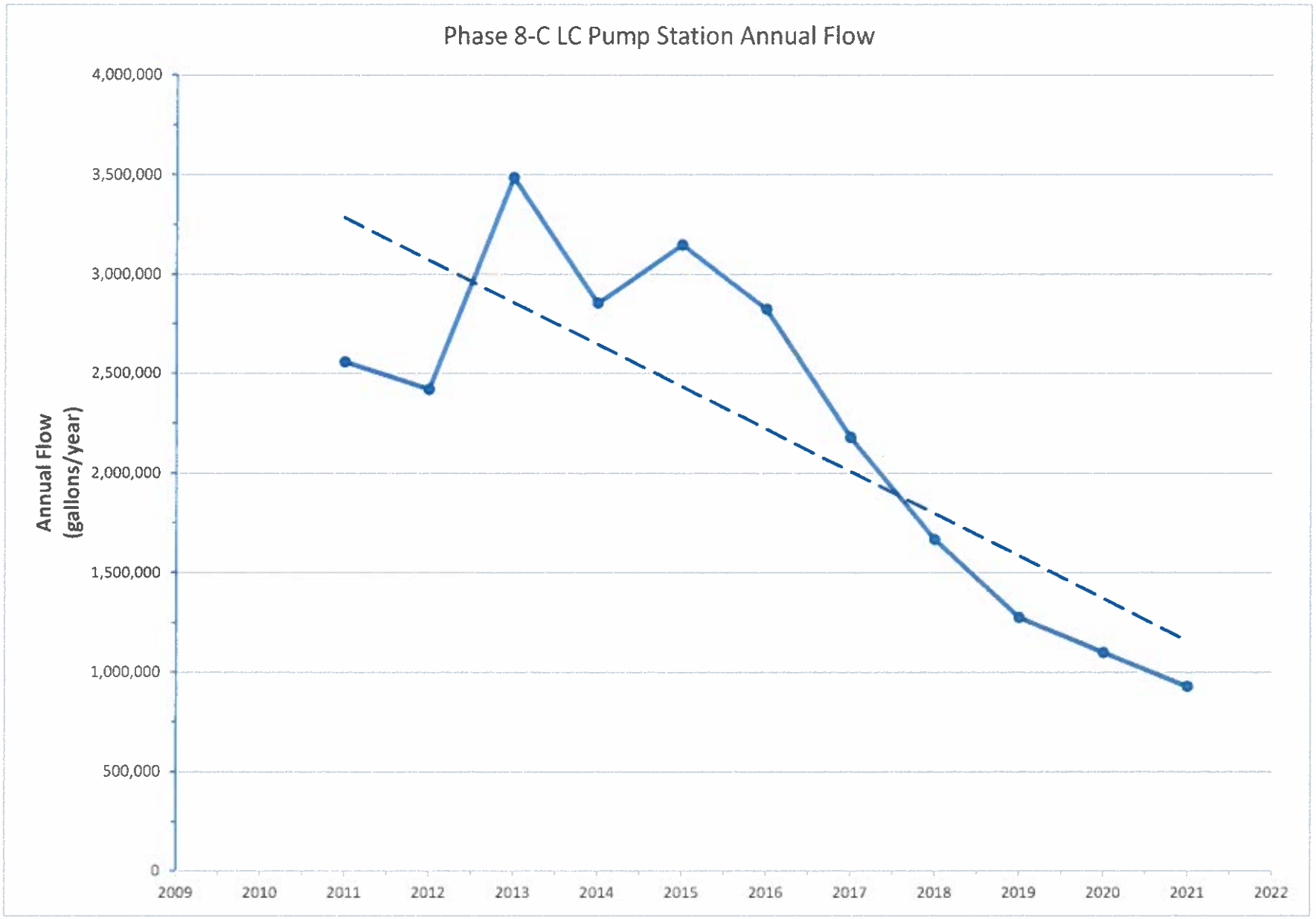

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LEAK DETECTION

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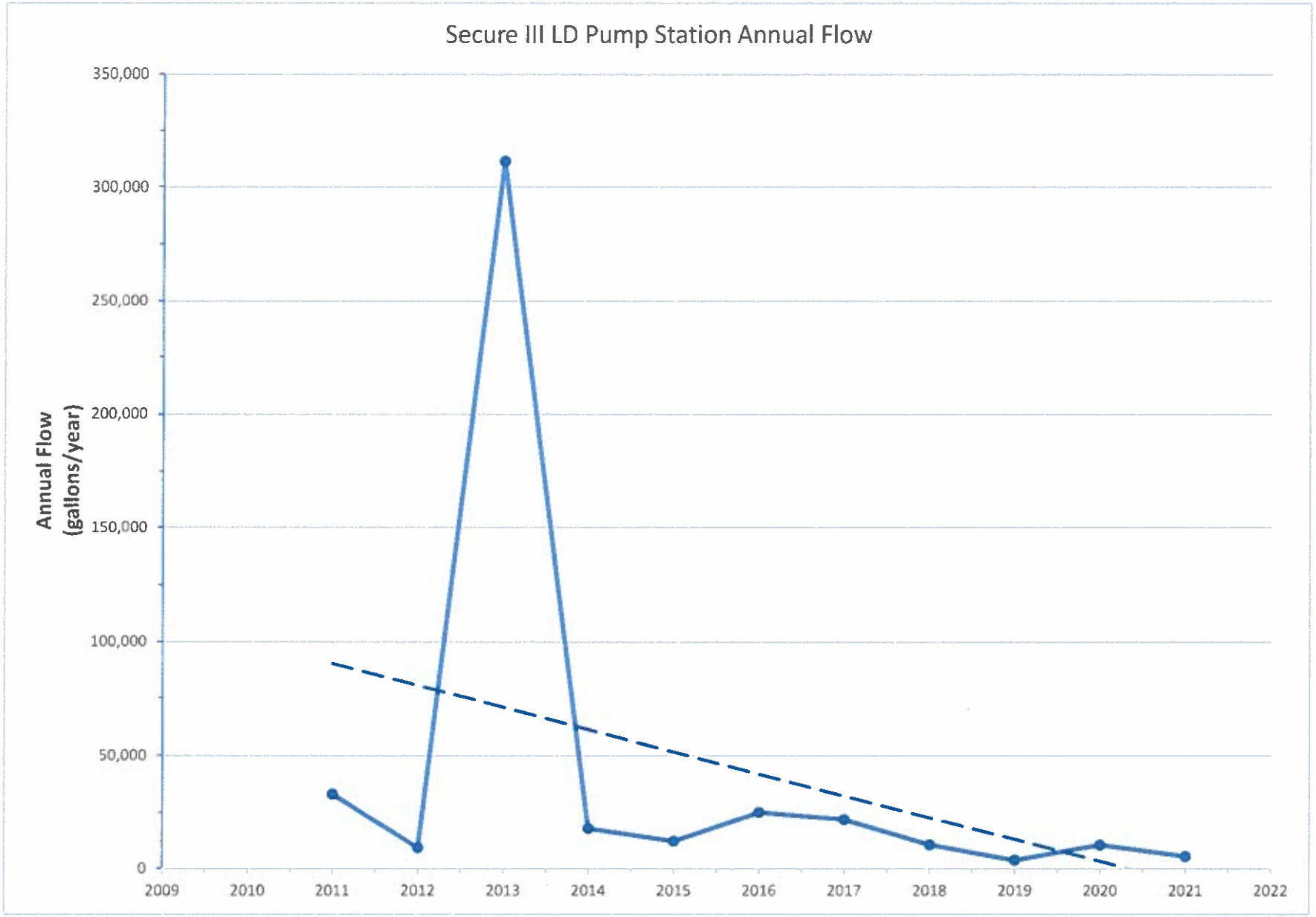
SEVEE & MAHER
ENGINEERS



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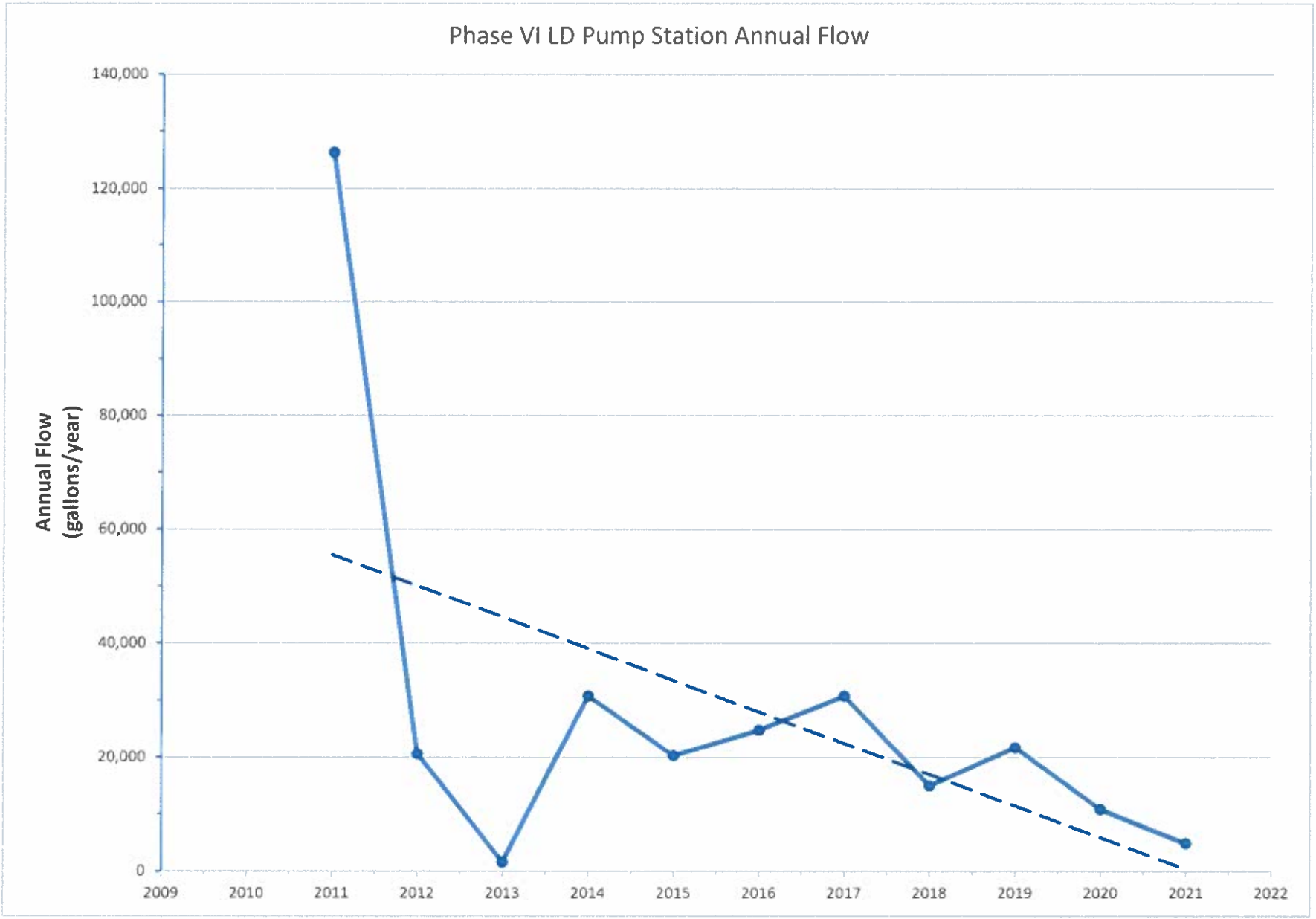

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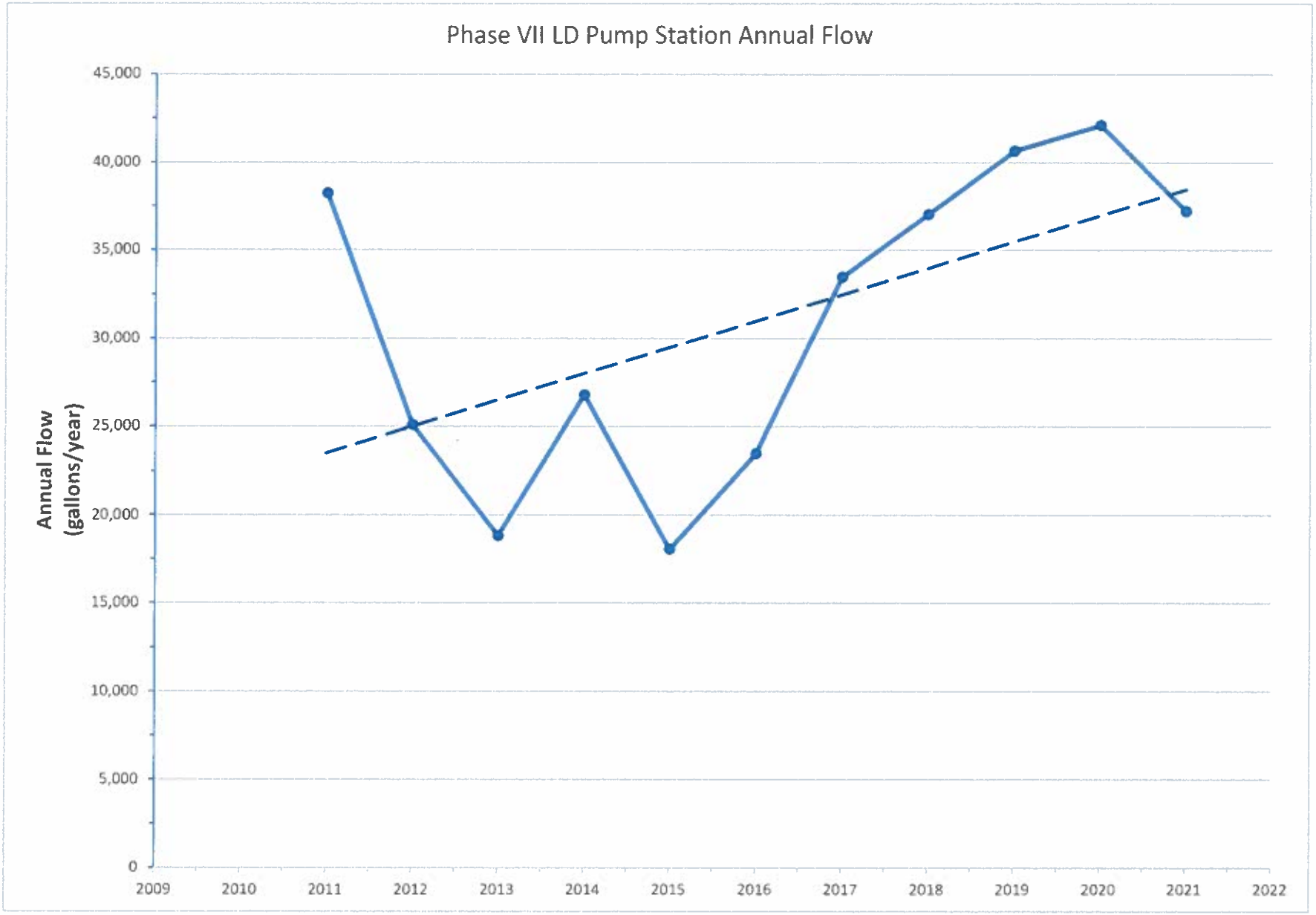

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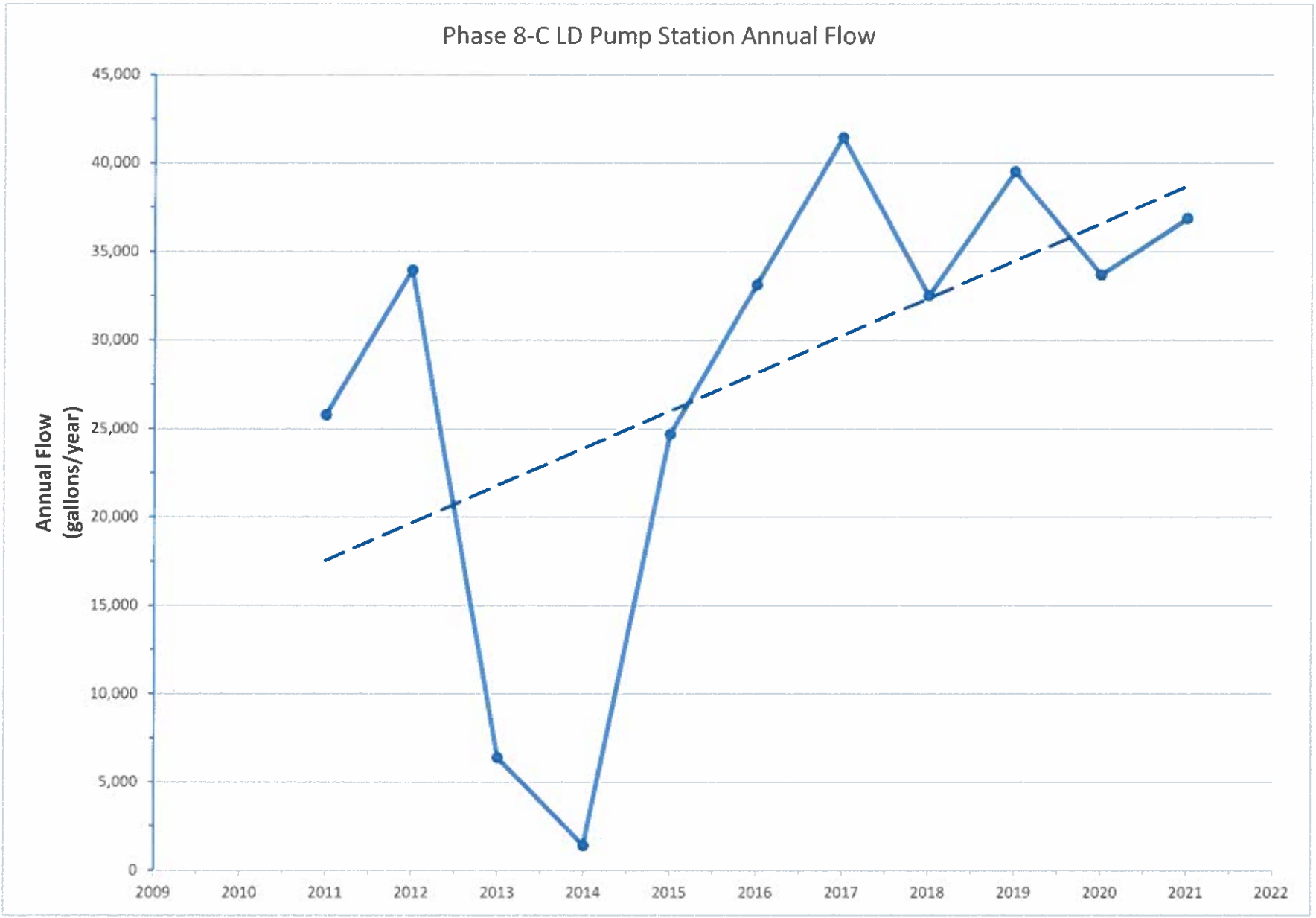

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ATTACHMENT D

LANDFILL GAS MONITORING EVALUATION

PINE TREE LANDFILL

2021 ANNUAL GAS MONITORING EVALUATION

PINE TREE LANDFILL
A Casella Waste Systems Company

Owned by New England Waste Services of ME, Inc.
358 Emerson Mill Rd, Hampden, Maine 04444 • (207) 862-4200

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1.0 INTRODUCTION

In accordance with the MEDEP Chapter 401, Solid Waste Management Rules, item 401.6.C, an evaluation of the gas monitoring results for Pine Tree Landfill's (PTL) past year, including a comparison of the past year's results to the previous year's results is provided below.

Throughout 2021, the following regular landfill gas (LFG) monitoring activities occurred at PTL: (1) well-tuning of the landfill gas collection trenches and wells, (2) continuous flow and temperature monitoring at the flare, and (3) LFG composition measurements taken at the flare during monthly well-tuning activities.

2.0 WELL FIELD ACTIVITY

During 2021, well field activities remained relatively the same as 2020. Anomalies associated with routine operation of the well-field were also monitored, and a summary is provided below.

2.1 Active, New, and Discontinued Well Heads

Throughout all of 2021, the PTL well field consisted of 56 active well heads. No active well heads were discontinued. Table 2-1 shows the well heads that were monitored during 2021 and their status as of the end of the year.

2.2 *Changes and Anomalies in Well Field*

There were no notable changes or anomalies that occurred in the well field during 2021. No temperature readings during 2021 exceeded 150 degrees Fahrenheit. Multiple readings of temperature were between 131 and 150 degrees Fahrenheit, consistent with historical readings and typical of temperatures present in construction and demolition debris landfills.

2.3 *External Soil Gas Extraction Wells*

Collection of migrating LFG from the unlined Conventional Landfill continued at external soil gas extraction wells during 2021. Five extraction wells were active at the beginning of 2021 and remained active at the end of 2021. Average CH_4, total flow, and total energy extraction at all five locations for 2020 & 2021 are provided in Table 2-2. Total flow and energy extracted increased overall throughout 2021.

Table 2-1 Well Heads Monitored at PTL, 2021

Well ID	Well Type	Well Status	Well ID	Well Type	Well Status	Well ID	Well Type	Well Status
PT-GCT05	Horizontal	Active	PT-GW054	Gas Well	Active	PT-GW126	Gas Well	Active
PT-GCT08	Horizontal	Active	PT-GW101	Gas Well	Active	PT-GW127	Gas Well	Active
PT-GCT09	Horizontal	Active	PT-GW105	Gas Well	Active	PT-GW128	Gas Well	Active
PT-GCT10	Horizontal	Active	PT-GW106	Gas Well	Active	PTGW08-1	Gas Well	Active
PTGCT115	Horizontal	Active	PT-GW108	Gas Well	Active	PTGW08-9	Gas Well	Active
PT-GCT7E	Horizontal	Active	PT-GW109	Gas Well	Active	PTGW8-11	Gas Well	Active
PT-GCT7F	Horizontal	Active	PT-GW111	Gas Well	Active	PTGW8-12	Gas Well	Active
PT-GCT7G	Horizontal	Active	PT-GW112	Gas Well	Active	PTGW8-13	Gas Well	Active
PT-GCT7H	Horizontal	Active	PT-GW113	Gas Well	Active	PT-GW-8B	Gas Well	Active
PT-GCT7I	Horizontal	Active	PT-GW114	Gas Well	Active	PT-GW-8D	Gas Well	Active
PT-GCT7J	Horizontal	Active	PT-GW115	Gas Well	Active	PT-GW-8E	Gas Well	Active
PT-GW006	Gas Well	Active	PT-GW116	Gas Well	Active	PT-GW-8G	Gas Well	Active
PT-GW008	Gas Well	Active	PT-GW118	Gas Well	Active	PT-HCT1B	Horizontal	Active
PT-GW009	Gas Well	Active	PT-GW120	Gas Well	Active	PT-HCT1C	Horizontal	Active
PT-GW017	Gas Well	Active	PT-GW121	Gas Well	Active	PT-LGV02	Vent	Active
PT-GW019	Gas Well	Active	PT-GW122	Gas Well	Active	PT-PDMH3	Other	Active
PT-GW021	Gas Well	Active	PT-GW123	Gas Well	Active	PT-SGV03	Vent	Active
PT-GW042	Gas Well	Active	PT-GW124	Gas Well	Active	PT-SGV06	Vent	Active
PT-GW053	Gas Well	Active	PT-GW125	Gas Well	Active			

Table 2-2 External Soil Gas Extraction Well Totals, 2020 & 2021

	AVERAGE METHANE (%)		TOTAL FLOW (MMSCF)		ENERGY EXTRACTED (MMBTU)	
WELL	2020	2021	2020	2021	2020	2021
PTGW08-1	51.5	49.8	11.7	11.8	6026	5876
PTGW08-9	0.3	2.8	1.4	1.8	4	50
PTGW8-11	29.3	27.7	0.6	1.5	188	416
PTGW8-12	20.3	18.5	1.8	1.9	365	352
PTGW8-13	10.9	12.7	1.4	2.4	153	305

**Data is from average of readings taken and is not time weighted based on reading interval.*

3.0 LANDFILL GAS COMPOSITION

During well-tuning activities, the gas composition of the LFG supplied to the flare was measured in concentrations of methane, carbon dioxide, oxygen (CH_4, CO_2, O_2 respectively), and balance gas (primarily nitrogen). During 2021, PTL staff tuned gas wells with the intent of maintaining CH_4 concentrations of 40-50% (by volume) at each collection location within the secure landfill, 30-40% at collection locations within the conventional landfill, and lower than 30% if possible, at external soil extraction wells. A combination of these flows resulted in an acceptable LFG concentration to operate the flare. In order to maintain a highly efficient vacuum system and prevent possible landfill complications associated with oxygen infiltration, PTL staff strive to maintain satisfactorily low levels of O_2 and balance gas concentrations within the landfill. Concentrations of CO_2 are not of great concern but are measured in addition to the more important levels of CH_4, O_2, and balance gas.

The monthly concentrations of CH_4 and O_2 required for this report varied slightly in 2021 due to a change in the measurement/reporting method used from previous years. Due to the closure of the PTL GTE facility in January of 2021, the previously used stationary gas analyzer that monitored continuous CH_4 and O_2 readings is no longer functionable. To supplement the data from this device, monthly well tuning flare readings were utilized (collected by a portable gas analyzer) to report monthly CH_4 and O_2 concentrations. 2020 data, as reported in years past, represents monthly average concentrations of CH_4 and O_2 computed by using continuous readings from a stationary gas analyzer, located at the former PTL GTE facility. A summary of monthly concentrations of CH_4 and O_2 are shown in Figure 3-1.

Overall, CH_4 concentrations for 2021 were lower than those of 2020. This was a direct result of increased collection in the conventional landfill and external soil extraction wells. Collection rates of these areas were increased in efforts to minimize gas migration off site. CH_4 concentrations ranged from 27-41%, with an annual average of 33.3% for 2021. This was a decrease of approximately 11% from 2020. O_2 concentrations remained at relatively low levels for all of 2021 with an annual average concentration of 1.36%. This was an approximately 26% increase from the 2020 annual average of 1.08%.

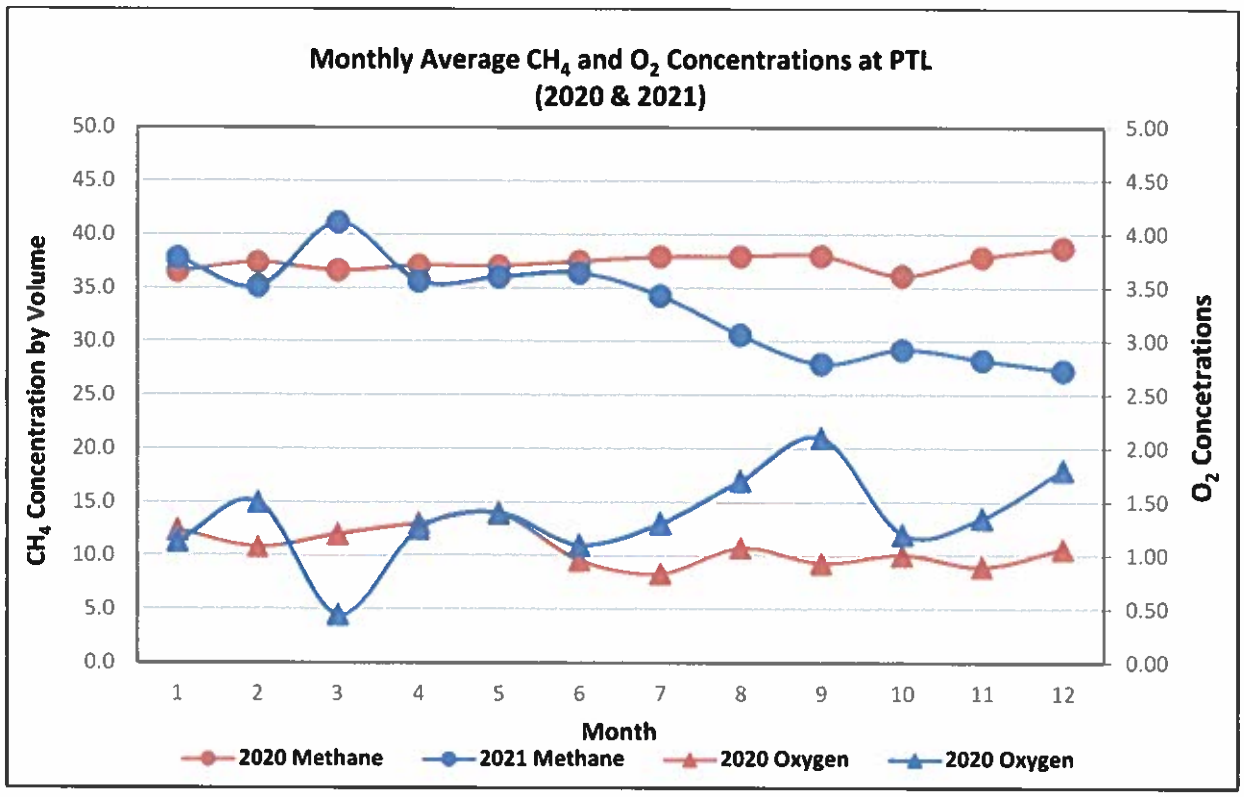

Figure 3-1 Monthly Average CH_4 and O_2 Concentrations at PTL, 2020 & 2021

4.0 LANDFILL GAS FLOW / ENERGY CONTENT OF METHANE COLLECTION

Throughout 2021, the total LFG flow supplied to the PTL GTE facility and the flare was measured and recorded on a continuous basis. Using this data, along with an approximate heating value of 1,005 BTU/SCF (BTU per standard cubic foot) for CH_4, flow data and energy content was calculated. Data results for 2021 (and 2020 for comparison) are listed in Table 4-1.

Figure 4-1 shows the monthly average LFG flow rates during 2021 (and 2020 for comparison) in graph format. As expected, the closed landfill saw an approximately 26% increase in overall LFG flow for 2021. This was a direct result of increased collection in the conventional landfill and external soil extraction wells. The total flow during 2021 was 236.81 million standard cubic feet (MMSCF). This is compared to 188.05 MMSCF collected in 2020.

Figure 4-2 shows the average daily LFG energy content during each month of 2021 (and 2020 for comparison) in graph format. The total energy content at PTL during 2021 was 78,877 MMBTUs, an increase of approximately 12% from 2020.

Table 4-1 LFG Flows / Energy Content of CH_4 Collection at PTL, 2020 & 2021

	MONTHLY FLOW (MMSCF)		MONTHLY TOTAL (MMBTUs)		AVERAGE FLOW RATE (SCFM)		AVERAGE (MMBTUs/day)	
MONTH	2020	2021	2020*	2021	2020	2021	2020*	2021
JANUARY	17.28	16.37	6,345	6,310	387	367	206	205
FEBRUARY	15.19	17.96	5,702	6,335	364	445	198	227
MARCH	17.30	19.89	6,365	8,214	388	445	206	266
APRIL	16.45	21.40	6,128	7,656	381	495	205	256
MAY	16.89	20.87	6,285	7,552	378	468	204	245
JUNE	15.60	19.57	5,876	7,160	361	453	197	240
JULY	14.74	16.59	5,612	5,712	330	372	182	185
AUGUST	15.50	18.92	5,902	5,818	347	424	191	189
SEPTEMBER	15.27	21.12	5,833	5,921	354	489	195	198
OCTOBER	16.18	21.06	5,874	6,181	362	472	190	200
NOVEMBER	13.23	21.16	5,030	6,009	306	490	168	201
DECEMBER	14.41	21.91	5,605	6,010	323	491	182	195
TOTAL	**188.05**	**236.81**	**70,556**	**78,877**				
AVERAGE					**357**	**451**	**194**	**217**

*2020 data was adjusted to incorporate a calculation change of CH4 heating value to 1005 BTU/SCF.

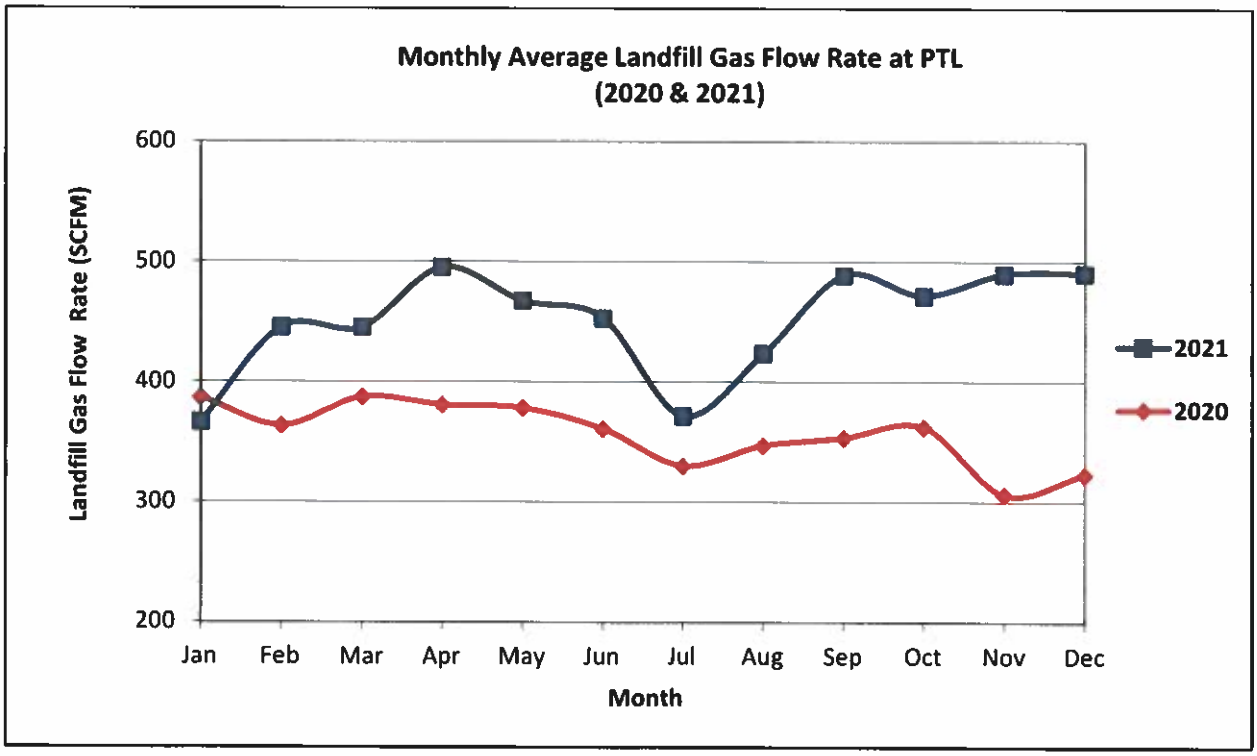

Figure 4-1 Monthly Average Landfill Gas Flow Rate at PTL, 2020 & 2021

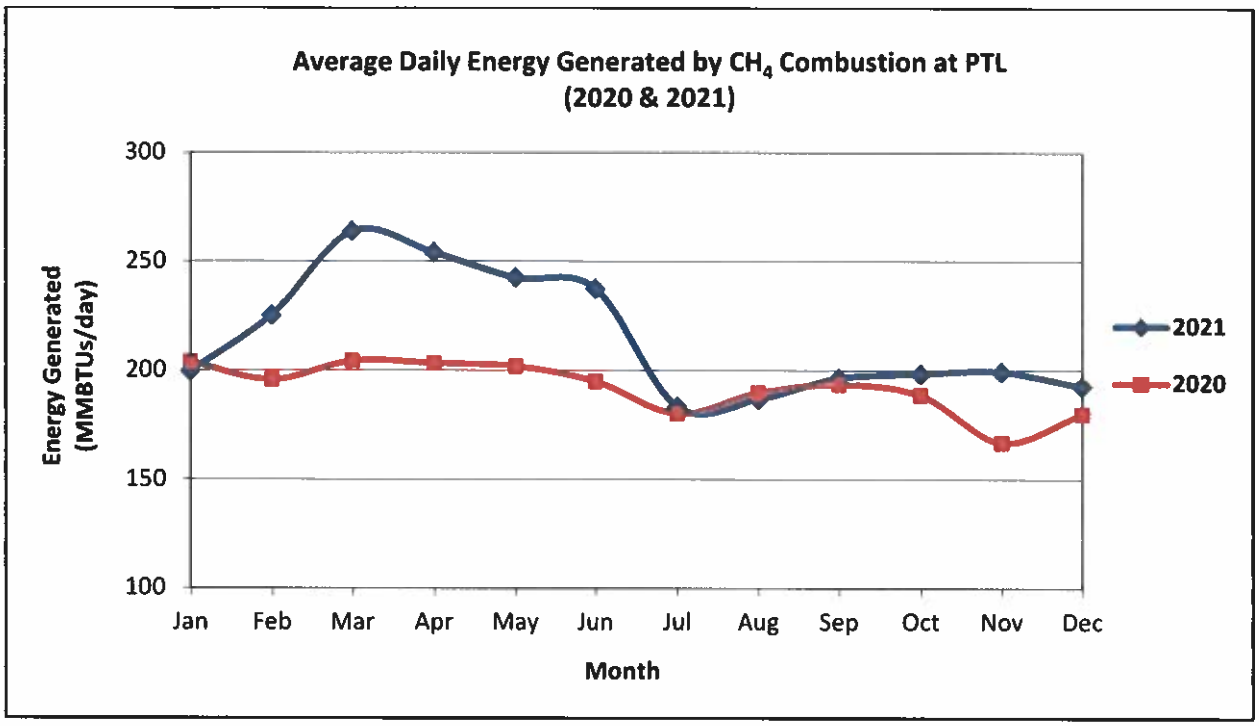

Figure 4-2 Average Daily Energy Generated by CH_4 Combustion at PTL, 2020 & 2021

5.0 SUMMARY

In accordance with the MEDEP Chapter 401, Solid Waste Management Rules, item 401.6.C, an evaluation of the gas monitoring results for Pine Tree Landfill's (PTL) past year, including a comparison of the past year's results to the previous year's results is provided in this evaluation.

Throughout 2021, the following regular landfill gas (LFG) monitoring activities occurred at PTL: (1) well-tuning of the landfill gas collection trenches and wells, (2) continuous flow and temperature monitoring at the flare, and (3) LFG composition measurements taken at the flare during monthly well-tuning activities.

Throughout all of 2021, the PTL well field consisted of 56 active well heads. No active well heads were discontinued.

Collection of migrating LFG from the unlined Conventional Landfill continued at external soil gas extraction wells during 2021. Five extraction wells were active at the beginning of 2021 and remained active at the end of 2021. Total flow and energy extracted increased overall throughout 2021.

Overall, CH_4 concentrations for 2021 were lower than those of 2020. This was a direct result of increased collection in the conventional landfill and external soil extraction wells. Collection rates of these areas were increased in efforts to minimize gas migration off site. CH_4 concentrations ranged from 27-41%, with an annual average of 33.3% for 2021. This was a decrease of approximately 11% from 2020. O_2 concentrations remained at relatively low levels for all of 2021 with an annual average concentration of 1.36%. This was an approximately 26% increase from the 2020 annual average of 1.08%.

As expected, the closed landfill saw an approximately 26% increase in overall LFG flow for 2021. This was a direct result of increased collection in the conventional landfill and external soil extraction wells. The total flow during 2021 was 236.81 million standard cubic feet (MMSCF). This is compared to 188.05 MMSCF collected in 2020. The total energy content at PTL during 2021 was 78,877 MMBTUs, an increase of 12% from 2020.

ATTACHMENT E

LANDFILL AIR MONITORING EVALUATION

PINE TREE LANDFILL

2021 ANNUAL AIR MONITORING EVALUATION

PINE TREE LANDFILL
A Casella Waste Systems Company

Operated by New England Waste Services of ME, Inc.
358 Emerson Mill Road, Hampden, Maine 04444 • (207) 862-4200

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1.0 INTRODUCTION

In accordance with closure order #S-001987-WN-HC-N, conditions #11 and #16, an evaluation of the air monitoring results for the past year, including a comparison of the past year's results to the previous year's results is provided below.

Abiding by the Pine Tree Landfill (PTL) Post Closure Monitoring and Maintenance Manual, methane (CH_4) scans were performed using a MicroFID® (flame ionizing detector) or similar mobile device, and completed by walking an approximate 100 ft spacing grid over the entire landfill cover system. Cover penetrations (i.e. gas collection infrastructure) were also checked in addition to performing the grid walk.

Hydrogen sulfide (H_2S) monitoring with the single remaining stationary continuous monitor was discontinued during 2016 as discussed in the 2015 Annual Report. Approved by the MEDEP, this topic will not be discussed in this report.

Additionally, tracking odor complaints from the 24-hour PTL odor complaint hotline provided an opportunity to evaluate the effectiveness of the cover system at the PTL.

2.0 ODOR COMPLAINTS

Odor Complaint history via the 24-hour PTL complaint hotline was recorded and provided in Table 2-1 below for 2020 and 2021. PTL did not receive any complaints during 2021 similar to 2020; confirming that odors are not a concern with the closed landfill.

Table 2-1 Summary of Complaints at Pine Tree Landfill, 2020 & 2021

2020	-OBJECT OF COMPLAINT-							MONTH
MONTH	ODOR	NOISE	LIGHTS	DUST	TRAFFIC	BIRDS	OTHER	TOTAL
JAN.	0	0	0	0	0	0	0	0
FEB.	0	0	0	0	0	0	0	0
MAR.	0	0	0	0	0	0	0	0
APR.	0	0	0	0	0	0	0	0
MAY	0	0	0	0	0	0	0	0
JUN.	0	0	0	0	0	0	0	0
JUL.	0	0	0	0	0	0	0	0
AUG.	0	0	0	0	0	0	0	0
SEP.	0	0	0	0	0	0	0	0
OCT.	0	0	0	0	0	0	0	0
NOV.	0	0	0	0	0	0	0	0
DEC.	0	0	0	0	0	0	0	0
TOTALS	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***

2021			-OBJECT OF COMPLAINT-					MONTH
MONTH	ODOR	NOISE	LIGHTS	DUST	TRAFFIC	BIRDS	OTHER	TOTAL
JAN.	0	0	0	0	0	0	0	0
FEB.	0	0	0	0	0	0	0	0
MAR.	0	0	0	0	0	0	0	0
APR.	0	0	0	0	0	0	0	0
MAY	0	0	0	0	0	0	0	0
JUN.	0	0	0	0	0	0	0	0
JUL.	0	0	0	0	0	0	0	0
AUG.	0	0	0	0	0	0	0	0
SEP.	0	0	0	0	0	0	0	0
OCT.	0	0	0	0	0	0	0	0
NOV.	0	0	0	0	0	0	0	0
DEC.	0	0	0	0	0	0	0	0
TOTALS	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***

3.0 CH_4 SURFACE SCANS

Landfill methane (CH_4) emission surface scans are performed to determine the effectiveness of the final landfill cover system in controlling CH_4 migration. In accordance with Condition #16 of the Closure Order and the post-closure operations manual, an annual surface scan was performed on December 20, 2021. A copy of the 2021 surface scan is kept on file in the Environmental Manager's office.

Surface scans were completed in general accordance with the New Source Performance Standard (NSPS) for municipal solid waste (MSW) landfills contained in 40 Code of Federal Regulations (CFR) Part 60, Subpart WWW, specifically Section 60.753(d) which states that each owner or operator of a MSW landfill with a gas collection and control system shall: *"Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage..."* In addition, in accordance with MEDEP requests, each penetration through the cover system was also scanned to monitor if boots are functioning properly.

Surface scans were completed using a Micro FID® (flame ionizing detector) or similar mobile device that has a detection limit of 0.5 parts per million (ppm) and a concentration range of 0.5 to 50,000 ppm. During the 2021 scan, PTL staff did not encounter any locations with CH_4 readings above 500 ppm throughout the entire landfill cover system and all its penetrations. This was a decrease of 4 CH_4 reading from 2020, which at the time were cause by a cluster of groundhog holes, below a rocky drainage area overlooking the maintenance garage. Once the groundhog holes were repaired, the 4 CH_4 readings above 500 ppm were eliminated. A breakdown of the number of readings above 500 ppm during 2020 and 2021 is listed in Table 3-1. A copy of the surface scan record log for 2021 is also shown in Figure 3-1.

Table 3-1 Readings above 500 ppm found during 2020 & 2021 CH_4 Surface Scans

Year	Total CH4 Readings Found >500 ppm
2020	4
2021	0

As the topography at PTL continues to settle and stabilize, gaps around the boots will occur, resulting in a need to continually check boots to prevent methane migration. Boots are checked routinely during well tuning activities.

Surface Scan					
Date: 12/20/21			Site Location: Pine Tree Landfill		
Employee: S. Parker			Equipment Used: SEM 5000		
Time:	Location Description:	Northing:	Easting:	Exceedence:	Corrective Action:
Authorized Signature:					Date: 12/20/21

No Exceedences Found

Figure 3-1 Surface Scan Record Log for 2021

4.0 SUMMARY

In accordance with Conditions #11 and #16 of the closure order #S-001987-WN-HC-N, an annual Methane (CH_4) emission surface scan on the landfill final cover was completed. Additionally, review of the number of odor complaints from the 24-hour PTL odor complaint hotline provided an opportunity to evaluate the effectiveness of odor control measures at the PTL. Since no odor related complaints occurred in 2021 similar to 2020, this confirms that the final cover system is functioning properly in terms of odor control.

An annual surface scan was completed as required on December 20, 2021 using a Micro FID® (flame ionizing detector) or similar mobile device. During the 2021 scan, PTL staff did not encounter any locations with CH_4 readings above 500 ppm throughout the entire landfill cover system and all its penetrations. This was a decrease of 4 CH_4 reading from 2020, which at the time were cause by a cluster of groundhog holes, below a rocky drainage area overlooking the maintenance garage. Once the groundhog holes were repaired, the 4 CH_4 readings above 500 ppm were eliminated.

ATTACHMENT F

GEOTECHNICAL MONITORING REPORT

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2021 Post-Closure Geotechnical Monitoring Report
Pine Tree Landfill Facility
Hampden, Maine

March 2022

Report to:

Pine Tree Landfill Facility
Hampden, Maine

Casella Waste Systems, Inc.
Saco, Maine

STATE OF MAINE
RICHARD E. WARDWELL
No. 3315
LICENSED
PROFESSIONAL ENGINEER

Richard E. Wardwell, P.E., Ph.D.
Lake George, NY 12845

A corporation providing hydrogeotechnical consulting services for engineering and environmental applications.

EXECUTIVE SUMMARY

This Geotechnical Monitoring Report has been prepared to summarize the results from post-closure monitoring that was performed for the Pine Tree Landfill during 2021. Final closure construction for the landfill was completed in 2010 with the placement of the cap over the top of Phase VIII-A/B and Phase VIII-C/Stage 1&2 – an activity that augmented the final cover that had been placed over Phases V, VI, VII, and VIII-C/Stage 3 during previous years.

Procedures that were implemented at the site in 2011 continued through 2021 as described in the Post-Closure Geotechnical Monitoring Plan (PCGMP, REW 2010b). Observational methodology was used to assure that the geotechnical performance of the landfill cover was consistent with the design analyses. To address the interrelationship between infiltration and cover stability, the performance of drainage features during the post-closure period was assessed by inspecting the condition of: 1) the cover surface, 2) the invert grades of the surface terraces, and 3) pipe outlets from the cover drainage layer.

In the past, these observations were supplemented with topographic surveys of the landfill surface and drainage terraces. Specifically, monuments, established in each phase of the landfill after closure, were tracked to further augment these landfill observations in assessing the large-scale pattern of topographic variations across the landfill. The horizontal and vertical movements of these monuments were measured to track displacements associated with potential instabilities and excessive strains that may affect the integrity of the cover system's drainage performance.

After a decade of data and analysis, the survey results consistently showed that the resulting strains are acceptable and that the integrity of the drainage facilities within the cover system have not likely been compromised. Based on this consistent behavior (that correlates well with the theoretical basis for the closure design), topographic surveys of the displacement monuments were suspended in 2020, while the geotechnical performance of the closed landfill continued to be assessed using the ongoing site observational methodologies.

Following this plan, the geotechnical monitoring at PTL during 2021 emphasized stability and settlement observations of the landfill surface made during the year, and an independent geotechnical inspection of the landfill surface and slope topography conducted on August 30, 2021. This document supplements previous monitoring and landfill inspection reports (REW 2013 through 2021) where all monitoring data indicated that settlement and stability of the landfill waste is consistent with design parameters and assumptions.

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2021 Post-Closure Geotechnical Monitoring Report
Pine Tree Landfill Facility, Hampden, Maine

1. INTRODUCTION

This 2021 Post-Closure Geotechnical Monitoring Report (PCGMR) describes the stability and settlement monitoring activities that were conducted during the past year at the Pine Tree Landfill (PTL) facility in Hampden, Maine. PTL is a closed, multi-phased, lined facility meeting the MEDEP requirements for a secure landfill. Portions of it piggyback onto the previous landfill areas. The history of landfill development at the site has been summarized in previous plans and annual reports (REW 2005 through 2011a). Figure 1-1 presents a site map for the PTL facility and shows the historic landfill areas (i.e. Conventional, asbestos, Secure I, and Secure II landfills), and the development phases for the Secure III expansion.

The landfill was closed and capped in phases starting in 2008 and finishing in 2010. In accordance with the Post-Closure Geotechnical Monitoring Plan (PCGMP, REW 2010b), site observational monitoring of the cover system was emphasized in 2021. Post-closure activities included additional tasks and schedules for topographic surveying and performance monitoring of surface drainage features and internal collection pipes provided in the cover system. The PCGMP is based in part on the cover stability analysis (SME 2007, 2008) and settlement assessment (REW 2007b). It is consistent with the Closure Geotechnical Monitoring Plan (CGMP) that was part of the Closure Application approved by the Maine Department of Environmental Protection (MEDEP) in Closure Order #S-001987-WN-HC-N (MEDEP 2008).

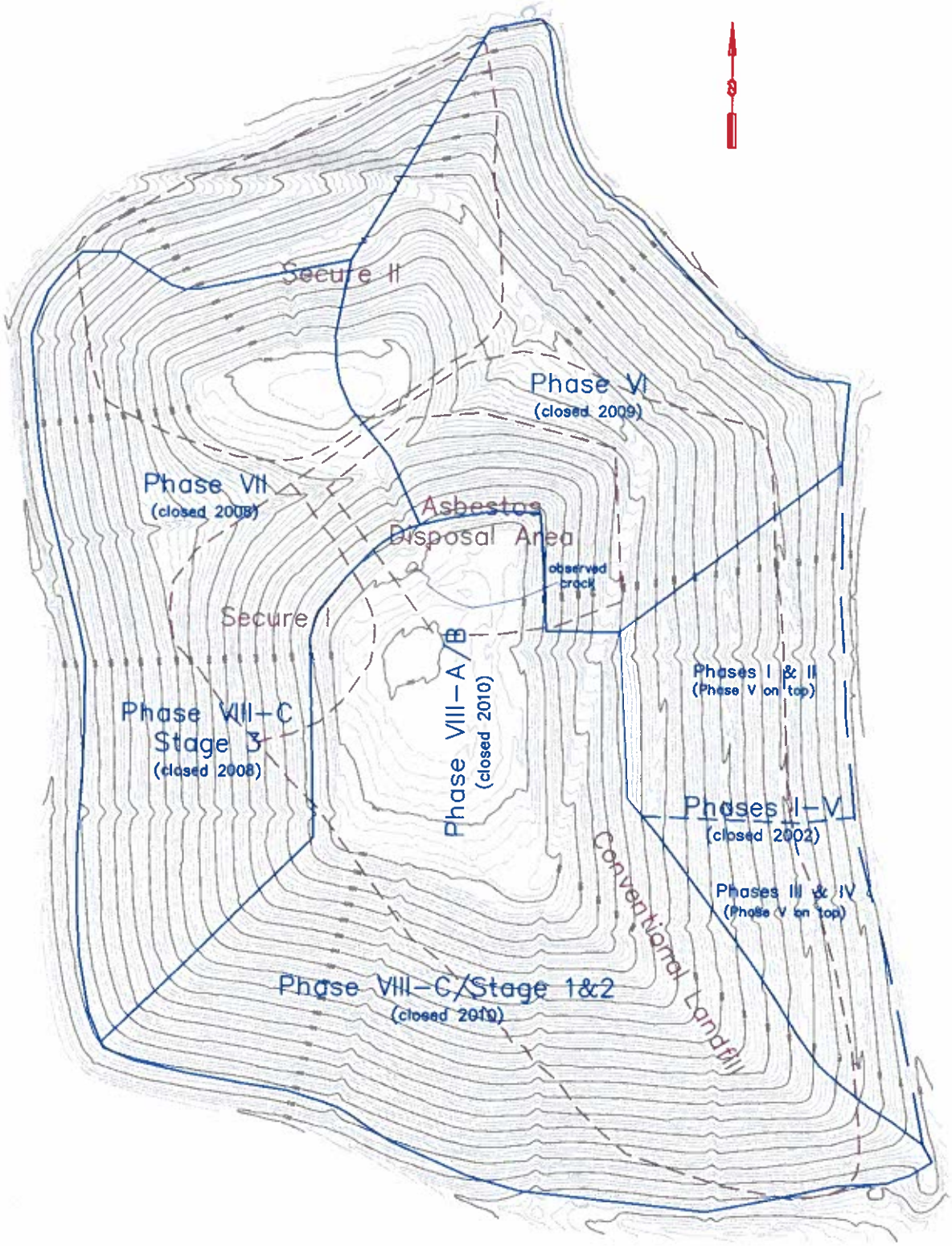
A description of the monitoring performed during this first nine years of the post-closure period was presented in previous annual reports (REW 2011 to 2021) while the observations during this past year is provided herein.

2. POST-CLOSURE MONITORING PROGRAM

This section presents a summary of closure construction, an overview of the post-closure monitoring program objectives, a general discussion of the program, and a narrative description of the historical results.

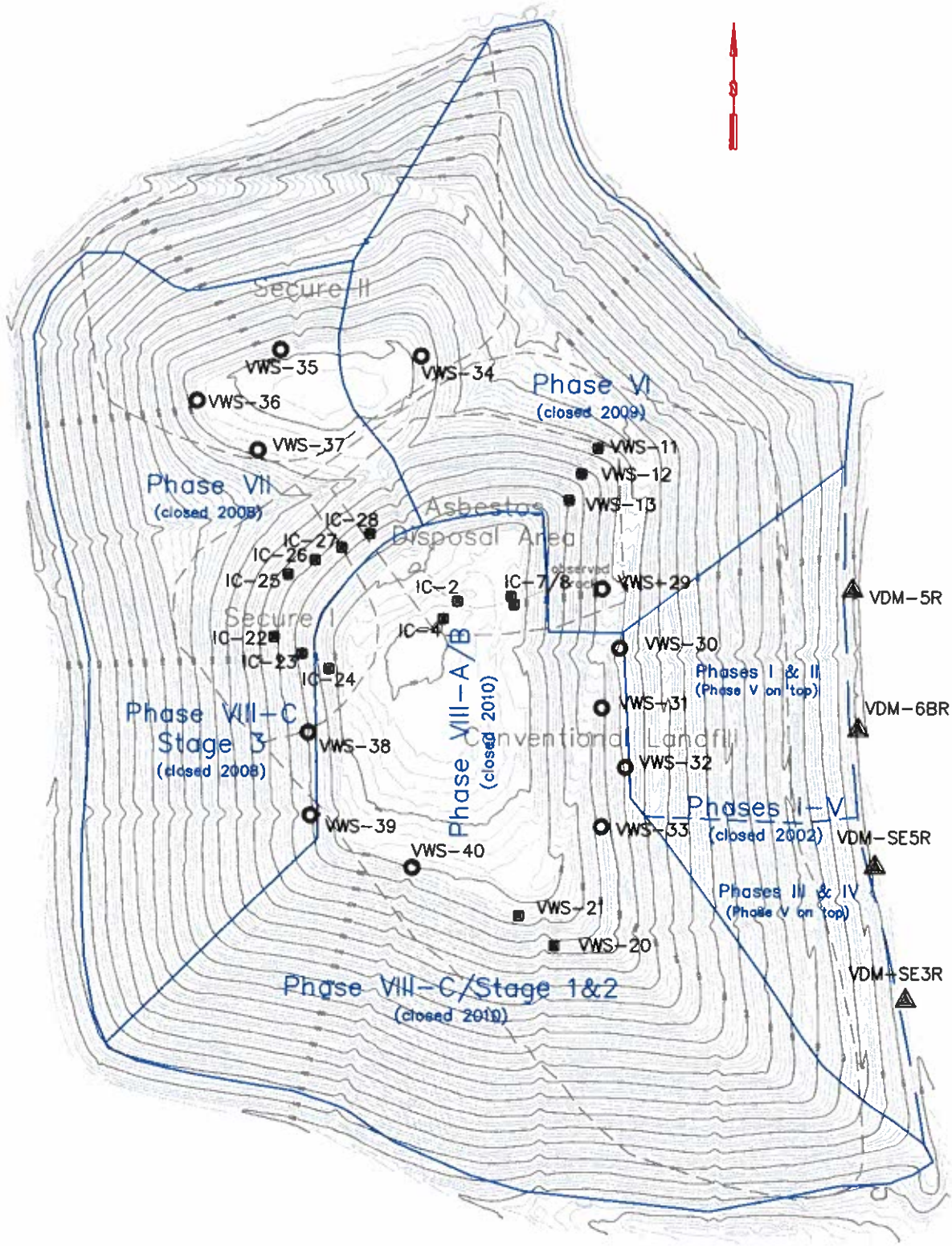
2.1 LANDFILL OPERATIONS AND CLOSURE CONSTRUCTION

The final cover of PTL was constructed in multiple phases (see Figures 1-1 & 2-1) using various cover buildups and drainage features. Closures included Phase I-V in 2002 and the Secure III Expansion areas (Phases VI, VII, and VIII) over a three year period starting in 2008.



(Ref: 09-17-15 aerial survey by SME)

Richard E. Wardwell, P.E., Ph.D. 19 Old Lake RD, PO Box 169 Lake George, NY 12845	Project: 2021 Post-Closure Monitoring Report	Title: Site Plan - Pine Tree Landfill Hampden, Maine		By: REW Checked: REW Date: March 2022
	Client: Pine Tree Landfill, Hampden, ME	Project No: 1750	Scale: 1" = 250'	Fig. No: 1-1



(Ref: 09-17-15 aerial survey by SME)

Richard E. Wardwell, P.E., Ph.D. 19 Old Lake Rd, PO Box 169 Lake George, NY 12845	Project: 2021 Post-Closure Monitoring Report	Title: Location of Monitoring Instruments & Survey Monuments		By: REW Checked: REW Date: March 2022
	Client: Pine Tree Landfill, Hampden, ME	Project No: 1750	Scale: 1" = 250'	Fig. No: 2-1

Phase VI reached interim grade and intermediate cover was placed in 2002. Final waste grading was initiated in the fall of 2008 and closure construction was completed by the beginning of 2010. The Phase VI area has the same cover buildup as Phase VII (see next paragraph), except construction and demolition (C&D) fines were used as the bedding layer instead of sand and the geocomposite drainage net (GDN) was not used in the drainage layer. These changes resulted in a cap consisting of a 6" bedding layer of C&D fines, a barrier layer consisting of 2' of compacted clay and a linear low density polyethylene (LLDPE) geomembrane, a drainage layer consisting of 1' of sand, and a 1' vegetative layer. Four (4) survey monuments (VWS-11 to VWS-13, VWS-34) were established down the mid-slope of Phase VI area to track slope displacements in this area.

Phase VII area was closed in 2008 and has a cover system that includes from the bottom up: 6" bedding layer of sand, a barrier layer consisting of 2' of compacted clay and a LLDPE geomembrane, a drainage layer consisting of a GDN and 1' of sand, and a 1' vegetative layer. In Phase VII, a series of seven (7) instrumentation clusters (IC-25 to IC-28, VWS-35 to VWS-37) were placed in this area for use during operational and post-closure monitoring.

Phases VIII-A/B area was closed in 2010 and has a cover on the side-slope areas similar to the cover used for Phase VI except the clay thickness was reduced from 2' to 1.5' (i.e. 6" bedding layer of C&D fines, a barrier layer consisting of 1.5' of compacted clay and a LLDPE geomembrane, a drainage layer consisting of 1' of sand, and a 1' vegetative layer.) On the top of the Phase VIII-A/B area, the barrier soil layer below the geomembrane consisted of a 6" bedding layer of C&D fines, a barrier layer consisting of 1' of compacted clay and a geosynthetic clay liner (GCL) and a LLDPE geomembrane, a drainage layer consisting of 1' of sand, and a 1' vegetative layer. Monitoring of Phase VIII-A/B secondary settlement in this area and in the transition between the Conventional Landfill and the asbestos disposal area began in 2003 with the measuring the elevation of eight (8) instruments (IC-2, IC-4, IC-78, VWS-29 to VWS-33) installed into the Secure III waste.

Phase VIII-C/Stage 1&2 reached interim grade and intermediate cover was placed in 2002. Final waste grading was initiated in the fall of 2008 and completed in 2009 with closure construction completed in 2010. VIII-C/Stages 1&2 area was closed in 2010 and has a cover on the side-slope areas similar to the cover used for Phase VI except the clay thickness was reduced to 1.5' (i.e. 6" bedding layer of C&D fines, a barrier layer consisting of 1.5' of compacted clay and a LLDPE geomembrane, a drainage layer consisting of 1' of sand, and a 1' vegetative layer). On the top of the Phase VIII-A/B area, the barrier soil layer below the geomembrane consisted of 1' of clay and a GCL, (i.e. 6" bedding layer of C&D fines, a barrier layer consisting of 1' of compacted clay and GCL, and a LLDPE geomembrane, a drainage layer consisting of 1' of sand, and a 1' vegetative layer). Three (3) survey monuments (VWS-20, VWS-21, VWS-40) were installed in this area for long term monitoring.

Phase VIII-C, Stage 3 area was closed in 2008 and have a cover system that includes from the bottom up: 6" bedding layer of sand, a barrier layer consisting of 2' of compacted clay and a LLDPE geomembrane, a drainage layer consisting of a GDN and 1' of sand, and a 1' vegetative layer. While most of Phase VIII-C/Stage 3 was closed in 2008, the area on the top of this phase in the vicinity of IC-24 was used as a temporary storage area for waste that was subsequently re-

graded to other portions of the landfill. As a result, the waste thickness varied over this location until the final grade was reached and the area was capped in 2010. Surface elevations had been measured in five (5) monuments (IC-22 to IC-24, VWS-38, VWS-39) since 2009 to track post-closure settlements of the landfill cover in this area.

All the cover systems included an extensive system of drainage piping located in the sand above the geomembrane to collect and convey infiltrated water to discharge points typically located in surface water down-chutes. As will be discussed further in the next section, the drainage system, including the collection pipes, is integral to maintaining stability of the cover system.

2.2 OBJECTIVES OF POST-CLOSURE MONITORING

The goal of the monitoring program is to detect excessive differential settlement and slope instabilities and to remediate the impact from these movements should they occur before the drainage capabilities of the cover system are degraded. Landfill settlement results from waste consolidation and waste mass decomposition. Settlement may affect cover integrity by: 1) imposing excessive strain on the barrier layer and GDN, 2) reducing runoff and increasing infiltration, and 3) reducing the effectiveness of the internal drainage system in the cover. Settlement may also exceed the design capacity of landfill gas wells and pipe boots to accommodate such movement.

Post-closure monitoring program for PTL was developed to ascertain if the performance of the cover system is remaining intact for the post-closure period. Degraded cover stability is primarily caused by the inability of drainage system to shed precipitation and infiltration, which is often a direct result of excessive differential settlements, waste instabilities, and long term progressive changes in foundation strength and deformation of the landfill footprint. Specifically the performance of the cover may be directly impacted by: 1) degradation of the cover system that could reduce runoff, increase infiltration, and hinder subsurface drainage efficiency; and 2) landfill settlement that may reduce and distort surface grades, resulting in less water runoff and potential impact on the performance of the internal drainage layer within the cover system. Further degradation of the cover system can be due to a number of other causes such as cracking and erosion of the vegetative soil layer, animal burrows, lateral movements and settlement, excessive woody growth, and landfill gas. The objectives of post-closure monitoring are to detect the impacts that may result from the inability of the cover to shed runoff as indicated by ponded water, grass kills, changes in drainage pipe flows over time, and sediment transport through drainage pipes.

2.3 GENERAL MONITORING PROGRAM

To address the sensitive aspects that are vulnerable in the design of a closed landfill, geotechnical monitoring of PTL in 2021 focused on assessing the performance of its cover as it relates to the drainage, stability, and strains in this landfill component. In addition, the integrity of the cover as impacted by waste-mass and foundation instability was inspected for potential conditions that may indicate adverse field behavior.

Based on maintaining the integrity of the drainage system installed in the final cover system as a key component necessary to maintain stability through the post-closure period, monitoring focused on the physical observations of the performance of the cover system by inspecting the condition of the vegetative layer, the integrity of the slope grades, and the flow characteristics of the drainage pipes. To supplement these observations, the overall surface elevation of the landfill was conducted up to 2015 and surveys made of the drainage terraces in subsequent years (SME 2021, see Appendix A).

2.4 HISTORICAL MONITORING RESULTS

Because landfill stress may not be always discernible by visual inspection, measurements were made at specific landfill monuments (established at numerous locations as shown on Figure 2-1) to track both horizontal and vertical displacements of the cover system. These surveys had been made during the past 11 plus years of post-closure monitoring. As noted in annual reports for the first decade of post-closure data, the geotechnical and drainage performance of the closed PTL consistently agreed with theoretical expectations that matches well with design assumptions. Based on the plethora of consistent historical data, the labor intensive survey measurements of the foundation and landfill surface monuments were suspended after the August 2020 event with the concurrence of the regulatory agency (see Appendix B).

While historic geotechnical performance observations clearly indicated that the landfill slopes were stable and that differential waste settlement was minor and has been managed to tolerable levels well within the goals of the final cover design, other geotechnical monitoring of the closed landfill's performance at PTL continues (as documented herein). Concurrently, it is recognized that should future observations indicate any unusual surface deformations or degraded drainage conditions, the topographic surveys can be reinstated without any loss in the data needed to evaluate the extent and causes of such landfill movements.

3. DISCUSSION OF THE 2021 POST-CLOSURE MONITORING

To help assure that the goals and objectives of post-closure monitoring are achieve, observations of the geotechnical performance of the Pine Tree Landfill were conducted in 2021. Specifically, monitoring of the waste mass, cover, and foundation soils was focused on detecting localize and global instabilities, impaired drainage from differential settlement conditions as they affect surface runoff, and drainage terrace impacts from excessive cover strains. The results of the 2021 inspections (i.e. general landfill observations of cover performance and cover stability, cover strain, conclusions from the drainage terrace survey, and global waste mass/foundation stability monitoring) are summarized in the following sections.

3.1 GENERAL LANDFILL OBSERVATIONS

During 2021, observations were conducted four times by inspecting external and internal drainage facilities and assessing their performance. These observations were augmented with a survey of the landfill including the surface drainage terraces (see SME 2021). With the one exception noted and repaired in 2018 to improve surface water drainage from the Secure II and

Secure III cover systems (REW 2019), all of the closure slopes appear to be intact with no noticeable deformations or indications of excessive differential settlements.

With the referenced Secure II and III repairs, the entire landfill cover sheds runoff as designed with no indication of ponded water, surface cracking, leachate breakouts, toe heaving, or excessive topographic variations. Landfill geometry, erosion resistance, and cover appearance are indicative of a stable system at the time of the observations. The topographic survey indicated that waste slope angles are consistent with design with no apparent depressions or discontinuities in the slope of the drainage ditches that might be indicative of instabilities. In summary, ground observations and the results from the topographic surveys do not suggest potential landfill slope instabilities or undesirable cover settlement.

To further monitor potential impacts, the landfill cover was inspected under the direction of an experienced geotechnical engineer on August 30, 2021, and focused on the overall condition of the landfill that specifically looked for evidence of cracking, localized depressions, erosion, leachate breakout on sideslopes, areas of ponded water, stressed vegetation, and toe heaving (see Site Photos in Appendix C). Using the checklist presented in Appendix D, inspection elements for assessment of geotechnical performance of the closed landfill included:

- overall surface cover condition
- surface cracking
- localized surficial depressions in the cover surface
- erosion of cover material
- erosion of ditch linings
- leachate breakout on sideslopes
- ponded water
- toe heaving
- grass kills
- gas venting

At the time of the inspection, there were no indications of inconsistencies between site conditions and PTL Post-closure Operations Manual. The results of this inspection did not detect any unusual movements or behavior – good signs that the landfill cover is performing in accordance with the closure design.

3.2 COVER STABILITY MONITORING

As previously mentioned, the landfill cover system is subject to adverse impacts from large-scale and localized slope instabilities, excessive settlements, and intolerable differential displacements. This section summarizes cover stability monitoring, while the impact of cover strains from total and differential settlements are discussed in Section 3.3.

3.2.1 Large-Scale Cover Stability

Monitoring for large-scale cover stability was performed to detect slope displacements or conditions that could lead to excessive deformations. Visual observations by others were

focused towards identifying adverse performance characteristics before they propagate to larger scale displacements that might compromise the integrity of the cover system. Attention was paid towards: 1) observing the overall surface geometry and cover condition of the landfill, and 2) looking for evidence of extensive surface cracking, large scale depressions, and large scale toe heaving, among others. During this post-closure period, the special emphasis placed on the observations of the landfill surface, along with the appearance of the drainage terraces, and the condition of the outlet end of the drain pipes above the geomembrane, indicate, to date, a minimal threat on the cover system from a massive slope instability.

3.2.2 Localized Cover Stability

As noted earlier (see §2.1), the final landfill cap was constructed in multiple phases using various cover buildups and drainage features. For assessing localized movements, site observations have focused on identifying neighborhood cracks, differential movement or heaving in the cover that could lead to subsequent excessive movements. Evidence of the erosion of cover material and ditch linings was also assessed.

Historically, site observations of cover stability were augmented by measurements of positional changes in monitoring pins placed into the cover system. As described in previous reports (see references REW, 2013 through REW, 2021), the survey movements appear random with no trends indicative of lateral movements in the cover. Site observations did not detect any surface movements, and survey data did not measure any outlying variations in the settlement rates of the cover not attributed to the vertical deformation of the waste. All of these facts support the conclusion that, to date, the cover system appears stable and is performing as anticipated during design.

3.2.3 Overall Cover Stability Conclusions

Historic conclusions (from a vast amount of data during the first decade of the post-closure period) demonstrate that slope movements are aleatory and epistemic differences associated with variations of the measurements. Illustration of directional trends or visual indications of surface instabilities (such as variations from the uniform settlement rate) were not detected in the cover grades.

3.3 COVER STRAIN

Settlement during the initial post-closure period was less than the rate observed during operations – the latter value generally higher as a likely reflection of some undetected stress-related compression caused by additional laterally-applied loads from active portions of the landfill operations. Historic inspections and settlement data demonstrated that compression coefficients have lessened during the first decade of the post-closure period, resulting in an order of magnitude decrease in settlement rate over the last decade of closure.

Observations in 2021 focused on cover deformations to indicate potential impacts on the drainage capability of the cover system, breaches in the integrity of the cover materials, and the onset of localized instability issues. The recent observations were consistent with those

historically measured during operations and with secondary compression coefficients measured during the past 11 years of post-closure period. Historic GPS surveys of the surface displacements at each monument (established over the landfill surface to evaluate cover strain) match 2021 observations that indicate no excessive differential settlements or severe surface water ponding indicative of drainage impacts associated with cover strain. Specifically, field observations support the premise that cover deformations are within tolerable limits, thus demonstrating that resulting strains are acceptable and that the integrity of the drainage facilities within the cover system have not likely been compromised to date.

3.4 DRAINAGE TERRACE SURVEYS

In accordance with the 2010 Post-Closure Geotechnical Monitoring Plan, Sevee & Maher Engineers, Inc. (SME) completed a ground survey of the drainage terraces (see REW 2019, SME 2018b, 2020, 2021) to augment previous measurements (SME 2011, 2012, 2014, 2017) in verifying the discharge performance of these drainage features during the post-closure period. As described in the SME report (SME 2021), details of this survey demonstrate that, while over the entire length of these terraces there is still positive drainage, water may pond in isolated low areas before draining from both the terrace and the sand underdrain located below the terrace. While these sags would result in some retention of surface water runoff, SME concluded that it would not result in flows over the top of the berm or limit the terrace from draining surface water from the cover.

The noted sags of the cover where water may pond at times were monitored during 2021 as part of the routine cover inspections to ascertain the potential for the cover soil to become saturated or displaced sufficiently to trigger further actions. While none of these conditions were detected, future ponding will be brought to the attention of the site's engineer for an evaluation of additional remedial measures to re-establish drainage in these areas.

3.5 GLOBAL WASTE MASS/FOUNDATION STABILITY MONITORING

Global waste mass stability monitoring during the post-closure period focused on identifying signs of large scale deformations that extend below the cover system into the waste mass and through the foundation soils on the east side of the landfill where the facility is underlain with native silty clay. To assess waste mass stability, visual observations were used and compared to previous monitoring of surface displacements. No excessive movements or erratic outliers were detected in the slopes of the closed landfill of the foundation ground adjacent to the toe of the waste pile that may be indicative of surface instabilities, leading to the conclusion that the global waste mass and foundations remain stable.

3.6 OVERALL COVER INTEGRITY

To date, site observations are consistent with historic measured differences in horizontal locations, and show no constant trend associated with slope instabilities. As these trends continue, both total and differential settlements continue to be less than the predicted values, and the impact on cover strain and threat to impinging drainage will be even less than anticipated during design. The geotechnical performance of the closed landfill continues to be monitored

using the existing observational methodologies for facility inspections, knowing that monument surveys can be reinstated any time landfill observations indicate unusual deformations or degraded drainage conditions.

4. SUMMARY

The stability of the cover and waste mass at the Pine Tree Landfill was primarily assessed in 2021 by periodic landfill observations. Observations have been collected during the post-closure period in order to evaluate adverse impacts in the landfill cover system that might be indicative of potential impacts to the performance of the cover system. Conclusions from these observations are consistent with historic field measurements and supports the hypothesis that there was no widespread indication of cover instabilities or excessive settlements that would impair surface drainage or the collection and removal of infiltration into the cover system. Furthermore, evaluation of the landfill topography matched with slope stability monitoring data indicates that the foundation soils continue to provide satisfactory support for the landfill. Assessing a decade of data and analyses from monument surveys supports the conclusion that resulting strains are acceptable and that the integrity of the drainage facilities within the cover system have not likely been compromised. Furthermore, comparison of field observations are consistent with field measured values and show that estimates of the total strains extrapolated for the 30-year post-closure period will be less than those tolerable levels predicted during design.

Based on this consistent behavior (that correlates well with the theoretical basis for the closure design), topographic surveys of the displacement monuments were suspended in 2020, while the geotechnical performance of the closed landfill continued to be assessed using the ongoing site observational methodologies. If, in the future, field measured surveys of the foundation and landfill surface monuments will be reinstated in any area where unusual deformations or adverse drainage conditions are detected by visual inspections.

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APPENDIX A

Pine Tree Landfill Drainage Terraces Post-Closure Survey

SME
SEVEE & MAHER
ENGINEERS

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Cumberland, ME 04021
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info@sme-engineers.com
sme-engineers.com

MEMO TO: Jeff Pelletier (NEWSME)

CC: Ritch Wardwell
Rhonda Forrester (SME)

FROM: Ted Leatherbee

DATE: October 18, 2021

SUBJECT: **PINE TREE LANDFILL DRAINAGE TERRACES POST-CLOSURE SURVEY**

As requested, Sevee & Maher Engineers, Inc. (SME) surveyed the drainage terraces on the closed Secure III final cover at the Pine Tree Landfill in Hampden Maine. The survey was completed on two dates, April 26 and 27, 2021, using Topcon HiPer V GPS technology. The weather was mostly clear on both days and temperatures were between 40-50°F. The site conditions were dry and the vegetation was short from recent mowing. At the time of survey there was no ponding or signs of extensive long-term ponding, such as grass kills.

The primary purpose of the survey was to evaluate slopes along the drainage terraces. Ground surface elevations were measured along the inverts of the drainage terrace at the locations shown on the attached Figure 1. Generally, elevations were measured at 10-40 foot intervals along the terraces, with additional measurements taken in areas that appeared to have settled, resulting in potential for surface water ponding within the drainage terrace. In some cases there was a buildup of eroded material resulting in spillage over the terrace berm. There were many additional areas of sag identified during this survey. These new areas are highlighted on Figure 1. The data collected was also compared to the data obtained from similar surveys completed on December 2, 2020, November 25, 2019, August 27, 2018, October 3, 2017, September 11, 2014, November 5, 2012, and April 14, 2011 for an indication of overall landfill settlement.

The drainage terraces have positive slopes from their high points to their outlets. Figure 1 shows the survey points and ground elevations along each drainage terrace. Areas were identified where a nominal sag has formed along the invert of the terrace. These sags would result in some localized ponding of surface water during certain times of the year. Most of these areas would not result in flows over the top of the berm or limit the terrace from draining surface water from the cover. Figures 2 through 5 show both plan and profile of the highlighted areas in Figure 1. These areas have been identified in past surveys and have been monitored over the years as shown in the table below. Included in Figure 1, but not included in Figures 2 through 5 are the areas that have been identified in this survey. These areas will be surveyed more closely in next year's terrace survey and included in the table below if deemed appropriate.

The sag locations (see Figure 1), and yearly magnitude recorded since the surveys have been completed, beginning in 2011, are summarized in the table below.

LOCALIZED SETTLEMENT AREAS	YEAR DISCOVERED	MAXIMUM LOCALIZED SETTLEMENT MEASURED PER YEAR								
		2011	2012	2013	2014	2017	2018	2019	2020	2021
A	2017	-	-	-	-	0.16	N/A	N/A	N/A	N/A
B	2011	0.06	0.36	0.12	0.21	0.57	0.53	0.29	0.51	0.51
C	2011	0.05	0.82	0.75	0.83	0.94	1.24	0.38	0.87	0.87
D	2011	0.19	N/A	0.21	N/A	0.45	0.58	0.45	0.59	0.59
E	2017	-	-	-	-	0.41	0.55	0.40	0.45	0.45
F	2011	0.13	0.39	N/A	0.23	0.73	0.85	0.42	0.91	0.91
G	2017	-	-	-	-	0.29	0.15	N/A	0.27	0.27
H	2017	-	-	-	-	0.45	0.45	0.38	0.50	0.50
I	2018	-	-	-	-	-	0.15	N/A	0.28	0.28
J	2020	-	-	-	-	-	-	-	0.15	0.15
K	2020	-	-	-	-	-	-	-	0.42	0.42
L	2020	-	-	-	-	-	-	-	0.16	0.16
M	2020	-	-	-	-	-	-	-	0.49	0.49
N	2020	-	-	-	-	-	-	-	0.47	0.47
O	2020	-	-	-	-	-	-	-	0.33	0.33
P	2020	-	-	-	-	-	-	-	0.48	0.48

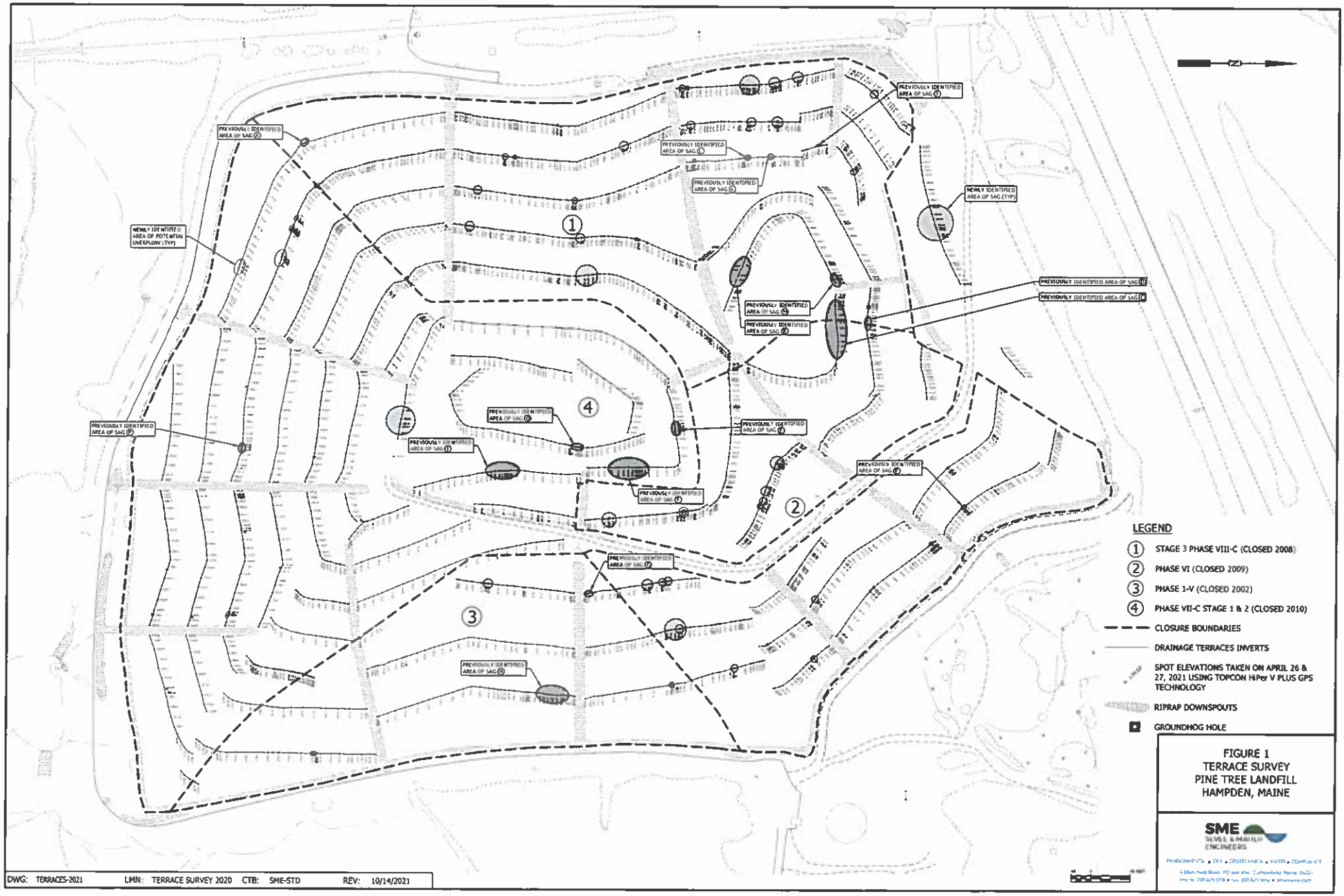
Note:
1. Note there is some variability in the sag measurement from year to year since the actual measurement location may have varied between yearly measurements.

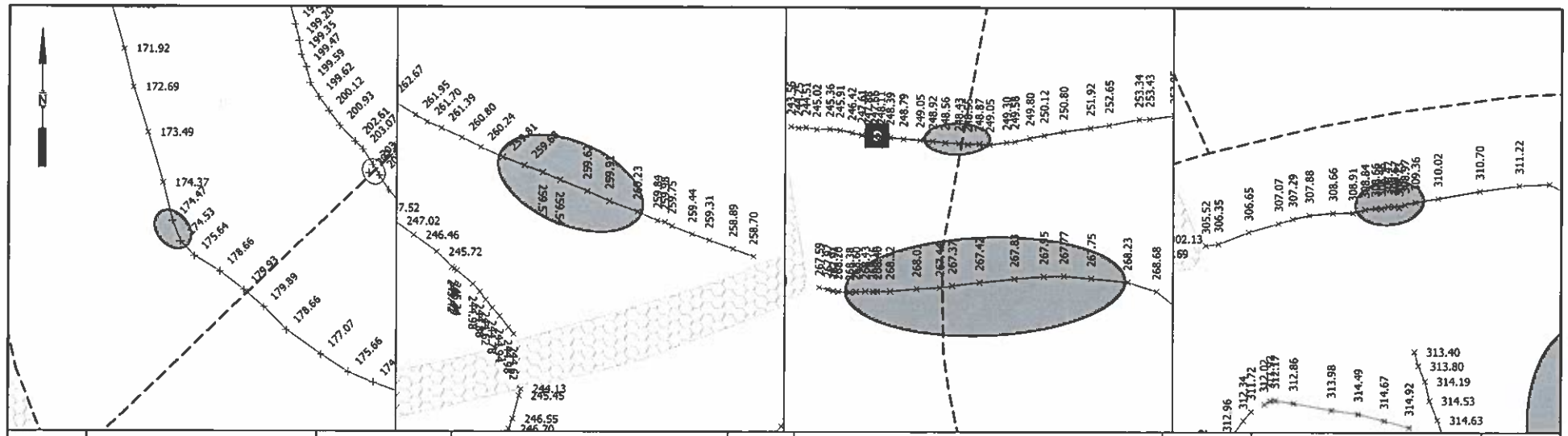
Figure 1 also shows locations of groundhog holes borrowed into the terraces. This is not a complete inventory of the holes but there appeared to be an active population of these animals present on the landfill. Groundhogs can do significant damage to the integrity of the cover and drainage system and controls should be put in place to minimize the impact of these borrowing animals. In some areas surface water flowing in the drainage path flow directly into these holes. In other areas, the drainage path has been restricted by the borrowed material from these holes and subsequently overflow spills over the terrace dike leading to erosion and stressed vegetation.

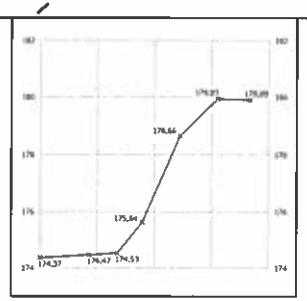
These areas should be checked during the routine landfill inspections.

OVERALL SITE SETTLEMENT

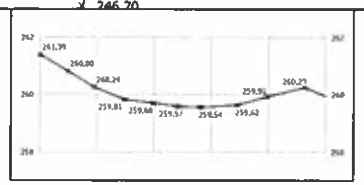
To date, the greatest amount of overall cover settlement continues to be from the upper portion of Closure Area 4 which is part of the 2010 closure area. In this area, there is over 10 feet of settlement where settlement has been observed since the inception of these surveys on April 14, 2011. Typical settlements in the mid-slope of the landfill sideslopes are as follows: Southern side range from 3 to 5 feet, west side range from 2 to 4 feet, north side range from 1 to 2 feet and the east side range from 2 to 4 feet. These values increase with increasing elevations. During our site visit, we observed no cover integrity issues associated with these settlements.


PREVIOUSLY IDENTIFIED AREA OF SAG (A)
PREVIOUSLY IDENTIFIED AREA OF SAG (B)
PREVIOUSLY IDENTIFIED AREA OF SAG (C)
PREVIOUSLY IDENTIFIED AREA OF SAG (D)
PREVIOUSLY IDENTIFIED AREA OF SAG (E)
PREVIOUSLY IDENTIFIED AREA OF SAG (F)
PREVIOUSLY IDENTIFIED AREA OF SAG (G)
PREVIOUSLY IDENTIFIED AREA OF SAG (H)
PREVIOUSLY IDENTIFIED AREA OF SAG (I)
PREVIOUSLY IDENTIFIED AREA OF SAG (J)
PREVIOUSLY IDENTIFIED AREA OF SAG (K)
PREVIOUSLY IDENTIFIED AREA OF SAG (L)
PREVIOUSLY IDENTIFIED AREA OF SAG (M)
PREVIOUSLY IDENTIFIED AREA OF SAG (N)
PREVIOUSLY IDENTIFIED AREA OF SAG (O)
PREVIOUSLY IDENTIFIED AREA OF SAG (P)
NEWLY IDENTIFIED AREA OF POTENTIAL OVERFLOW (TYP)
NEWLY IDENTIFIED AREA OF SAG (TYP)
1
2
3
4
N
LEGEND
1 STAGE 3 PHASE VIII-C (CLOSED 2008)
2 PHASE VI (CLOSED 2009)
3 PHASE 1-V (CLOSED 2002)
4 PHASE VII-C STAGE 1 & 2 (CLOSED 2010)
CLOSURE BOUNDARIES
DRAINAGE TERRACES INVERTS
SPOT ELEVATIONS TAKEN ON APRIL 26 & 27, 2021 USING TOPCON HiPer V PLUS GPS TECHNOLOGY
RIPRAP DOWNSPOUTS
GROUNDHOG HOLE
FIGURE 1
TERRACE SURVEY
PINE TREE LANDFILL
HAMPDEN, MAINE
SME
SEWELL & MARTIN ENGINEERS
DWG: TERRACES-2021
LMN: TERRACE SURVEY 2020
CTB: SME-STD
REV: 10/14/2021





AREA A



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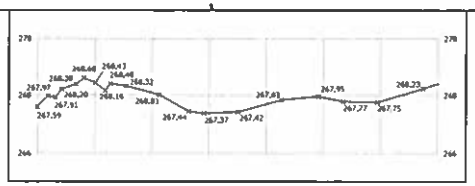

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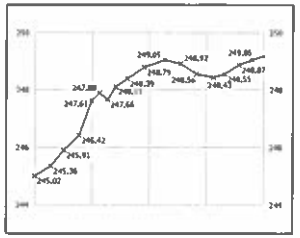

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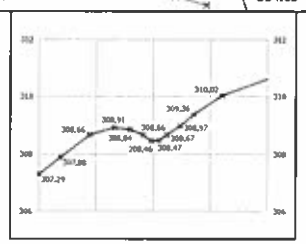


AREA E

LEGEND

SPOT ELEVATIONS TAKEN ON APRIL 26 & 27, 2021 USING TOPCON HiPer V PLUS GPS TECHNOLOGY

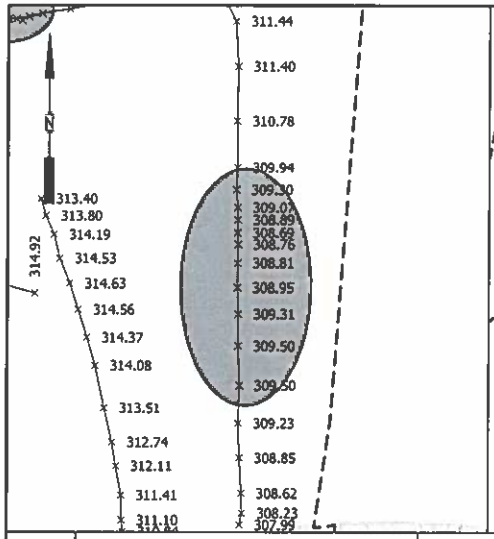
DRAINAGE TERRACES INVERTS

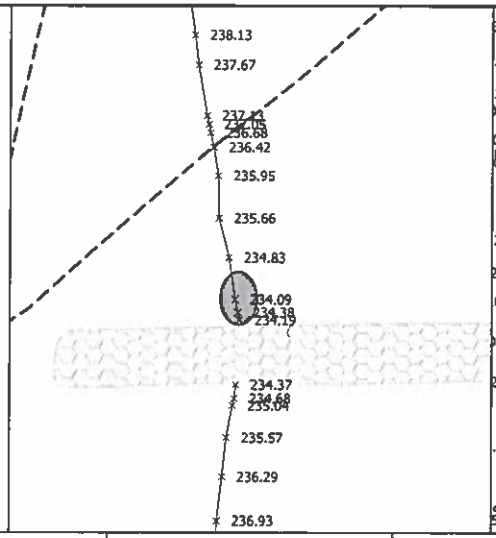
RIPRAP DOWNSPOUTS

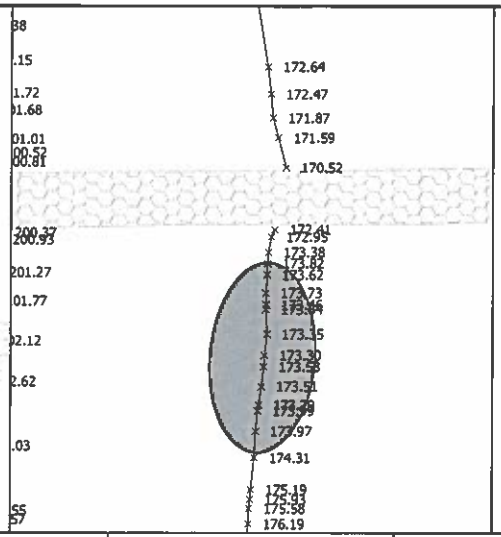
FIGURE 2
EXPANDED VIEW OF SAG AREAS
PINE TREE LANDFILL
HAMPDEN, MAINE

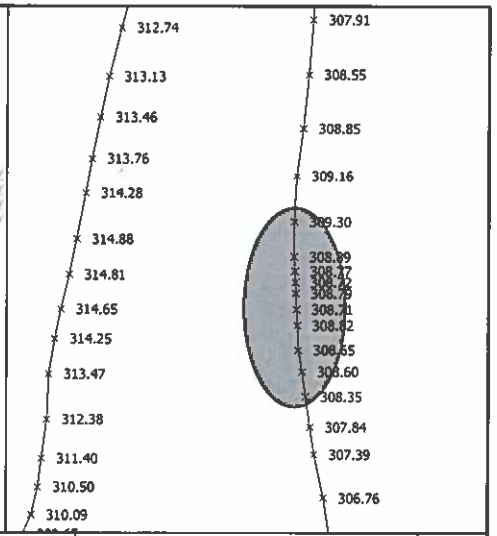
SME
SEVEE & MAHER ENGINEERS

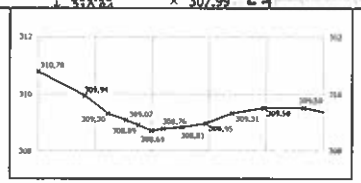
DWG: TERRACES-2021 LMN: SAG AREAS CTB: SME-STD REV: 10/14/2021











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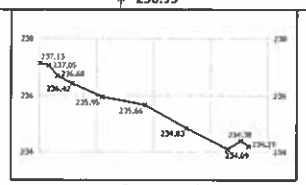

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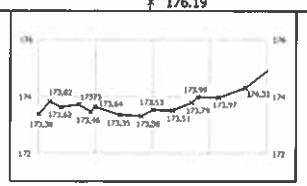

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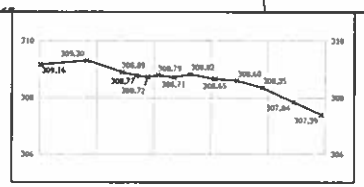


AREA I

LEGEND

SPOT ELEVATIONS TAKEN ON APRIL 26 & 27, 2021 USING TOPCON HiPer V PLUS GPS TECHNOLOGY

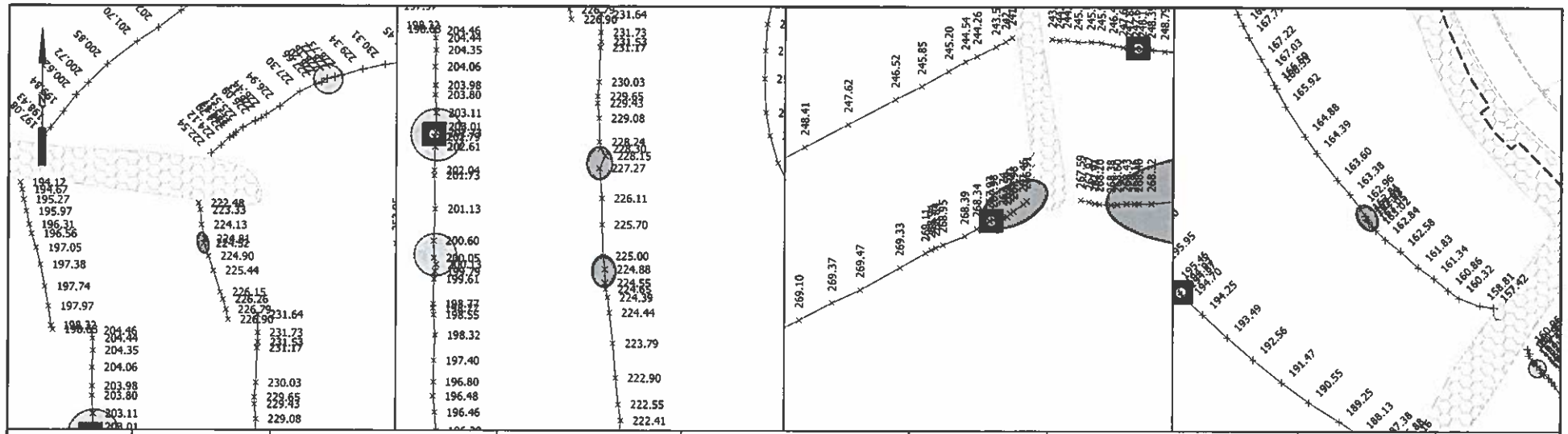
DRAINAGE TERRACES DIVERTS

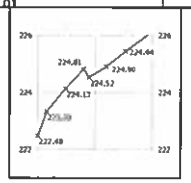
RIPRAP DOWNSPOUTS

FIGURE 3
EXPANDED VIEW OF SAG AREAS
PINE TREE LANDFILL
HAMPDEN, MAINE

SME
SEVEE & MAHER ENGINEERS

DWG: TERRACES-2021 LMN: SAG AREAS CTB: SME-STD REV: 10/14/2021





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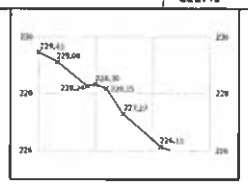

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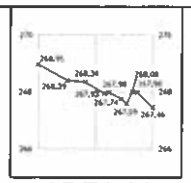

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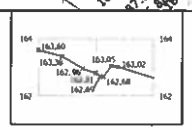

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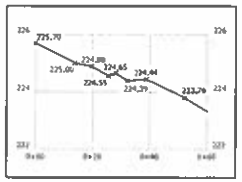


AREA L

LEGEND

+ 179.87 — SPOT ELEVATIONS TAKEN ON APRIL 26 & 27, 2021 USING TOPCON HiPer V PLUS GPS TECHNOLOGY

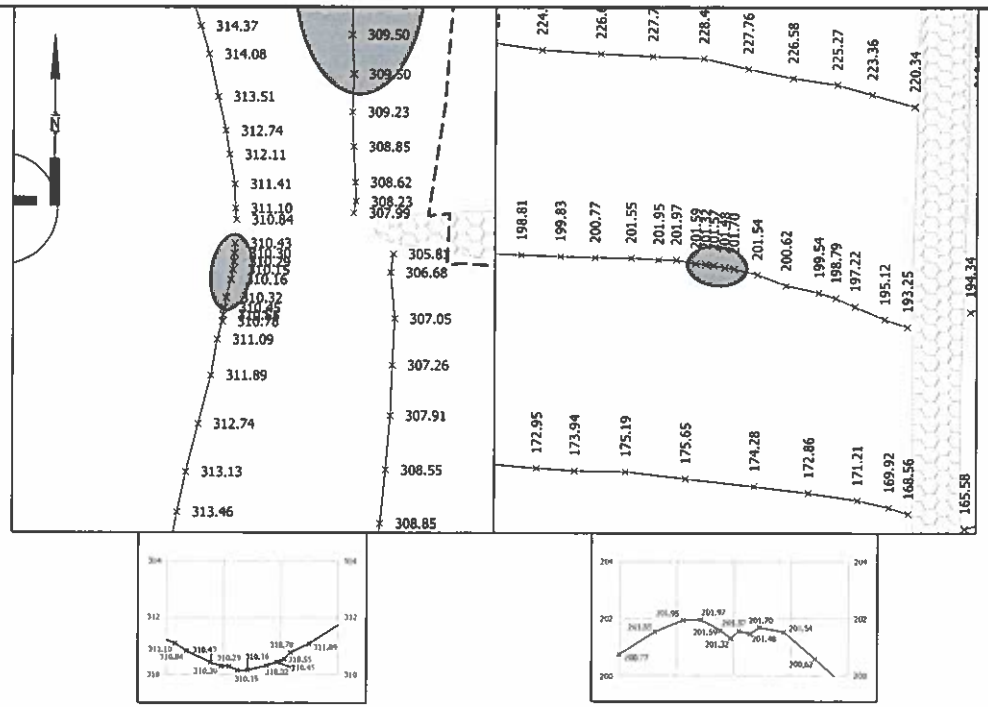
DRAINAGE TERRACES INVERTS

RIPRAP DOWNSPOUTS

FIGURE 4
EXPANDED VIEW OF SAG AREAS
PINE TREE LANDFILL
HAMPDEN, MAINE

SME
SEVEE & MAHER ENGINEERS

DWG: TERRACES-2021 LMN: SAG AREAS CTB: SME-STD REV: 10/14/2021



AREA O

AREA P

LEGEND

SPOT ELEVATIONS TAKEN ON APRIL 26 & 27, 2021 USING TOPCON HiPer V PLUS GPS TECHNOLOGY

DRAINAGE TERRACES INVERTS

RIPRAP DOWNSPOUTS

FIGURE 5
EXPANDED VIEW OF SAG AREAS
PINE TREE LANDFILL
HAMPDEN, MAINE

SME
SEVEE & MAHER ENGINEERS

DWG: TERRACES-2021 LMN: SAG AREAS CTB: SME-STD REV: 10/14/2021

APPENDIX B

SME/MEDEP Correspondence
October 22-23, 2020

Subject: RE: PTL Geotechnical Monitoring

Farrar, Stephen E <Stephen.E.Farrar@maine.gov> Fri, Oct 23, 2020, 1(
to Jeffrey Pelletier

You are viewing an attached message. Gmail can't verify the authenticity of attached messages.

Hi Jeff. At this point I see no need for anything except observations when you do your walk-overs. Thanks.

From: Jeffrey Pelletier <Jeffrey.Pelletier@casella.com>
Sent: Thursday, October 22, 2020 2:06 PM
To: Farrar, Stephen E <Stephen.E.Farrar@maine.gov>
Cc: Wayne Boyd <Wayne.Boyd@casella.com>; Toni King <Toni.King@casella.com>
Subject: PTL Geotechnical Monitoring

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or op attachments unless you recognize the sender and know the content is safe.
Steve,

I hope all is well! I want to thank you for reviewing the 2019 Pine Tree Landfill Geotechnical Monitoring Report, ar considering discontinuing future monitoring as requested by Richard Wardwell. So far in 2020, geotechnical mon has been completed as required for Q1-Q3. A terrace survey will also be performed within the next few weeks. I wondering what your thoughts are for Q4 and beyond. Please let me know and thank you for your help!

Jeffrey Pelletier
Environmental Manager
Casella Waste Systems, Inc.

358 Emerson Mill Rd.
Hampden, ME 04444
c. 207.249.8025| w. casella.com

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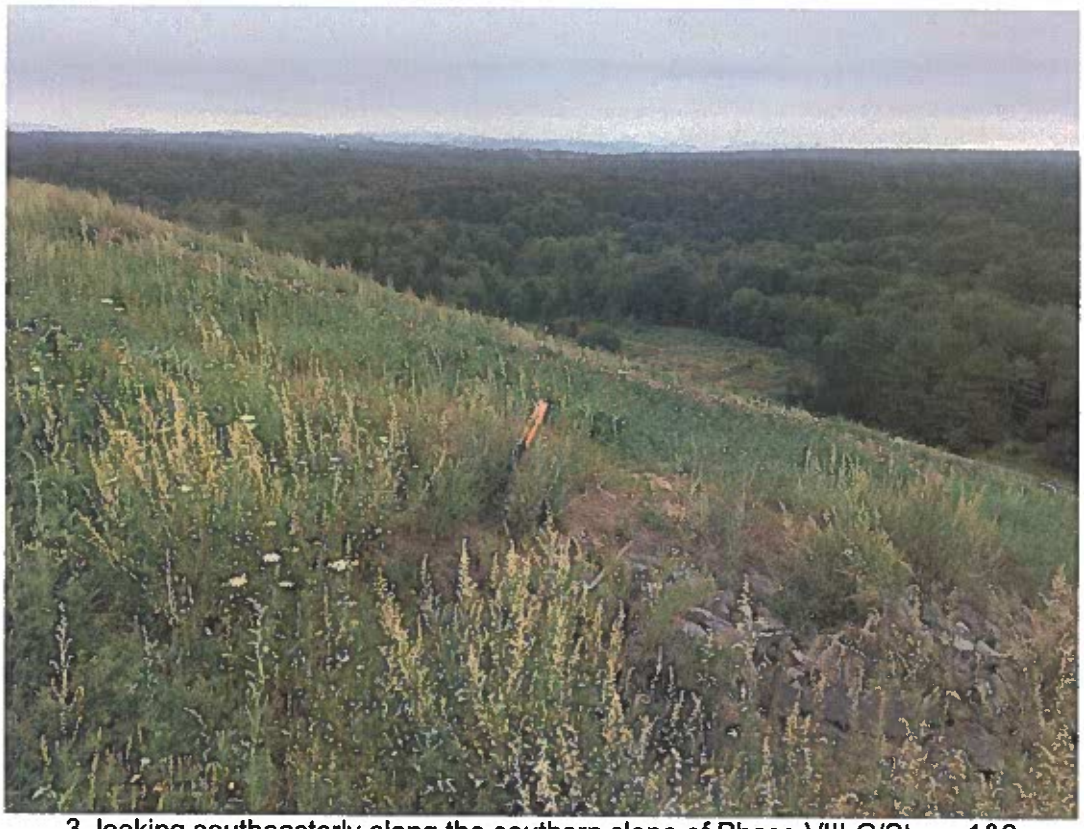
Appendix C

Site Photographs

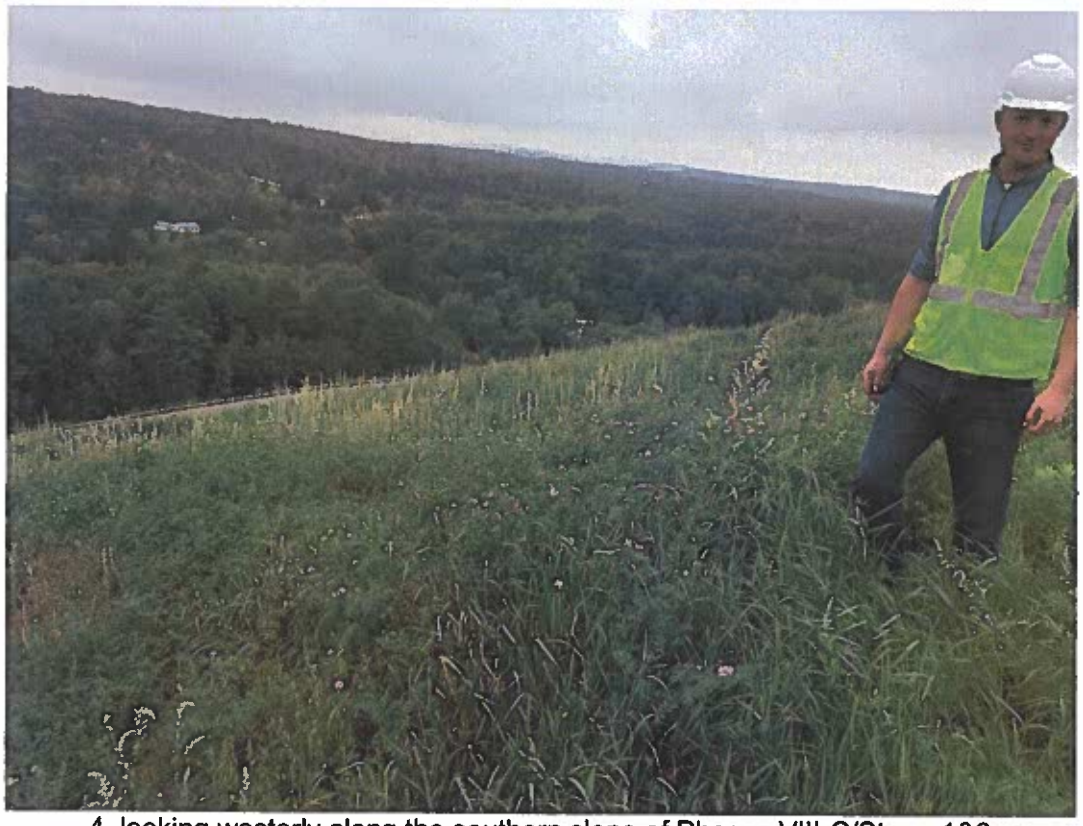
8/30/21 Site Visit

1. looking southerly along southern portion of the western slope of Phase VII & Phase VIII-C/Stage 3

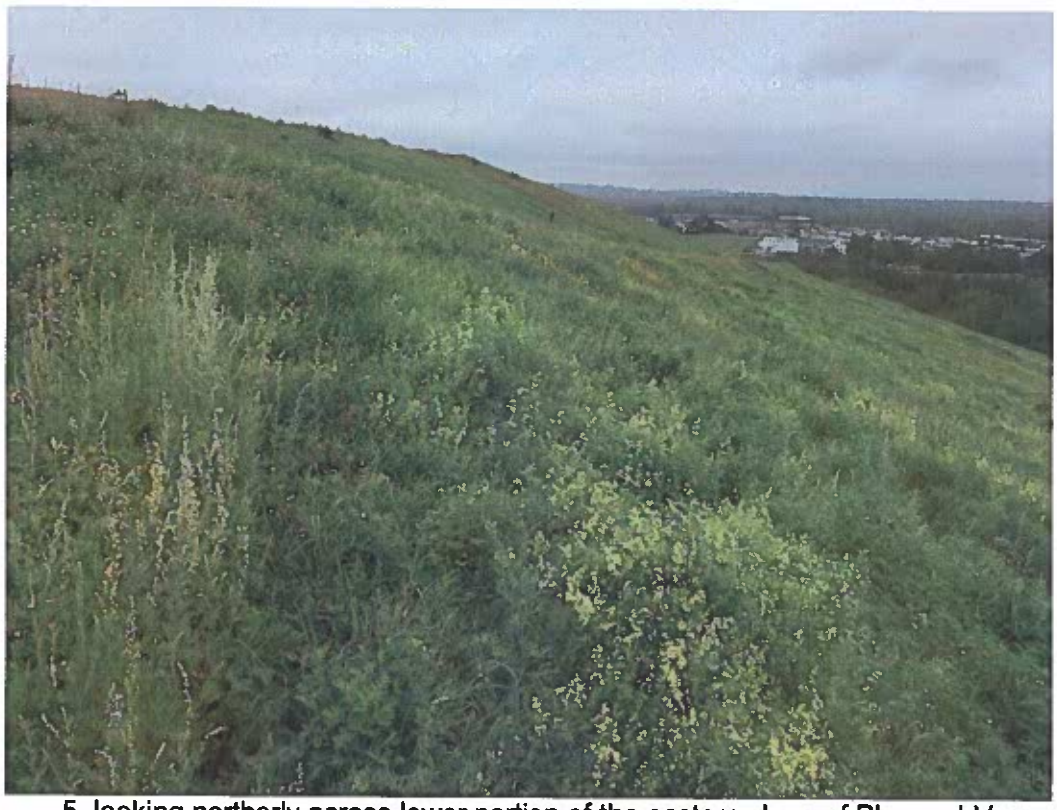
2. looking northerly along the western slope of Phase VIII-C/Stage 3 & Phase VII western slope



3. looking southeasterly along the southern slope of Phase VIII-C/Stage 1&2

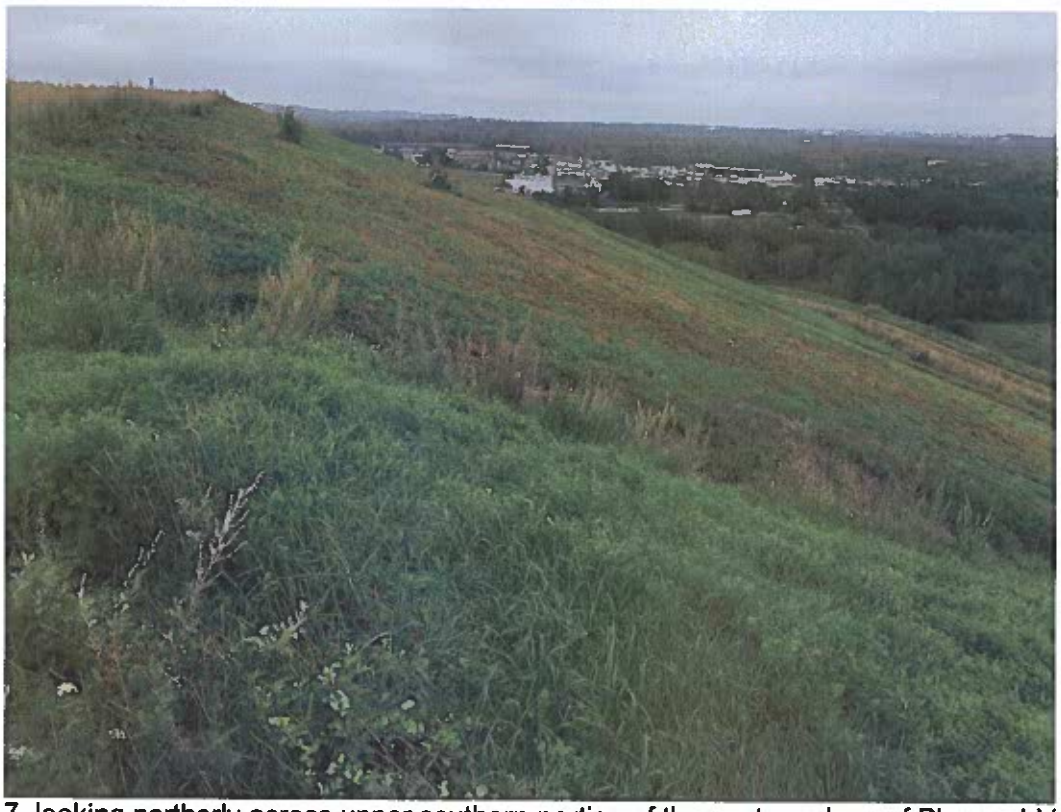


4. looking westerly along the southern slope of Phases VIII-C/Stage 1&2

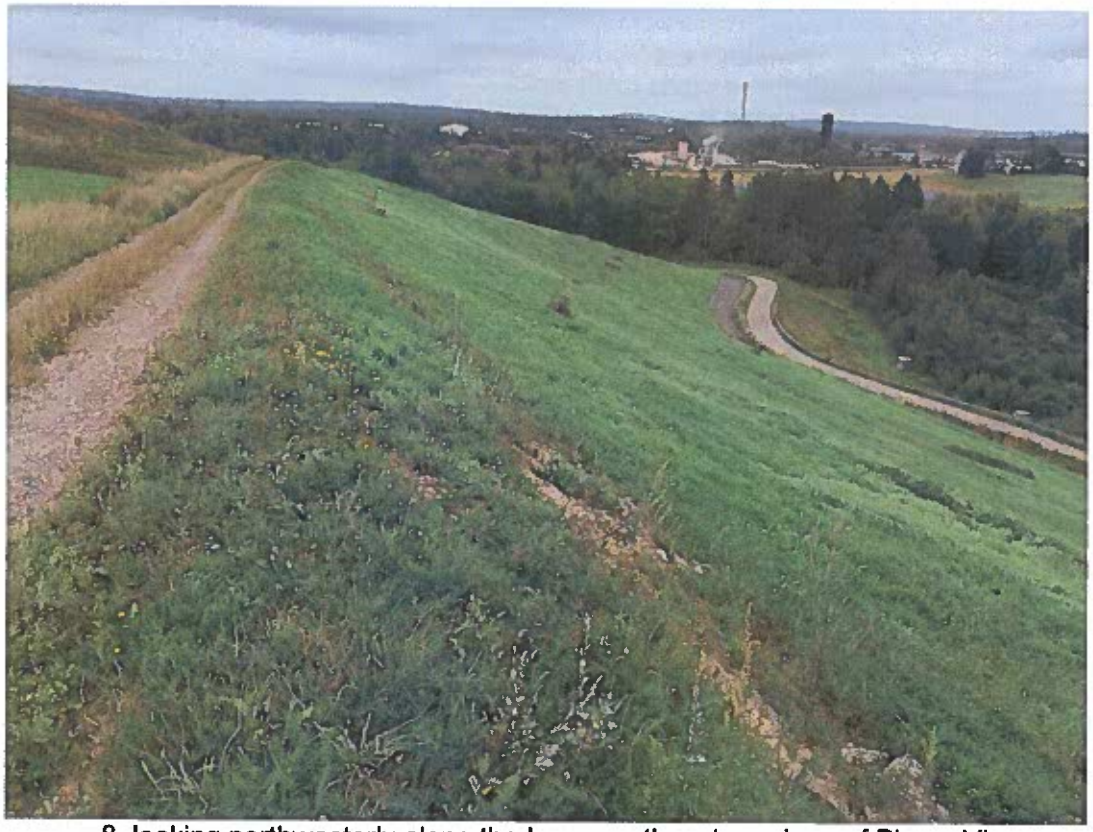


5. looking northerly across lower portion of the eastern slope of Phases I-V

6. looking northerly across upper southern portion of the eastern slope of Phases I-V



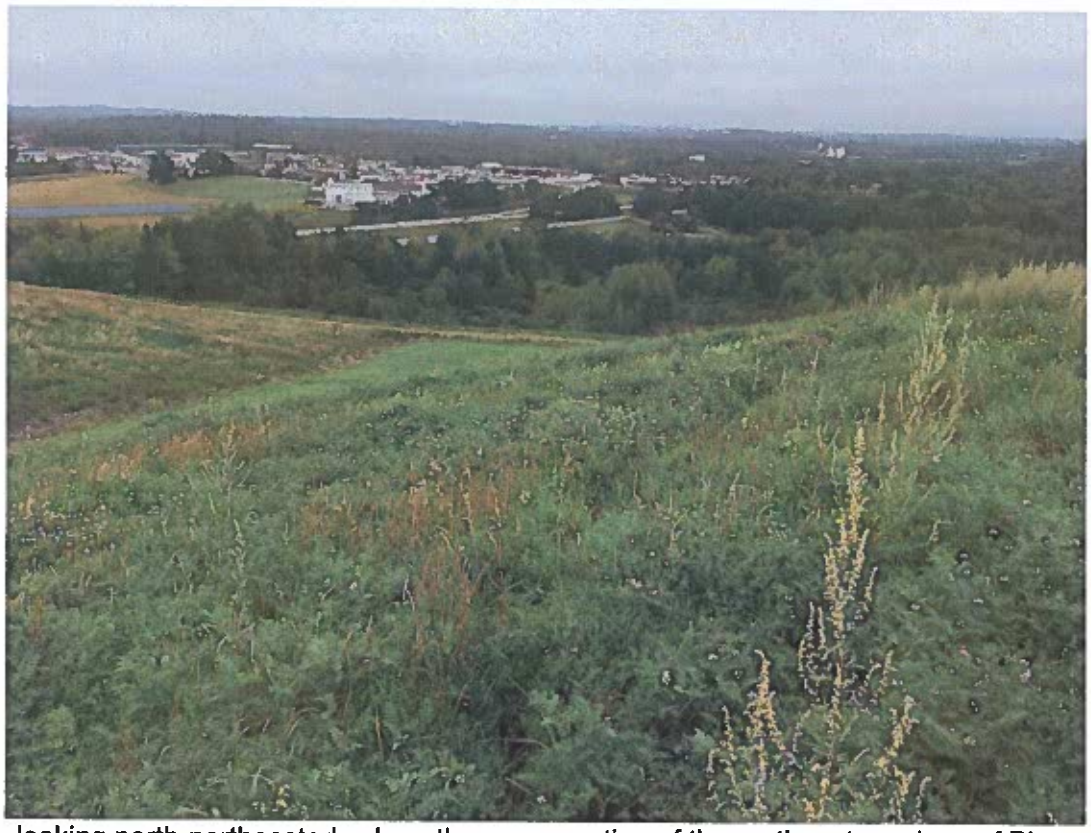
7. looking northerly across upper southern portion of the eastern slope of Phases I-V



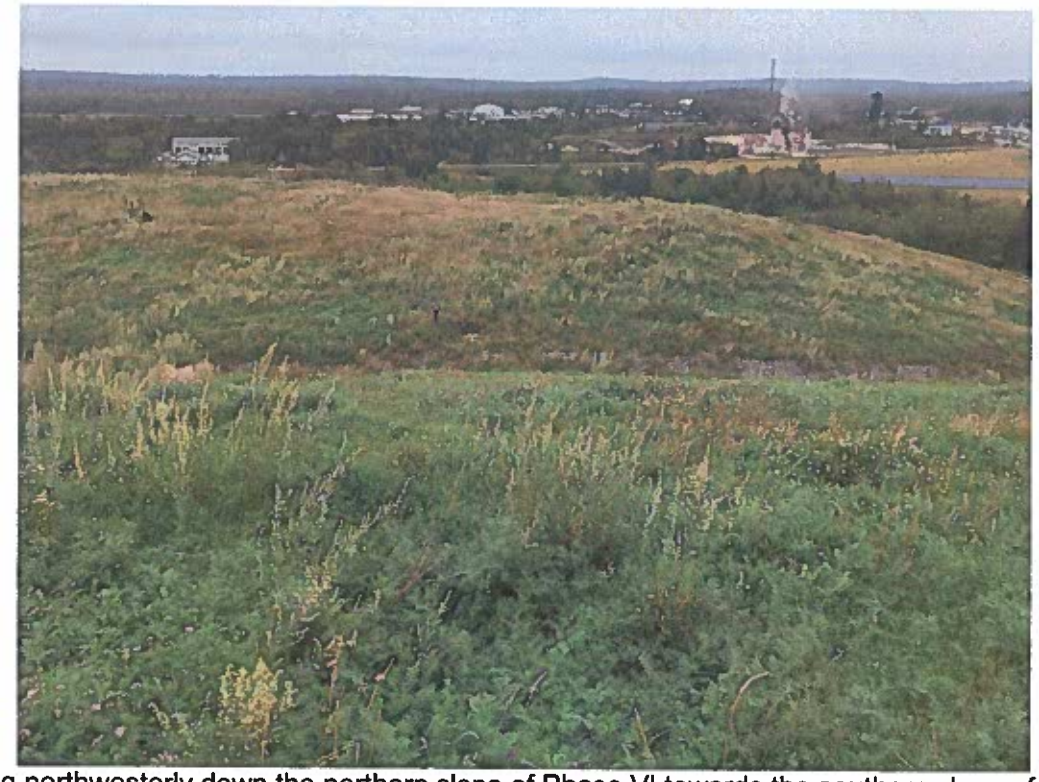
8. looking northwesterly along the lower northeastern slope of Phase VI

9. looking southerly along the eastern slope of Phases I-V & top of Phase VIII-A/B

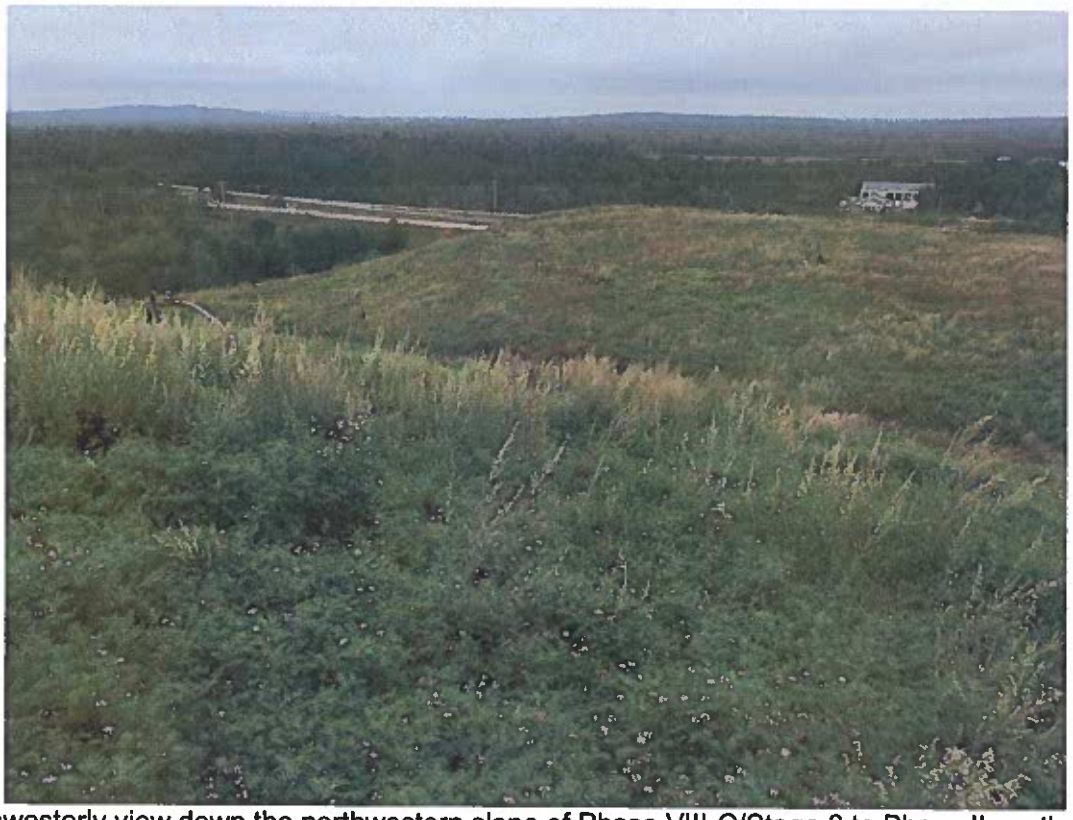
10. looking southerly across the top of Phase VIII-A/B



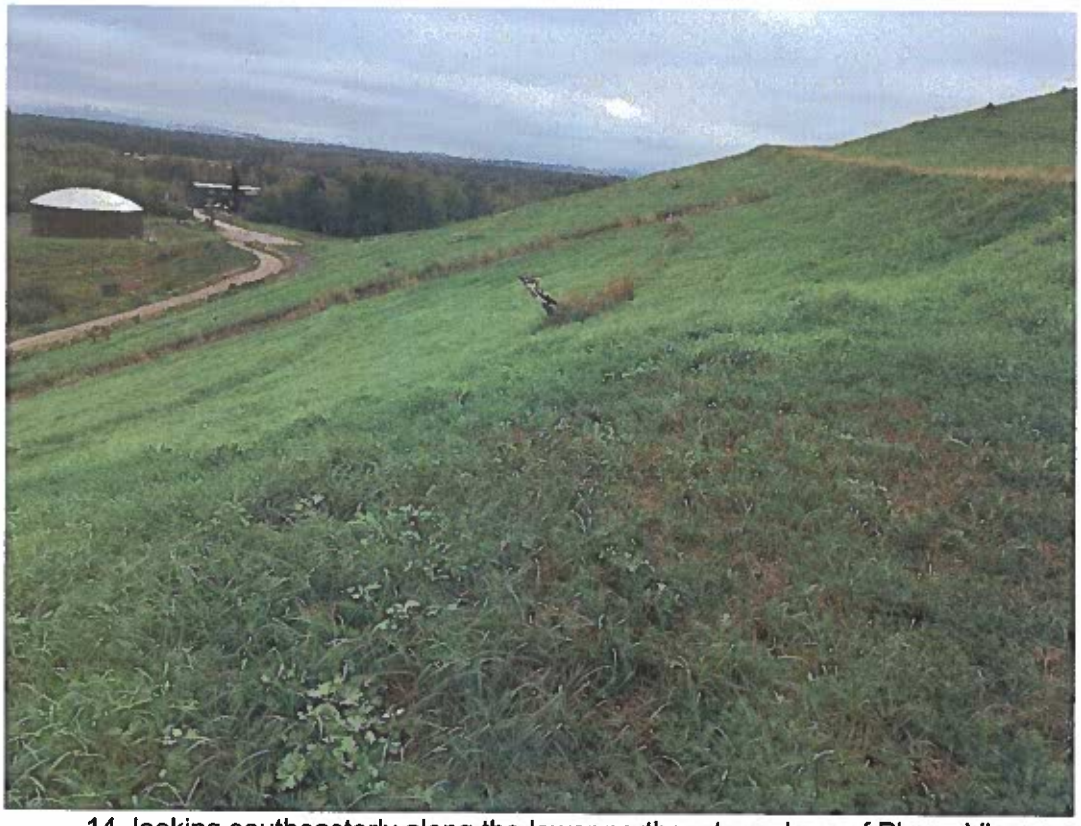
11. looking north-northeasterly along the upper portion of the northeastern slope of Phase VI



12. looking northwesterly down the northern slope of Phase VI towards the southern slope of Phase VII

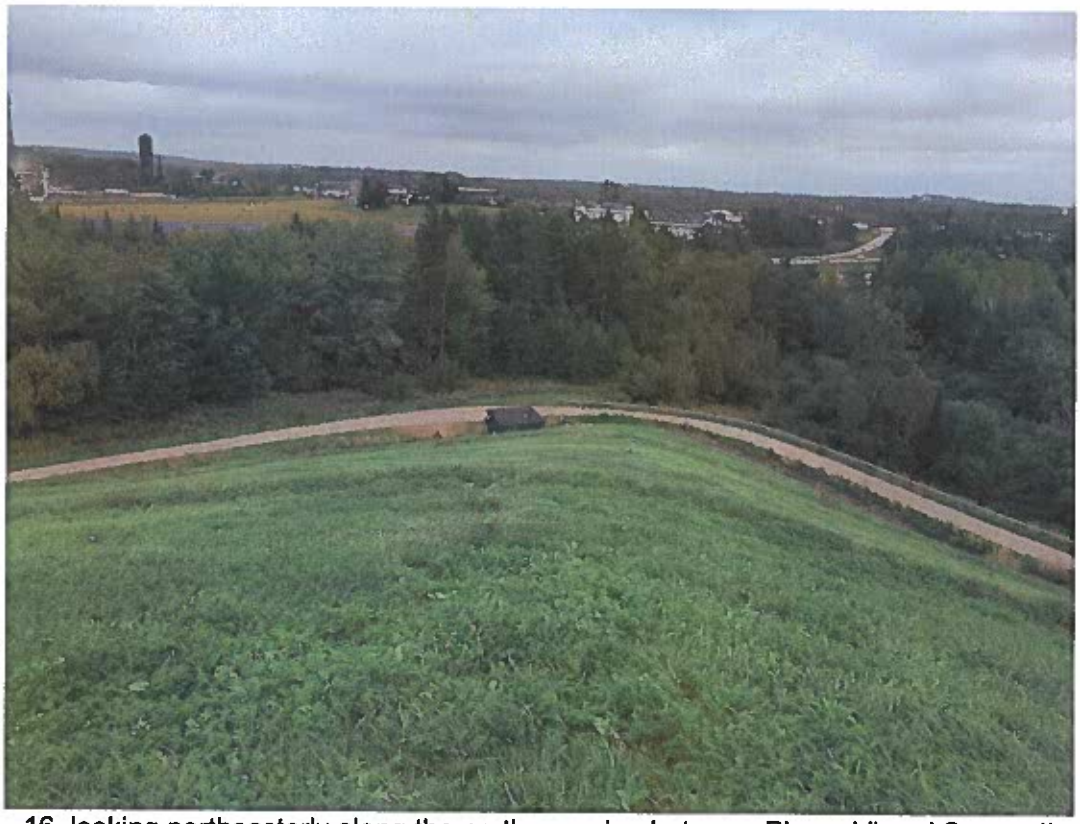


13. northwesterly view down the northwestern slope of Phase VIII-C/Stage 3 to Phase II southern slope

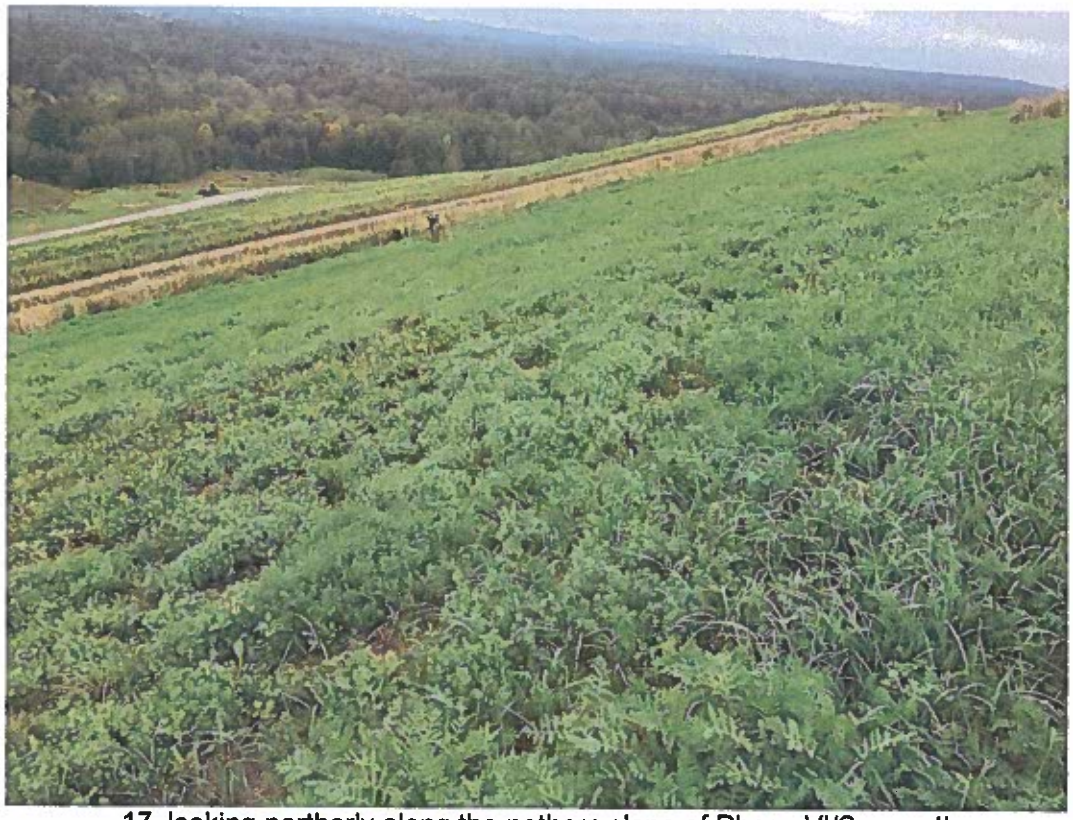


14. looking southeasterly along the lower northeastern slope of Phase VI

15. looking northeasterly down the northeast slope of Phase VI

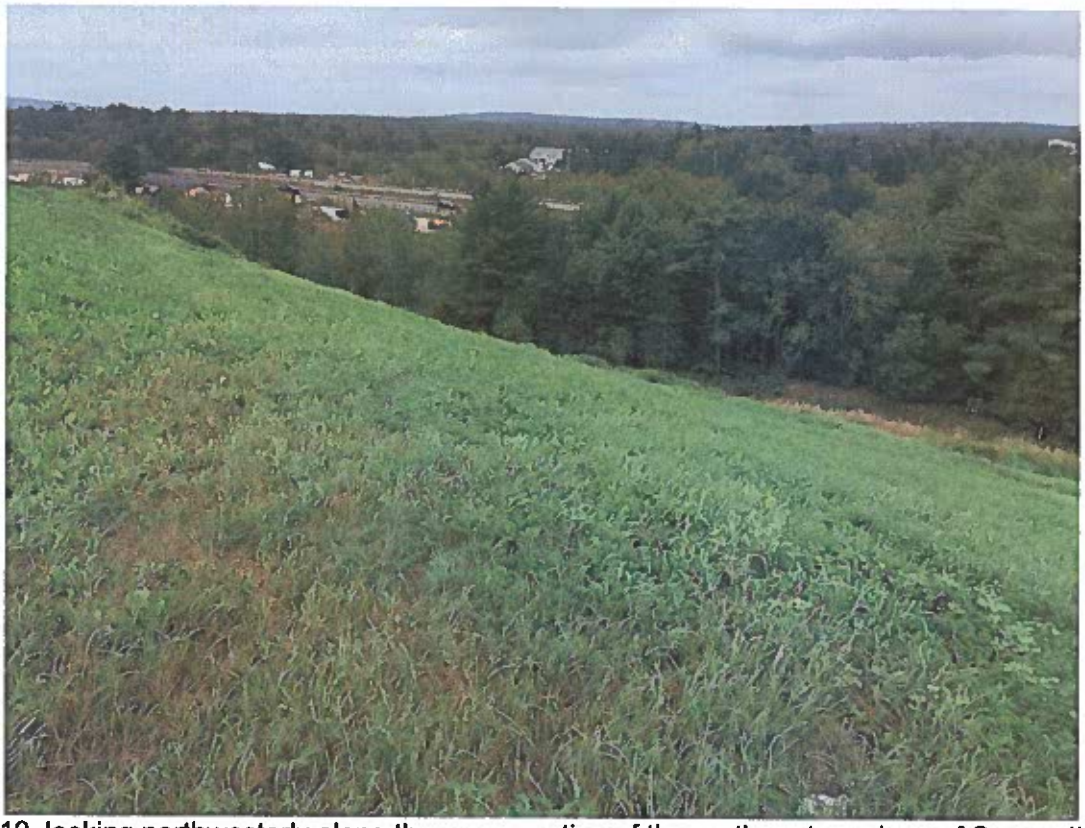


16. looking northeasterly along the northern spine between Phase VI and Secure II

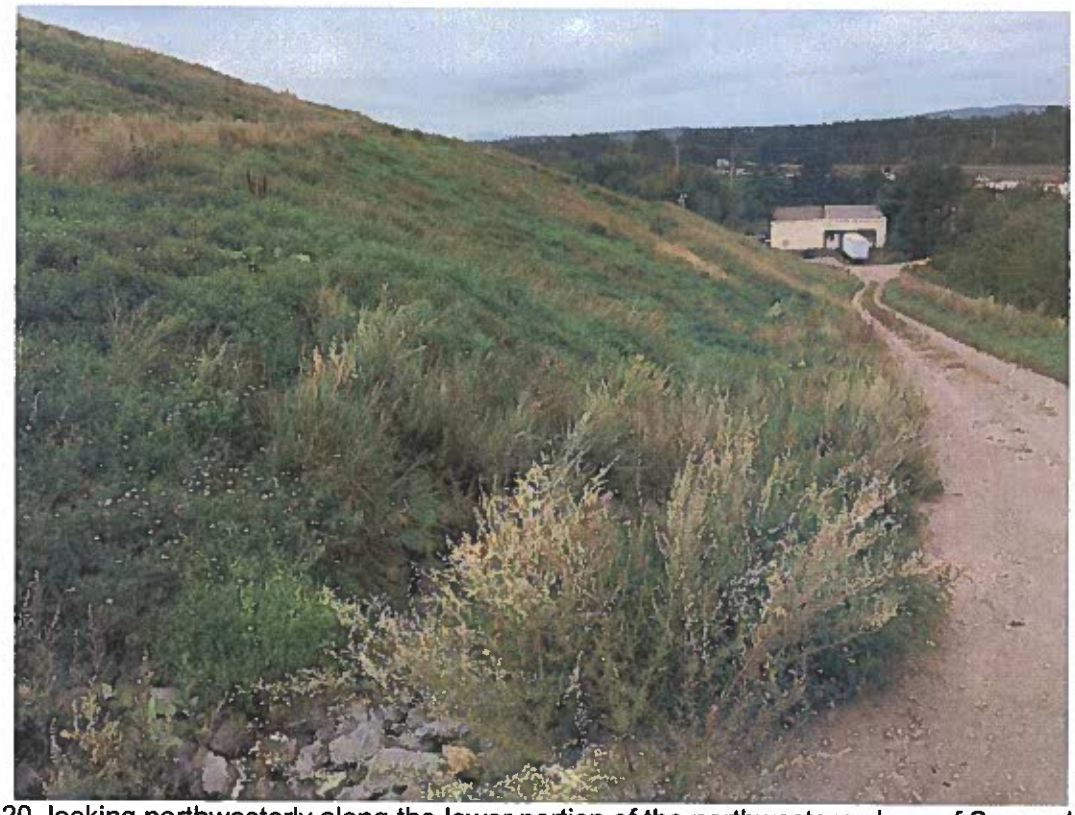


17. looking northerly along the nothern slope of Phase VI/Secure II

18. looking southwesterly towards the northeastern slope of Phase VI & northwesten slope of Secure II



19. looking northwesterly along the upper portion of the northwestern slope of Secure II



20. looking northwesterly along the lower portion of the northwestern slope of Secure II

21. looking southeasterly up the northwestern slope of Secure II

22. looking northesterly along northwestern lower slope of Secure II

Appendix D

Checklist: Annual Geotechnical Landfill Inspection

Table D-1
Checklist: Annual Geotechnical Inspection
2021 Annual Geotechnical Landfill Monitoring Report, Pine Tree Landfill, Hampden, Maine

Observation Date: 8/30/2021
Monitor Name: Richard E. Wardwell
Weather: cloudy, temperatures in mid-60's

Observation Area	Sat.	Unsat	Description (location, direction, appearance, etc.)	Proposed Action
Closed & Capped Landfill Surface				
location description	-	-	Secure III Expansion: Post-Closure Monitoring	n/a
overall surface cover	X		no signs of excessive settlements or slope deformatioins	none
surface cracking	X		none observed (N/O)	none
localized suficial depressions	X		small topographical depressions-does not appear to impact drainage	none
erosion of cover material	X			none
erosion of ditch linings	X			none
leachate breakout on sideslopes	X		N/O	none
ponded water	X		small isolated ponding in areas-does not apper to impact drainage	none
toe heaving	X		N/O	none
slope stability	X			none
grass kills	X		good grass/soil cover	none
gas venting	X		N/O	none
overall condition	X		stable slope appearance (see photos)	n/a

ATTACHMENT G

FACILITY INSPECTION REPORTS/ OTHER MAINTENANCE ACTIVITIES

Appendices included within Attachment G:

G-1 Quarterly Inspection Forms (Sample)

G-2 PTL Other Maintenance Activities

PINE TREE LANDFILL

-POST CLOSURE QUARTERLY INSPECTION REPORT-

INSPECTION DATE: 11-10-21

NAME OF INSPECTOR: J Pelletier

INSPECTION ITEM DESCRIPTION	INSPECTED NO ACTION TAKEN	NEEDS ACTION (See Comments)
LEACHATE MANAGEMENT		
Build-up of sediment in wetwells	✓	
Pumps & valves functioning properly	✓	
Flow conditions	✓	
Pump station vented properly	✓	
Electrical panel inspection	✓	
Flow meter inspection	✓	
Manholes intact and serviceable	✓	
Inspection of leachate storage tank	✓	
Storage tank containment	✓	
Tank pump station	✓	
Inspection of loading rack system	✓	
Leachate forcemain system	✓	
STORM WATER COLLECTION & CONTROL SYSTEMS		
Check outlet structures for condition	✓	
Drainage ditches clear and flowing	✓	
Signs of erosion		✓ #1 See Attached
Check dams	✓	
Detention ponds	✓	
Check roadway ditches for erosion		✓ #1 See Attached
ACTIVE GAS COLLECTION & FLARE SYSTEMS		
Condensate knockout system	✓	
Condition of wellheads ok	✓	
Presence of leakage on assembly	✓	
Flare operation ok	✓	
Noise/vibration in flare motor or blower	✓	
Maintenance up-to-date	✓	
Condition of igniter system	✓	
COVER SYSTEMS		
Landfill cover intact	✓	
No signs of ponding or erosion	✓	
Cover growth being maintained	✓	
No signs of excessive settlement	✓	
All final cover subsurface drainage outlets functioning properly as designed		✓ #1 See Attached
Slope stability	✓	
Secure II surface water drainage checked for integrity	✓	
SITE ACCESS & SECURITY		
All landfill roads accessible by vehicles		✓ #2 See Attached
Main gate fully functional	✓	
Security fencing & gates intact and locked	✓	
No signs of security breech or vandalism	✓	
All electrical panels & switches secured	✓	
MISC.		
No noticeable onsite or offsite odors	✓	
Combustible gas monitoring at facility property lines	✓	
Combustible gas monitoring at facility structures	✓	
Emergency generator operational	✓	
Buffer areas inspected	✓	

COMMENTS SECTION ON NEXT PAGE

PINE TREE LANDFILL
-POST CLOSURE QUARTERLY INSPECTION REPORT-

COMMENTS:

#1 Stormwater infrastrure needs refreshed. Rip-Rap down-Spout of Secure III (Near Phase VII PS).

Work completed: 12-13-21 by Sargent Corp.

#2 Road leading to old Maintenance Garage needs to be graded. Several large pot holes due to truck traffic cause by the Cimbro bridge repair.

Work Completed: 12-15-21 by Sargent Corp.

Other Comments: Light wind blown trash along the fence from the transfer Station.

work completed: 11-12-21 by Complete Labor + Staffing

REVIEW BY ENVIRONMENTAL COMPLIANCE MANAGER:

Signature: Jeff R Date: 11-10-21

Distribution: General Manager
PCE Manager

2021 Pine Tree Landfill Other Maintenance Activities	
Below is a list of all other maintenance activities that occurred throughout 2021. A list of all leachate maintenance and cleaning activities is chronologically listed in Attachment B of the 2021 PTL Annual Report.	
Access Road Maintenance	
•	Access roads going to the top of the landfill and around the perimeter were graded using a skid steer as needed.
•	All paved access roads were swept as necessary using the JRL sweeper or skid steer.
Landfill Cover System Maintenance	
•	Small repairs were made to the landfill cover where groundhog burrows were noticed.
•	Mowing occurred using a brush saw for downspouts and PTL's mower for the slopes.
Landfill Gas System (LFG) Maintenance	
•	Improvements were made to the LFG system as well tuning occurred. These improvements included: maintenance to all collection well head components (valves, ports, hoses), and torn well boots.
•	Routine maintenance was performed at the PTL Gas-to-Energy Facility in accordance with the Facility's operations manual until it closed on January 29, 2021. Throughout the remainder of the year the engines were sold and the plant equipment dismantled. The LFG flare remained in operation and maintained as needed.
•	Condensate knockout pots (KOP) were cleaned as necessary.
Scale House Maintenance	
•	Scales were cleaned, de-iced, and calibrated as necessary.
Stormwater Maintenance	
•	Minor stormwater improvements were made to Secure III drainage infrastructure near the Phase VII Pump Station. A Rip-Rap downspout was refreshed to allow for better stormwater drainage.
•	Seeding and mulching occurred as necessary to prevent erosion.
•	Continuous litter patrols were performed around the transfer station by 3rd party temporary personnel.

ATTACHMENT H

COMPLIANCE SELF-AUDIT

PINE TREE LANDFILL
COMPLIANCE SELF-AUDIT CHECKLIST
REPORT YEAR 2021

This Compliance Self-Audit Checklist is to be used to perform an annual audit of landfill operations. The purpose of this audit is to verify general compliance with the site Post-Closure Monitoring and Maintenance Plan, licenses, and regulatory requirements. Qualified facility personnel performed the audit.

Facility Name.....	**Pine Tree Landfill**
Location.....	**358 Emerson Mill Road, Hampden, Maine**
Audit for Calendar Year.....	**2021**
Compliance Auditor.....	**Jeffrey Pelletier**
Title.....	**Environmental Manager**
Signature of Auditor.....	Jeff P

General Evaluation:

1. **Are active facility licenses kept on file at the facility?**

Yes, copies of licenses held by Pine Tree Landfill (PTL) may be found on file in the Environmental Manager's office.

2. **Do the facility licenses have special license conditions relating to landfill monitoring and maintenance?**

Yes, a number of conditions are laid out in the various permits held by the facility. Conditions that require a submission to the MEDEP are tracked on a database in order to assure that submission deadlines are adhered to.

3. **What pending licenses or approvals that were sought from the MEDEP at the time of this audit.**

No solid waste permits pending at this time.

4. **Date of payment of MEDEP Annual Report/License Fees.**

- MEDEP 2021 annual report fee was paid on April 05, 2022.
- MEDEP 2021 annual license fee was not charged, as the facility is now in Post-Closure.

5. **Date of submittal of previous MEDEP Annual Report & Report/License Fees.**

- MEDEP 2020 annual report was submitted on April 30, 2021.
- MEDEP 2020 annual report fee of $3981.00 was paid on April 15, 2021.
- MEDEP 2020 annual license fee was not charged, as the facility is now in Post-Closure.

6. **Does the facility have a current liability insurance policy in-place and on file at the facility?**

Yes, a copy of the policy is available in the Division Manager's office.

7. **Has the facility submitted an executed financial assurance instrument for post-closure care along with updated post closure cost estimates to the MEDEP?**

Updated post- closure cost estimates are provided along with the annual report for approval; please see Attachment J. Following approval of the estimates, a revised financial assurance package will be submitted to the MEDEP under a separate cover.

Chapter 401.6 Landfill Post-Closure Monitoring and Maintenance Requirements

A. Post-Closure Monitoring and Maintenance Plan

1. Last date a certified copy of the facility Post-Closure Monitoring and Maintenance Plan was updated.

The Post-Closure Operations Plan was last updated and approved by the MEDEP in April 2013. Updated sections for 2021 are included as Attachment K in the 2021 Pine Tree Landfill Annual Report.

2. MEDEP approval date of last updated Plan.

Comments to the Post-Closure Operations Manual (re-titled Post-Closure Monitoring and Maintenance Plan in accordance with Section 401.6.C of Maine Solid Waste Management Rules), were received on March 30, 2012 and addressed in the updated Post-Closure Monitoring and Maintenance Plan issued in April 2013.

3. Number and locations of the Certified Copies of the Plan.

Certified copies of the manual may be found at the following locations:

- The Augusta Office of the MEDEP
- The Municipal Office of the Town of Hampden
- PTL's Environmental Manager's Office

B. Post-Closure Standards

1. Has groundwater monitoring been completed in accordance with the Post-Closure Monitoring and Maintenance Plan?

Yes, groundwater monitoring was completed in accordance with the Post-Closure Monitoring and Maintenance Plan during 2021. A summary of groundwater monitoring completed in 2021 is located in Attachment C.

2. Has surface water monitoring been completed in accordance with the Post-Closure Monitoring and Maintenance Plan?

Yes, surface water monitoring was completed in accordance with the Post-Closure Monitoring and Maintenance Plan during 2021. A summary of surface water monitoring completed in 2021 is located in Attachment C. Stormwater monitoring and maintenance is completed under #MER05A778 and overseen by the MEDEP Bureau of Water Quality.

3. Has gas monitoring been completed in accordance with the Post-Closure Monitoring and Maintenance Plan?

Yes, gas monitoring was completed in accordance with the Post-Closure Monitoring and Maintenance Plan during 2021. A summary report of activities completed in 2021 is located in Attachment D.

4. **Has leachate monitoring and maintenance been completed in accordance with the Post-Closure Monitoring and Maintenance Plan?**

   Yes, leachate monitoring and maintenance was completed in accordance with the Post-Closure Monitoring and Maintenance Plan during 2021. A summary report of activities completed in 2021 is located in Attachments A & B. Required landfill leachate PFAS testing was completed in the fall of 2021 and reported to the MEDEP on 01-06-22.

5. **Has stability and settlement monitoring been completed in accordance with the Post-Closure Monitoring and Maintenance Plan?**

   Yes, stability and settlement monitoring was completed in accordance with the Post-Closure Monitoring and Maintenance Plan during 2021. A summary report of activities completed in 2021 is located in Attachment F.

6. **Has cover monitoring and maintenance been completed in accordance with the Post-Closure Monitoring and Maintenance Plan?**

   Yes, cover monitoring and maintenance was completed in accordance with the Post-Closure Monitoring and Maintenance Plan during 2021. A summary report of activities completed in 2021 is located in Attachments F & G.

7. **Is access to the facility 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, an attendant is located at the entrance to the landfill (scalehouse for transfer station operations) and the entrance gate to the facility is closed to traffic after hours.

8. **Are inspections of the landfill facilities performed in accordance with the Post-Closure Monitoring and Maintenance Plan?**

   Yes, inspections were completed in accordance with the Post-Closure Monitoring and Maintenance Plan during 2021. Sample Quarterly Inspection reports and a written summary of the inspection Program are included in Attachment G.

9. **Was rapid waste mass stabilization (leachate recirculation) performed in accordance with the Post-Closure Monitoring and Maintenance Plan?**

   Yes, leachate recirculation was completed in accordance with the Post-Closure Monitoring and Maintenance Plan during 2021. A summary report of activities completed in 2021 is located in Attachment A.

C. Reporting Requirements

1. **Were reports and inspection documents provided to the Department in accordance with the Post-Closure Monitoring and Maintenance Plan?**

   Yes, reports of monitoring were submitted in accordance with the plan, and additional inspection documents are available to the MEDEP upon request and are

maintained in the Environmental Manager's office. A summary of inspections and monitoring is provided in the 2021 Annual Report.

ATTACHMENT I

ANNUAL SOLID WASTE MANAGEMENT REPORT

ANNUAL SOLID WASTE MANAGEMENT REPORT FOR LICENSED LANDFILLS

FACILITY NAME: New England Waste Services of ME, Inc (Pine Tree Landfill) Report For Year: 2021

DEP LICENSE NUMBER #S-001987-WN-HC-N (Formerly #S-001987-WD-GZ-N)

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

CONTACT PERSON: Jeffrey Pelletier Title: Environmental Manager
Mailing Address: 358 Emerson Mill Rd.
City/Town: Hampden Zip Code: 04444
Phone: 207-249-8025 E-mail: jeffrey.pelletier@casella.com

LANDFILL MANAGER: Wayne Boyd
Mailing Address: 358 Emerson Mill Rd.
City/Town: Hampden Zip Code: 04444
Phone: 207-862-4200 x224 E-mail: wayne.boyd@casella.com

☐ **Please check here if a stand-alone annual report is being submitted. If so, submit this cover sheet only along with your report.**

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 04/29/22

Printed name of person completing this form: Jeffrey Pelletier

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
Geraldine.Travers@maine.gov

ATTACHMENT J

UPDATED POST-CLOSURE COST ESTIMATES

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

April 26, 2022

Mr. Jeffrey Pelletier
Environmental Manager
Pine Tree Landfill
Casella Waste Systems
358 Emerson Mill Road
Hampden, ME 04444

Subject: Update of Opinion of Escrow Post-Closure Costs
For Calendar Year 2022
Pine Tree Landfill, Hampden, Maine

Dear Jeffrey:

As requested, Sevee & Maher Engineers, Inc. (SME) has updated our opinion of escrow post-closure costs for the Pine Tree Landfill (PTL) in Hampden, Maine for the calendar year 2022. The post-closure period began in January of 2011. Therefore, as of January 2021 the facility has been closed for eleven years, so our opinion of the post-closure monitoring and maintenance costs are for the remaining 19 years of the post-closure period.

Our opinion of escrow post-closure monitoring and maintenance costs for the remaining 19-year post-closure period is $5,046,000 as summarized in Table 1. These include costs for leachate collection, transport, and disposal; post-closure water quality, and methane gas monitoring; passive landfill gas system operation and flare maintenance; landfill inspections, general site maintenance, and professional services. The overall post-closure costs are based on 2022 dollars. Assumptions used to develop costs for each item are summarized on Table 1.

If you have any questions concerning our opinion of costs presented in this letter, please feel free to contact us.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.

Rhonda M Forrester

Rhonda N. Forrester, P.E.
Project Manager

(Cont'd)

SME
SEVEE & MAHER
ENGINEERS

Attachment

Table 1 Pine Tree Landfill Opinion of 19-Year Post-Closure Monitoring and Maintenance Costs Beginning in Calendar Year 2022

cc: Wayne Boyd, Casella

TABLE 1
PINE TREE LANDFILL
OPINION OF 20 YEAR POST-CLOSURE MONITORING AND MAINTENANCE COSTS

ITEM	OPINION OF AVERAGE YEARLY COSTS	TOTAL COST FOR 19 YEAR PERIOD	ASSUMPTIONS
Leachate Collection, Transport and Disposal			
A. Site Leachate Disposal at Bangor	$ 76,330	$ 1,450,270	In 2021 the facility reported a yearly average post closure leachate generation of approximately 9.1 million gallons that required disposal at the Bangor WWTP. This included leachate generated by the landfills, Secure I, II, III Phases I-V, VI, VII, and VIII, plus flow collected from the extraction wells and perimeter drain. The leachate generation is assumed to decrease exponentially from years 12-30. The amount of leachate sent to the Bangor WWTP is reduced by the amount of leachate recirculated onsite which was 0.10 million gallons in 2021. The leachate recirculated is assumed to decrease exponentially from years 12-30 from the previous two year average of 0.13 million gallons. Using this method the yearly average amount of leachate disposed of at the Bangor WWTP is about 6.8 million gallons. Treatment cost is $0.0112 per gallon.
B. Electrical to Run Eight Pump Stations	$ 2,320	$ 44,080	Assumes 15 Hp pumps rated at 200 gpm running and average of 1,144 hours per year. Electrical Costs=$0.18 per kwhr.
C. Annual Leachate Testing	$ 4,100	$ 77,900	Assumes four times per year.
Total Leachate Collection, Transport & Treatment Costs		$ 1,572,250	
Post Closure Water Quality & Methane Gas Monitoring			
A. Collect 22 monitoring well, 4 surface water, 3 leachate, 2 residential well for 1 round/year & methane measurements from wells 1 time per year. Field and/or detection parameters only collected from 6 wells in spring. (Year 12 - Year 30)	$ 24,900	$ 473,100	Assumes one round extended parameter list for years 12-30.
B.1 Analyses of 6 Samples during Spring (Years 12-30)	$ 3,400	$ 64,600	Assumes 22 monitoring wells, 4 surface water, 3 leachate, 2 residential, and 5 QA/QC samples with one round for indicator and expanded parameters, and the other round indicator parameters only.
B.2 Analyses of 31 Samples During Fall (Years 12-30)	$ 11,130	$ 211,470	Assumes 22 monitoring wells, 4 surface water, 3 leachate, 2 residential and 5 QA/QC samples for indicator and expanded parameter lists.
C. Compile Data and Submit to MEDEP	$ 12,000	$ 228,000	Assumes data submitted to MEDEP after each sampling round.
D. Perimeter Gas Probe Monitoring 4 time Per Year	$ 4,200	$ 79,800	
Total Post Closure Water Quality & Methane Gas Monitoring		$ 1,056,970	
Landfill Inspection			
A. Monthly Site Walk Over & Report Generation	$ 12,600	$ 239,400	Assumes 14 hr. per month @ $75/hr. includes inspections of stormwater system, and annual report preparation.
Active Landfill Gas Extraction System			
A. Equipment Replacement	$ 10,500	$ 199,500	General equipment replacement including well heads, condensate pumps etc.
B. Flare Maintenance	$ 6,800	$ 129,200	Replacement of flare parts such as flame arrestor etc.
C. Blower Maintenance	$ 5,200	$ 98,800	Routing inspection and maintenance on blower system.
D. System Operations and Inspection	$ 5,200	$ 98,800	General system operations & maintenance.
E. Well Tuning	$ 10,500	$ 199,500	Well tuning once per month.
F. Compliance Monitoring	$ 3,500	$ 66,500	Collection of air monitoring samples.
G. Methane Scan	$ 1,000	$ 19,000	Assumes methane scan annually @ $1,000 per scan.
H. Electrical	$ 21,000	$ 399,000	Electrical costs to run blower for average flow of 440 scfm.
Total Active Landfill Gas Extraction System		$ 1,210,300	
Landfill Maintenance			
A. Cover Maintenance Including Annual Mowing & Erosion Repair	$ 12,000	$ 228,000	Assumes 3 man crew & equip. 6 days/ year.
B.1 Pump Stations and Leachate Tank Inspections	$ 10,400	$ 197,600	Assumes 4 hr. week @ $50 per hour.
B.2 Pump Replacement Every Five years (Not Annual Cost)	$ 19,000	$ 76,000	Assumes replacing pumps in leachate & leak systems and leachate recirculation every 5 years.
C. General Site Maintenance	$ 5,000	$ 95,000	Assumes items such as snow plowing, sedimentation pond cleaning and other routine items.
D. Leachate Line Cleaning Every Other Year (Not Annual Cost)	$ 20,000	$ 190,000	Assumes cleaning every other year for years 12-30 @ $20,000 per cleaning.
Total Landfill Maintenance		$ 786,600	
Professional Services			
A. Engineering Services	$ 6,000	$ 114,000	General Services
B. Settlement and Stability Monitoring	$ 3,500	$ 66,500	Prepare Annual Report
Total Professional Services		$ 180,500	
TOTAL		$ 5,046,000	

ATTACHMENT K

UPDATED OPERATIONS MANUAL SECTIONS

No changes were made to the Post-Closure Monitoring and Maintenance Plan(Plan) during 2021. As communicated by PTL Staff to the MEDEP in early 2022, the Facility's Plan will be fully updated in 2022 to incorporate site changes due to the closure of the PTL Gas-to-Energy Facility on January 29, 2021 and recently approved changes to the post-closure Environmental Monitoring Plan (EMP), to incorporated recent approvals granted by the MEDEP Memorandum (Pine Tree Landfill Hydrogeology Review of 2020 Water Quality Summary, dated October 15, 2021).