



Environmental Monitoring Report – 2023 Third Quarter

Mechanic Street
Landfill
Leominster, MA

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TABLE OF CONTENTS

SECTION	PAGE NO.
1. ENVIRONMENTAL MONITORING PROGRAM.....	1-1
1.1 Site History.....	1-1
1.2 Ambient Air Monitoring.....	1-2
1.3 Landfill Gas Monitoring.....	1-2
1.4 Methane Monitor Calibrations	1-2
1.5 Groundwater Monitoring.....	1-2
1.6 Surface Water Monitoring.....	1-2
2. ENVIRONMENTAL MONITORING RESULTS.....	2-1
2.1 Ambient Air Monitoring Results	2-1
2.2 Landfill Gas Monitoring Results	2-1
2.3 Groundwater Monitoring Results.....	2-1
2.4 Surface Water Monitoring Results	2-2
3. SUMMARY	3-1

TABLES

Table 1-1: Environmental Monitoring Program Summary
Table 1-2: Residential Methane Detector Calibration Results
Table 1-3: Gauged Groundwater Elevations
Table 2-1: Ambient Air Analytical Data Summary
Table 2-2: Landfill Gas Monitoring Results
Table 2-3: Water Quality Indicator Parameters
Table 2-4: Groundwater Analytical Data Summary
Table 2-5: Surface Water Analytical Data Summary

FIGURES

Figure 1-1: Environmental Monitoring Site Plan
Figure 2-1: MassDEP Phase 1 Site Assessment Map

APPENDICES

Appendix A: Geological Field Services, Inc. Field Summary Report
Appendix B: Laboratory Analytical Data Package

1. ENVIRONMENTAL MONITORING PROGRAM

On behalf of the City of Leominster, Massachusetts (City), Woodard & Curran, Inc. (Woodard & Curran) is submitting this Third Quarter 2023 Environmental Monitoring Report. This report summarizes the Environmental Monitoring event at the Mechanic Street Landfill in Leominster, MA (Site). This site consists of an inactive landfill with ongoing post-closure monitoring occurring quarterly. The environmental monitoring event was conducted on September 13, 2023, by Geological Field Services, Inc. (GFS) of Salem, MA, a subcontractor utilized by Woodard & Curran. Field data sheets and a field visit summary from GFS are provided in Appendix A, Geological Field Services, Inc. Field Summary Report. A description of the environmental monitoring program scope and frequency is included in Table 1-1 Environmental Monitoring Program. This monitoring event included the following activities:

- Ambient air monitoring;
- Landfill gas monitoring;
- Methane Gas Monitoring;
- Groundwater Sampling; and
- Surface Water Sampling.

1.1 Site History

Operations at the Site began in the late 1800's, operating as an open burn dump until 1970. From 1970 to 1985, municipal solid waste was accepted at the landfill. Additionally, the City deposited wastewater treatment plant sludge at the Site from 1970 to 1989. An Initial Site Assessment was completed for the landfill in 1996 and the landfill was officially closed in 1998, initiating the 30-year Post Closure Monitoring Program.

Historical landfill gas monitoring data had regularly indicated elevated concentration of landfill gas along the southern, western, and northern perimeter of the landfill at levels exceeding 25% of the Lower Explosive Limit (LEL) relative to methane. The permanent perimeter landfill gas monitoring wells located along the perimeter of the landfill (LGW-1 through LGW-29) were installed near the limit of solid waste (the landfill cap and property line) making it very difficult to assess landfill gas migration across Mechanic Street.

An expanded monitoring effort was implemented in 2000 and 2001 which included the installation and collection of landfill gas data from twenty-six (26) residential landfill gas monitoring wells located outside the perimeter of the landfill, identified as LGW-30 through LGW-55. A Consent Order and Notice of Non-Compliance (ACO) (ACO-CE-00-4001) was issued on October 2, 2000, by the Massachusetts Department of Environmental Protection (MassDEP) which required the City to install a landfill gas collection and treatment system. In January of 2002, the City constructed and began operation of a landfill gas collection system and flare to collect and destroy landfill gas as required. The flare is located across the street from the landfill at the Leominster Wastewater Treatment Facility on Commercial Road, as shown in Figure 1-1 Environmental Monitoring Site Plan. An annual report (Permits #W018599 – BWP SW 11 & #X624851 – BWP AQ 02) summarizing solid waste and air quality compliance activities of the landfill gas system is submitted to MassDEP in February of each year.

Based on landfill gas screening results following the installation of the flare, Woodard & Curran recommended modifications to the environmental monitoring program in March 2003. The modified environmental monitoring program removed the twenty-six (26) residential landfill gas monitoring wells (LGW-30 through LGW-55) from the environmental monitoring program. The recommended modifications to the environmental monitoring program were approved per a letter from Mr. John Regan of MassDEP dated April 18, 2003.

1.2 Ambient Air Monitoring

Per the requirements of Permit #W018797, two ambient air samples were collected, one on the landfill mound and one off the landfill (upwind) on September 13, 2023. The samples were collected in calibrated summa canisters provided by Alpha Analytical Laboratories of Westborough, Massachusetts. The canisters were calibrated to sample the ambient air over a four-hour period. Ambient Air Sample 1 was collected upwind to the west of the landfill and Sample 2 collected at the center of the landfill. The ambient air monitoring activities and methods are described in Table 1-1 and Appendix A.

1.3 Landfill Gas Monitoring

The Site has 29 perimeter landfill gas monitoring wells identified as LGW-1 through LGW-29. On September 13, 2023, GFS screened all 29-perimeter landfill gas monitoring wells with the exception of LGW-27 which was buried by equipment. The gases measured at these locations include methane, hydrogen sulfide, oxygen, and carbon dioxide. The perimeter landfill gas monitoring activities are described in Appendix A. The locations of the perimeter landfill gas monitoring wells can be seen in Figure 1-1 Environmental Monitoring Site Plan. The landfill gas monitoring activities and methods are described in Table 1-1.

1.4 Methane Monitor Calibrations

GFS attempted to calibrate all 15 methane detectors located in the homes across or near the landfill during this monitoring event, and was able to calibrate 14 methane detectors located at the following addresses, all of which responded properly to calibration:

- | | | |
|-----------------------|-----------------------|-------------------------|
| • 492 Mechanic Street | • 567 Mechanic Street | • 639 Mechanic Street |
| • 510 Mechanic Street | • 577 Mechanic Street | • 645 Mechanic Street |
| • 521 Mechanic Street | • 589 Mechanic Street | • 7 St. Cecelia Street |
| • 549 Mechanic Street | • 627 Mechanic Street | • 8A St. Cecelia Street |
| • 561 Mechanic Street | • 633 Mechanic Street | |

The detector at 502 Mechanic Street could not be accessed and therefore was not calibrated. New methane detectors were left on porches at 549 Mechanic Street, 7 St. Cecelia Street, 633 Mechanic Street, and 645 Mechanic Street as residents were not home. Beginning in Quarter 4 2017, methane monitor calibration at 539 Mechanic Street was stopped following a request by the homeowner. Figure 1-1 depicts the homes equipped with methane detectors. The residential methane detector calibration report can be seen in Appendix A and the results can be seen in Table 1-2.

1.5 Groundwater Monitoring

GFS collected groundwater samples from the following four locations:

- MW-3
- MW-4
- MW-5S
- MW-5D

The location of each well is shown on Figure 1-1. Groundwater elevation data used to create Figure 1-1 can be seen in Table 1-3 Gauged Groundwater Elevations. Prior to collecting each groundwater sample, GFS gauged the depth to groundwater and then screened for the water quality indicator parameters listed in Table 1-1. Each groundwater sample collected was submitted to Alpha Analytical to be analyzed as described in Table 1-1.

1.6 Surface Water Monitoring

GFS collected a surface water sample from location SW-1, shown in Figure 1-1. Prior to collecting the surface water sample, GFS screened for the water quality indicator parameters listed in Table 1-1. The surface water sample was submitted to Alpha Analytical to be analyzed as described in Table 1-1.

2. ENVIRONMENTAL MONITORING RESULTS

The water sample field screening and laboratory analytical data were compared to the following MassDEP water quality publications and standards:

- *Drinking Water Standards and Guidelines for Chemicals in Massachusetts Drinking Waters, as of November 2023*
 - Massachusetts Maximum Contaminant Levels (MMCL)
 - Office of Research and Standards Guidelines (ORSG)
 - Secondary Maximum Contaminant Levels (SMCL)
- *Massachusetts Contingency Plan (MCP), as of November 2023*
 - GW-1 water quality standards for those chemicals that have no drinking water standards/guidelines.
- *EPA National Recommended Water Quality Criteria – Freshwater Aquatic Life Criteria (NRWQC), as of November 2023*

2.1 Ambient Air Monitoring Results

Per the requirements of the final permit, the flare shall be operated such that the ambient air methane concentrations shall be less than 500 parts per million by volume (ppmv) above background. Both sampling locations were reported below 500 ppmv; Sample 1 (Upwind) had a concentration of 1.99 ppmv and sample 2 (Center of Landfill) had a concentration of 2.26 ppmv.

The results of the ambient air monitoring comply with the final permit and are consistent with historical monitoring data at this Site. Table 2-1 summarizes the results of the methane analysis, and the Alpha Analytical Laboratory Report can be found in Appendix B.

2.2 Landfill Gas Monitoring Results

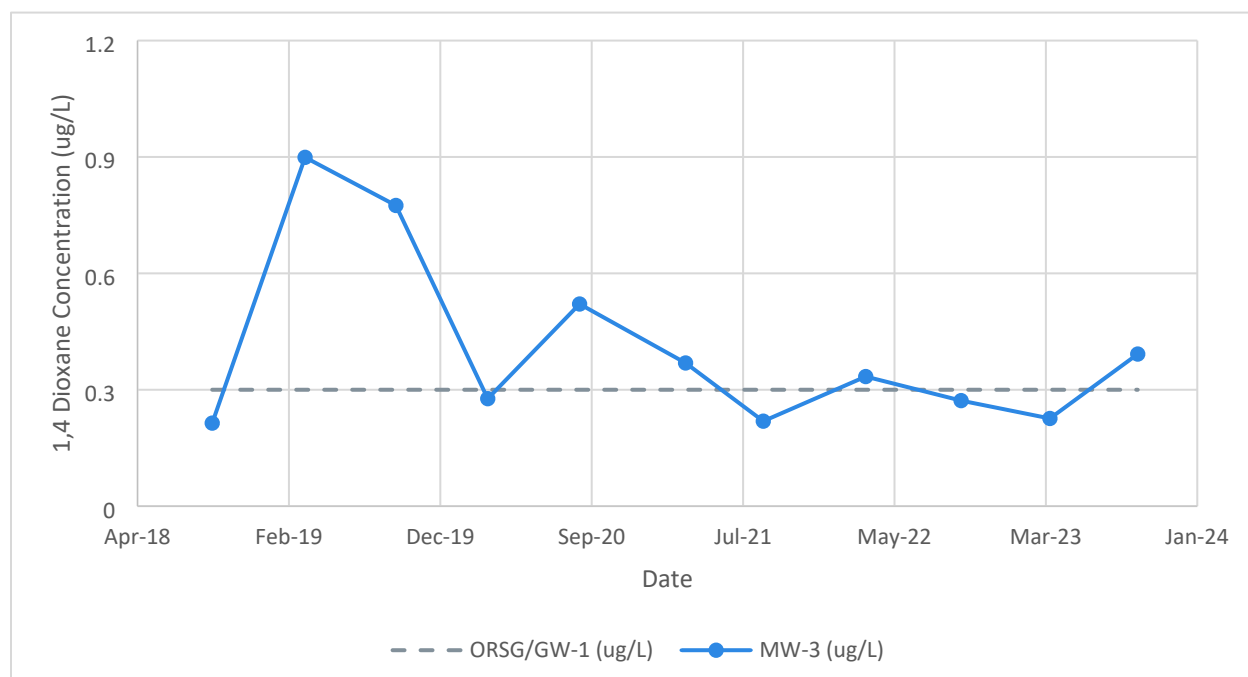
Volatile organic compounds (VOCs), hydrogen sulfide, and gas in the form of methane were not detected in any of the screened perimeter landfill gas monitoring wells during this round of environmental monitoring. Historically over the past few years methane has been detected in LGW-25, LFG-26, and LGW-28. Oxygen concentrations ranged from 12.6 percent-by-volume at LGW-19 to 21.5 percent-by-volume at LGW-22 and LGW-23. Carbon dioxide concentrations ranged from 0.0 percent-by-volume at multiple landfill gas wells (LGW-1, LGW-2, LGW-3, LGW-4, LGW-6, LFW-10, LGW-11, LGW-12, LGW-22, LGW-23, and LGW-26) to 6.8 percent-by-volume at LGW-19 during duplicative sampling. Table 2-2 summarizes the landfill gas monitoring results.

2.3 Groundwater Monitoring Results

Field screening of the water quality indicator parameters was performed during groundwater purging at all four groundwater monitoring wells at the Site. All field screening parameters were reported within acceptable ranges except for the pH of MW-3 falling below the SMCL standard with a reported value of 6.25. The water quality indicator parameters are summarized in Table 2-3 Water Quality Indicator Parameters.

Groundwater monitoring well MW-3 exceeded the GW-1 and ORSG standard of 0.3 ug/L for 1,4-dioxane with a concentration of 0.392 ug/L. Based on historical data, this well typically exceeds these standards for 1,4-dioxane, as shown in the graph below. In response to MassDEP's June 12, 2018 letter regarding detections of 1,4-dioxane levels Woodard & Curran has determined the Mechanic Street Landfill should be characterized as an MCP groundwater category GW-3, both at the landfill and immediately downgradient of the landfill. Groundwater monitoring well MW-3 did not exceed the GW-3 limit of 50,000 ug/L for 1,4-dioxane. Figure 2-1 is the Phase 1 Site Assessment Map for the Site. This map indicates there are no Zone 1 Areas, Current Drinking Water Source Areas, or Potential Drinking Water Source Areas in the vicinity of the Site. Also, based on June 2018 and November 2021 conversations with the City's Health Department, there are no known residential drinking water wells directly downgradient of the Site. Therefore, based on the information contained in the Phase 1 Site Assessment Map and provided by the City's Health Department, there is no known data indicating a significant risk exists to current or potential future drinking water receptors as a result of this exceedance of 1,4-dioxane.

1,4-dioxane Concentration vs. Time – MW-3



All other sampling locations met the MMCL, SMCL, ORSG, and GW-1 standards for field screening, general chemistry, and VOCs. The full laboratory report from Alpha Analytical can be seen in Appendix B, Laboratory Analytical Data Package. The groundwater laboratory analytical data is included in Table 2-4 Groundwater Analytical Data Summary.

2.4 Surface Water Monitoring Results

Surface water sampling location SW-1 met MMCL, SMCL, ORSG, and NRWQC regulatory standards for field screening, general chemistry, and VOCs. The full laboratory report from Alpha Analytical can be seen in Appendix B, Laboratory Analytical Data Package. The surface water laboratory analytical data is included in Table 2-5 Surface Water Analytical Data Summary.

3. SUMMARY

Per the requirements of Permit #W018797, two ambient air landfill samples were taken from the Site at the time of the monitoring event. Neither of the two samples (upwind and landfill center) exceeded the permit limit of 500 ppmv.

During this round of environmental monitoring, there were no exceedances to the MMCL regulatory standards at any of the groundwater monitoring wells. Gas in the form of methane, hydrogen sulfide, and VOCs were not detected in any of the screened perimeter landfill gas monitoring wells during this round of environmental monitoring.

Residential methane monitor calibrations were completed at 14 of the 15 locations. One monitor could not be accessed; therefore, that methane monitor was not calibrated during this monitoring event. New methane monitors were left on four porches as residents were not home.

Woodard & Curran does not recommend any changes be made to the environmental monitoring program at this time. The next monitoring event is expected to occur in December 2023.

TABLES

TABLE 1-1: ENVIRONMENTAL MONITORING PROGRAM SUMMARY

Landfill Gas (Quarter 1, Quarter 2, Quarter 3, Quarter 4)	
Screen landfill gas wells LGW-1 through LGW-29.	
<i>In-Situ Measurements</i>	Percent Oxygen Hydrogen Sulfide (ppm) Carbon Dioxide (ppm) Methane (% LEL and % by volume) Total Ionizable Volatile Organic Compounds
Groundwater and Surface Water (Quarter 1, Quarter 3)	
Collect samples at locations MW-3, MW-4, MW-5S, MW-5D and SW-1; include one trip blank.	
<i>In-Situ Measurements</i>	Dissolved Oxygen (DO) (mg/L) pH (standard units) Temperature (°C) Specific Conductance (µmhos/cm)
<i>Depth to Water</i>	At MW-1, MW-2S, MW-2D, MW-3, MW-4, MW-5S, MW-5D, MW-6, MW-7S and MW-7D.
<i>Indicator Parameters</i>	Alkalinity by EPA Method 310.1 Chemical Oxygen Demand by EPA Method 410.4 Chloride by EPA Method 325.2 Nitrate by EPA Method 353.2 Sulfate by EPA Method 375.4 Total Cyanide by EPA Method 9010 Total Dissolved Solids by EPA Method 160.1
VOCs	Volatile Organic Compounds by EPA Method 8260B.
Condensate (Quarter 2, Quarter 4)	
Condensate Drain CD-1 and CD-2.	
VOCs	Volatile Organic Compounds by EPA Method 8260B.
Ambient Air (Quarter 1, Quarter 2, Quarter 3, Quarter 4)	
One center of the landfill location and one upwind location.	
<i>Ambient Conditions</i>	Methane by ASTM Method D-1946 (4-hour sample)

Note: This monitoring program reflects modifications made during Fiscal Year (FY) 2004 and FY 2005. The casing on MW-6 is damaged and the well is not gauged.

Table 1-2
Residential Methane Detector Calibration Results
Environmental Monitoring Report
Mechanic Street Landfill - Leominster, MA

Address	Time	Lamp Color	Time to Red	Time to Green	Proper Calibration	Comments
492 Mechanic Street	12:13	Green	38	17	Yes	
502 Mechanic Street	13:40	Green				No access to rental unit.
510 Mechanic Street	13:34	Green	15	22	Yes	
521 Mechanic Street	14:27	Green	22	28	Yes	
549 Mechanic Street	14:31	Green	28	32	Yes	New sensor dropped off on porch no answer.
561 Mechanic Street	12:41	Green	8	40	Yes	Unplugged on arrival misunderstood letter unplugged this am.
567 Mechanic Street	12:38	Green	5	34	Yes	Unplugged on arrival calibrated after warm up.
577 Mechanic Street	12:05	Green	23	40	Yes	
589 Mechanic Street	11:58	Green	12	35	Yes	
7 St. Cecelia Street	15:25	Green	29	33	Yes	Resident not home left replacement sensor in the mail box.
8A St. Cecelia Street	14:45	Green	15	27	Yes	
627 Mechanic Street	14:40	Green	16	28	Yes	
633 Mechanic Street	15:30	Green	26	29	Yes	Resident not home and did not leave out meter. Left a new meter instead of calibration on old sensor.
639 Mechanic Street	11:50	Green	21	18	Yes	
645 Mechanic Street	11:45	Green	30	12	Yes	New sensor left on the porch.

Notes:

The data in this Table was collected by GFS during the monitoring event.

Calibration gas concentration 5000 ppm.

All times in seconds.

Table 1-3
Gauged Groundwater Elevations
Environmental Monitoring Report
Mechanic Street Landfill - Leominster, MA

Well ID	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation
MW-1	25.98	352.49	326.51
MW-2S	16.10	333.34	317.24
MW-2D	16.53	333.00	316.47
MW-3	11.02	304.80	293.78
MW-4	11.50	302.89	291.39
MW-5S	7.25	292.30	285.05
MW-5D	7.41	291.60	284.19
MW-6	23.87	325.87	302.00
MW-7S	40.10	352.18	312.08
MW-7D	40.26	352.16	311.90

Notes:

The data in this Table was collected by GFS during the monitoring event.

Elevations expressed in feet relative to the National Geodetic Datum of 1929.

Top of Casing Elevation represents the reference point for the depth measurements.

Depth to groundwater is measured in feet below the top of casing.

CNM = Could Not Measure

Table 2-1
Ambient Air Analytical Data Summary
Environmental Monitoring Report
Mechanic Street Landfill - Leominster, MA

Location	Sample ID	Sample Date	Methane Content (% by volume)	Methane Content (ppmv)
Upwind	L2353696-01	9/13/2023	0.000199	1.99
Center of Landfill	L2353696-02	9/13/2023	0.000226	2.26

Notes:

The data in this Table was collected by GFS during the monitoring event.

ND - Not detected at the reporting limit for the sample.

Table 2-2
Landfill Gas Monitoring Results
Environmental Monitoring Report
Mechanic Street Landfill - Leominster, MA

Well ID	Methane (vol%)	PID (ppm)	% LEL	Hydrogen Sulfide (H ₂ S) (ppm)	Oxygen (O ₂)(vol%)	Carbon Dioxide (CO ₂) (vol%)
LGW-1	0.0	0.0	0.0	0.0	21.0	0.0
LGW-2	0.0	0.0	0.0	0.0	21.0	0.0
LGW-3	0.0	0.0	0.0	0.0	20.9	0.0
LGW-4	0.0	0.0	0.0	0.0	20.8	0.0
LGW-5	0.0	0.0	0.0	0.0	20.7	0.1
LGW-6	0.0	0.0	0.0	0.0	20.8	0.0
LGW-7	0.0	0.0	0.0	0.0	20.7	0.1
LGW-7 Dup	0.0	0.0	0.0	0.0	20.7	0.1
LGW-8	0.0	0.0	0.0	0.0	20.7	0.1
LGW-9	0.0	0.0	0.0	0.0	20.7	0.2
LGW-10	0.0	0.0	0.0	0.0	20.9	0.0
LGW-11	0.0	0.0	0.0	0.0	21.0	0.0
LGW-12	0.0	0.0	0.0	0.0	21.0	0.0
LGW-13	0.0	0.0	0.0	0.0	20.6	0.4
LGW-14	0.0	0.0	0.0	0.0	20.7	0.3
LGW-15	0.0	0.0	0.0	0.0	20.9	0.1
LGW-16	0.0	0.0	0.0	0.0	19.9	0.7
LGW-17	0.0	0.0	0.0	0.0	18.4	1.6
LGW-18	0.0	0.0	0.0	0.0	18.3	2.0
LGW-19	0.0	0.0	0.0	0.0	12.6	6.8
LGW-20	0.0	0.0	0.0	0.0	17.6	4.5
LGW-21	0.0	0.0	0.0	0.0	20.5	0.4
LGW-22	0.0	0.0	0.0	0.0	21.5	0.0
LGW-23	0.0	0.0	0.0	0.0	21.5	0.0
LGW-24	0.0	0.0	0.0	0.0	17.9	1.7
LGW-24 Dup	0.0	0.0	0.0	0.0	17.4	1.7
LGW-25	0.0	0.0	0.0	0.0	16.9	1.6
LGW-26	0.0	0.0	0.0	0.0	21.4	0.0
LGW-27	Buried by equipment					
LGW-28	0.0	0.0	0.0	0.0	20.9	0.1
LGW-29	0.0	0.0	0.0	0.0	20.9	0.2
Ambient	0.0	0.0	0.0	0.0	20.9	0.1

Notes:

The data in this Table was collected by GFS during the monitoring event.

vol% - Percent by Volume

LEL - Lower Explosive Limit

ppm - parts per million

H₂S - Hydrogen Sulfide

O₂ - Oxygen

CO₂ - Carbon Dioxide

Table 2-3
Water Quality Indicator Parameters
Environmental Monitoring Report
Mechanic Street Landfill - Leominster, MA

Sample ID	Temp (°C)	pH	Specific Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)
Groundwater				
MW-3	13.5	6.26	1,106	1.53
MW-4	14.5	7.08	182	1.80
MW-5S	13.1	7.12	606	2.60
MW-5D	12.6	7.41	576	2.51
Surface Water				
SW-1	17.1	7.58	269	7.40

Notes:

The data in this Table was collected by GFS during the monitoring event.

°C - Degrees Celsius

µmhos/cm - Micro-mhos per Centimeter

mg/L - mililigrams per Liter

Table 2-4
Groundwater Analytical Data Summary
Environmental Monitoring Report
Mechanic Street Landfill - Leominster, MA

LOCATION						MW-3			MW-4			MW-5S			MW-5D
SAMPLING DATE						9/13/2023			9/13/2023			9/13/2023			9/13/2023
LAB SAMPLE ID						L2353540-01			L2353540-02			L2353540-03			L2353540-04
SAMPLE TYPE						WATER			WATER			WATER			WATER
SAMPLE DEPTH (ft.)															
	GW-1	MMCL	ORSG	SMCL	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry															
Alkalinity, Total					mg CaCO3/L	225		36.7		132		44.3			
Solids, Total Dissolved				500,000	ug/l	440,000		140,000		220,000		86,000			
Chloride				250,000	ug/l	120,000		36,000		5,700		18,000			
Nitrogen, Nitrate		10,000			ug/l	100	U	100	U	100	U	786			
Sulfate				250,000	ug/l	10,000	U	11,000		18,000		12,000			
Chemical Oxygen Demand					ug/l	120,000		20,000	U	54,000		52,000			
MCP 1,4 Dioxane by 8270E-SIM															
1,4-Dioxane	0.3		0.3		ug/l	0.392		0.136	U	0.136	U	0.136	U	0.136	U
MCP General Chemistry															
Cyanide, Total	200	200			ug/l	5		5	U	5	U	5	U	5	U
MCP Volatile Organics															
Methylene chloride	5	5			ug/l	2	U	2	U	2	U	2	U	2	U
1,1-Dichloroethane	70		70		ug/l	1	U	1	U	1	U	1	U	1	U
Chloroform	70		70		ug/l	1	U	1	U	1	U	1	U	1	U
Carbon tetrachloride	5	5			ug/l	1	U	1	U	1	U	1	U	1	U
1,2-Dichloropropane	5	5			ug/l	1	U	1	U	1	U	1	U	1	U
Dibromochloromethane	2				ug/l	1	U	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	5	5			ug/l	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	5	5			ug/l	1	U	1	U	1	U	1	U	1	U
Chlorobenzene	100	100			ug/l	10		1	U	1	U	1	U	1	U
Trichlorofluoromethane					ug/l	2	U	2	U	2	U	2	U	2	U
1,2-Dichloroethane	5	5			ug/l	1	U	1	U	1	U	1	U	1	U
1,1,1-Trichloroethane	200	200			ug/l	1	U	1	U	1	U	1	U	1	U
Bromodichloromethane	3				ug/l	1	U	1	U	1	U	1	U	1	U
trans-1,3-Dichloropropene	0.4				ug/l	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
cis-1,3-Dichloropropene	0.4				ug/l	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
1,3-Dichloropropene, Total	0.4		0.4		ug/l	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
1,1-Dichloropropene					ug/l	2	U	2	U	2	U	2	U	2	U
Bromoform	4				ug/l	2	U	2	U	2	U	2	U	2	U
1,1,2,2-Tetrachloroethane	2				ug/l	1	U	1	U	1	U	1	U	1	U
Benzene	5	5			ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	1,000	1,000			ug/l	1	U	1	U	1	U	1	U	1	U
Ethylbenzene	700	700			ug/l	1	U	1	U	1	U	1	U	1	U
Chloromethane					ug/l	2	U	2	U	2	U	2	U	2	U
Bromomethane	10		10		ug/l	2	U	2	U	2	U	2	U	2	U
Vinyl chloride	2	2			ug/l	1	U	1	U	1	U	1	U	1	U
Chloroethane					ug/l	2	U	2	U	2	U	2	U	2	U
1,1-Dichloroethene	7	7			ug/l	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	100	100			ug/l	1	U	1	U	1	U	1	U	1	U
Trichloroethene	5	5			ug/l	1	U	1	U	1	U	1	U	1	U
1,2-Dichlorobenzene	600	600			ug/l	1	U	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	100				ug/l	1	U	1	U	1	U	1	U	1	U
1,4-Dichlorobenzene	5	5			ug/l	1.6		1	U	1	U	1	U	1	U
Methyl tert butyl ether	70		70	40	ug/l	2	U	2	U	2	U	2	U	2	U
p/m-Xylene	10,000				ug/l	2	U	2	U	2	U	2	U	2	U
o-Xylene	10,000				ug/l	1	U	1	U	1	U	1	U	1	U
Xylenes, Total	10,000	10,000			ug/l	1	U	1	U	1	U	1	U	1	U
cis-1,2-Dichloroethene	70	70			ug/l	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethene, Total					ug/l	1	U	1	U	1	U	1	U	1	U
Dibromomethane					ug/l	2	U	2	U	2	U	2	U	2	U
1,2,3-Trichloropropane					ug/l	2	U	2	U	2	U	2	U	2	U
Styrene	100	100			ug/l	1	U	1	U	1	U	1	U	1	U
Dichlorodifluoromethane			1,400		ug/l	2	U	2	U	2	U	2	U	2	U
Acetone	6,300		6,300		ug/l	5	U	5	U	5	U	5	U	5	U
Carbon disulfide					ug/l	2	U	2	U	2	U	2	U	2	U
Methyl ethyl ketone	4,000		4,000		ug/l	5	U	5	U	5	U	5	U	5	U
Methyl isobutyl ketone	350		350		ug/l	5	U	5	U	5	U	5	U	5	U
2-Hexanone					ug/l	5	U	5	U	5	U	5	U	5	U
Bromochloromethane					ug/l	2	U	2	U	2	U	2	U	2	U
Tetrahydrofuran			600		ug/l	6.9		2	U	2	U	2	U	2	U
2,2-Dichloropropane					ug/l	2	U	2	U	2	U	2	U	2	U
1,2-Dibromoethane	0.02	0.02			ug/l	2	U	2	U	2	U	2	U	2	U
1,3-Dichloropropane					ug/l	2	U	2	U	2	U	2	U	2	U
1,1,1,2-Tetrachloroethane	5				ug/l	1	U	1	U	1	U	1	U	1	U
Bromobenzene					ug/l	2	U	2	U	2	U	2	U	2	U
n-Butylbenzene					ug/l	2	U	2	U	2	U	2	U	2	U
sec-Butylbenzene					ug/l	2	U	2	U	2	U	2	U	2	U
tert-Butylbenzene					ug/l	2	U	2	U	2	U	2	U	2	U
o-Chlorotoluene					ug/l	2	U	2	U	2	U	2	U	2	U
p-Chlorotoluene					ug/l	2	U	2	U	2	U	2	U	2	U
1,2-Dibromo-3-chloropropane			0.2		ug/l	2	U	2	U	2	U	2	U	2	U
Hexachlorobutadiene	0.6				ug/l	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Isopropylbenzene					ug/l	2	U	2	U	2	U	2	U	2	U
p-Isopropyltoluene					ug/l	2	U	2	U	2	U	2	U	2	U
Naphthalene	140		140		ug/l	2	U	2	U	2	U	2	U	2	U
n-Propylbenzene					ug/l	2	U	2	U	2	U	2	U	2	U
1,2,3-Trichlorobenzene					ug/l	2	U	2	U	2	U	2	U	2	U
1,2,4-Trichlorobenzene	70	70			ug/l	2	U	2	U	2	U	2	U	2	U
1,3,5-Trimethylbenzene					ug/l	2	U	2	U	2	U	2	U	2	U
1,2,4-Trimethylbenzene					ug/l	2	U	2	U	2	U	2	U	2	U
Diethyl ether					ug/l	2	U	2	U	2	U	2	U	2	U
Diisopropyl Ether					ug/l	2	U	2	U	2	U	2	U	2	U
Ethyl-Tert-Butyl-Ether					ug/l	2	U	2	U	2	U	2	U	2	U
Tertiary-Amyl Methyl Ether			90		ug/l	2	U	2	U	2	U	2	U	2	U
1,4-Dioxane	0.3		0.3		ug/l	250	U	250	U	250	U	250	U	250	U
Microextractables by GC															
1,2-Dibromoethane	0.02	0.02			ug/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
1,2-Dibromo-3-chloropropane			0.2		ug/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U

* Comparison is not performed on parameters with non-numeric criteria.

Notes:

MMCL: Massachusetts Maximum Contaminant Levels Criteria per MassDEP DW Standards & Guidelines, as of November 2023.

ORSG: Massachusetts Drinking Water Guidelines Criteria per MassDEP DW Standards & Guidelines, as of November 2023.

SMCL: Secondary Maximum Contaminant Levels Criteria per MassDEP DW Standards & Guidelines, as of November 2023.

GW-1: MCP 2019 Method 1 GW-1 Groundwater Standards Criteria, as of November 2023.

U indicates the sample was not detected above the reporting limits

indicates an exceedance of MMCL standards

indicates an exceedance of the ORSG, GW-1 or SMCL standards

*All data in the table was generated by Alpha Analytical, Inc.

Table 2-5
Surface Water Analytical Data Summary
Environmental Monitoring Report
Mechanic Street Landfill -
Leominster, MA

LOCATION				SW-1		
SAMPLING DATE				9/13/2023		
LAB SAMPLE ID				L2353540-05		
	NRWQC	MMCL	ORSG	SMCL	Results	Qual
General Chemistry						
Alkalinity, Total	20,000				169	
Solids, Total Dissolved				500,000	190000	
Chloride	230,000			250,000	1700	
Nitrogen, Nitrate		10,000			469	
Sulfate				250,000	10000	U
Chemical Oxygen Demand					20000	U
MCP 1,4 Dioxane by 8270E-SIM						
1,4-Dioxane			0.3		0.136	U
MCP General Chemistry						
Cyanide, Total	5.2	200			5	U
MCP Volatile Organics						
Methylene chloride		5			2	U
1,1-Dichloroethane			70		1	U
Chloroform			70		1	U
Carbon tetrachloride		5			1	U
1,2-Dichloropropane		5			1	U
Dibromochloromethane					1	U
1,1,2-Trichloroethane		5			1	U
Tetrachloroethene		5			1	U
Chlorobenzene		100			1	U
Trichlorofluoromethane					2	U
1,2-Dichloroethane		5			1	U
1,1,1-Trichloroethane		200			1	U
Bromodichloromethane					1	U
trans-1,3-Dichloropropene					0.4	U
cis-1,3-Dichloropropene					0.4	U
1,3-Dichloropropene, Total			0.4		0.4	U
1,1-Dichloropropene					2	U
Bromoform					2	U
1,1,2,2-Tetrachloroethane					1	U
Benzene		5			0.5	U
Toluene		1000			1	U
Ethylbenzene		700			1	U
Chloromethane					2	U
Bromomethane			10		2	U
Vinyl chloride		2			1	U
Chloroethane					2	U
1,1-Dichloroethene		7			1	U
trans-1,2-Dichloroethene		100			1	U
Trichloroethene		5			1	U
1,2-Dichlorobenzene		600			1	U
1,3-Dichlorobenzene					1	U
1,4-Dichlorobenzene		5			1	U
Methyl tert butyl ether			70	40	2	U
p/m-Xylene					2	U
o-Xylene					1	U
Xylenes, Total		10000			1	U
cis-1,2-Dichloroethene		70			1	U
1,2-Dichloroethene, Total					1	U
Dibromomethane					2	U
1,2,3-Trichloropropane					2	U
Styrene		100			1	U
Dichlorodifluoromethane			1400		2	U
Acetone			6300		5	U
Carbon disulfide					2	U
Methyl ethyl ketone			4000		5	U
Methyl isobutyl ketone			350		5	U
2-Hexanone					5	U
Bromochloromethane					2	U
Tetrahydrofuran			600		2	U
2,2-Dichloropropane					2	U
1,2-Dibromoethane		0.02			2	U
1,3-Dichloropropane					2	U
1,1,1,2-Tetrachloroethane					1	U
Bromobenzene					2	U
n-Butylbenzene					2	U
sec-Butylbenzene					2	U
tert-Butylbenzene					2	U
o-Chlorotoluene					2	U
p-Chlorotoluene					2	U
1,2-Dibromo-3-chloropropane		0.2			2	U
Hexachlorobutadiene					0.6	U
Isopropylbenzene					2	U
p-Isopropyltoluene					2	U
Naphthalene			140		2	U
n-Propylbenzene					2	U
1,2,3-Trichlorobenzene					2	U
1,2,4-Trichlorobenzene		70			2	U
1,3,5-Trimethylbenzene					2	U
1,2,4-Trimethylbenzene					2	U
Diethyl ether					2	U
Diisopropyl Ether					2	U
Ethyl-Tert-Butyl-Ether					2	U
Tertiary-Amyl Methyl Ether			90		2	U
1,4-Dioxane			0.3		250	U
Microextractables by GC						
1,2-Dibromoethane		0.02			0.01	U
1,2-Dibromo-3-chloropropane		0.2			0.01	U

Notes:

MMCL: Massachusetts Maximum Contaminant Levels Criteria per MassDEP DW Standards & Guidelines, as of November 2023.

ORSG: Massachusetts Drinking Water Guidelines Criteria per MassDEP DW Standards & Guidelines, as of November 2023.

SMCL: Secondary Maximum Contaminant Levels Criteria per MassDEP DW Standards & Guidelines, as of November 2023.

NRWQC: EPA National Recommended Water Quality Criteria – Freshwater Aquatic Life Criteria (NRWQC), as of November 2023.

U indicates the sample was not detected above the reporting limits

indicates an exceedance of MMCL standards

indicates an exceedance of the ORSG, NRWQC or SMCL standards

*All data in the table was generated by Alpha Analytical, Inc.

TABLE 1-2: RESIDENTIAL METHANE DETECTOR CALIBRATION RESULTS

TABLE 1-3: GAUGED GROUNDWATER ELEVATIONS

TABLE 2-1: AMBIENT AIR ANALYTICAL DATA SUMMARY

TABLE 2-2: LANDFILL GAS MONITORING RESULTS

TABLE 2-3: WATER QUALITY INDICATOR PARAMETERS

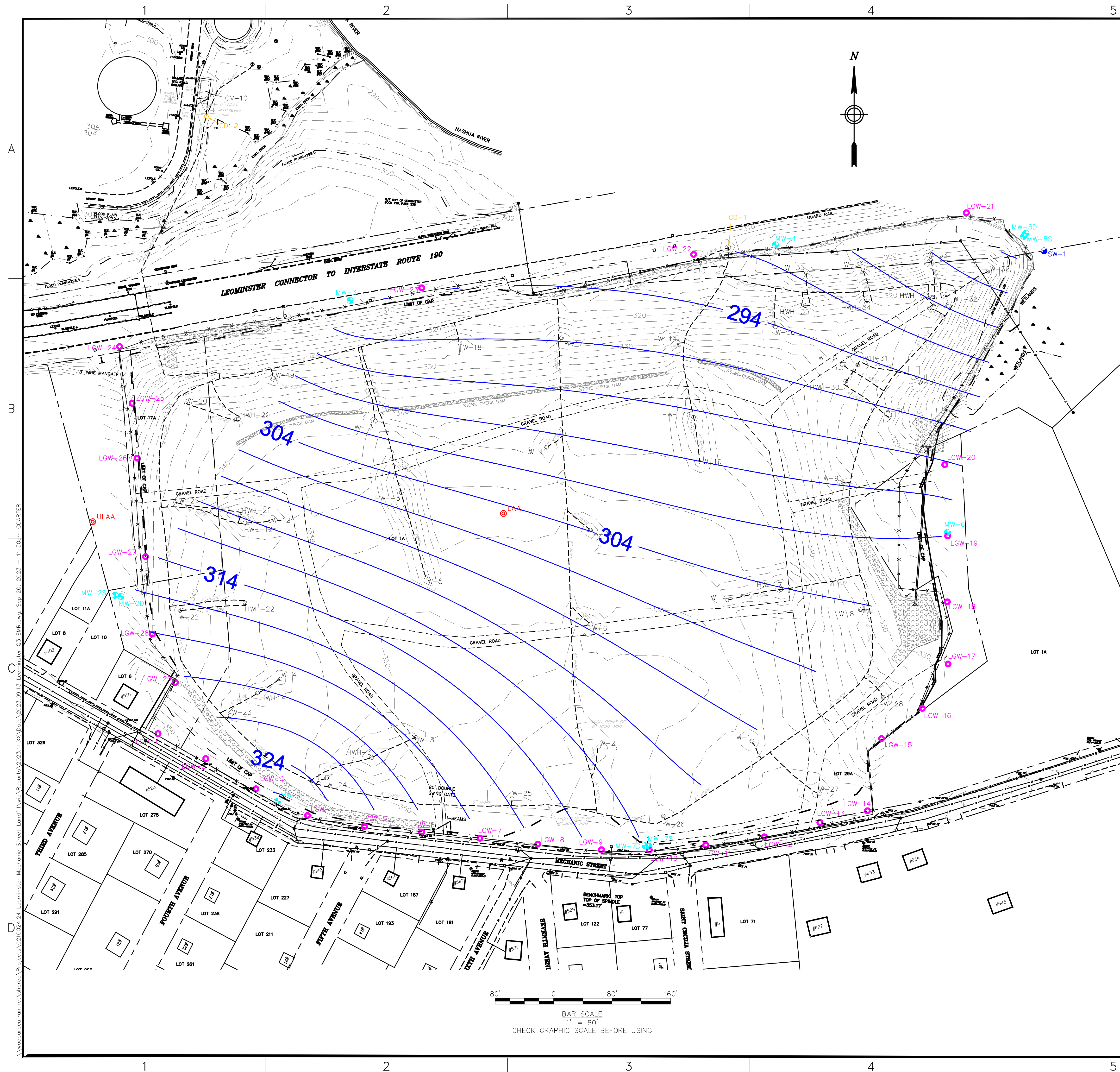
TABLE 2-4: GROUNDWATER ANALYTICAL DATA SUMMARY

TABLE 2-5: SURFACE WATER ANALYTICAL DATA SUMMARY

FIGURES

FIGURE 1-1: ENVIRONMENTAL MONITORING SITE PLAN

FIGURE 2-1: MASSDEP PHASE 1 SITE ASSESSMENT MAP



LEGEND

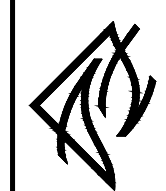
- | | |
|-------|--------------------------------|
| _____ | 10' CONTOUR LINE |
| _____ | PROPERTY LINE |
| _____ | EDGE OF PAVEMENT |
| _____ | EDGE OF GRAVEL ROAD |
| _____ | EDGE OF HDPE CAP |
| _____ | CHAIN LINK FENCE |
| _____ | LANDFILL GAS COLLECTION PIPING |
| _____ | EDGE OF WETLANDS |
| _____ | EDGE OF RIVER |
| _____ | SANITARY SEWER PIPING |
| _____ | WATER MAIN PIPING |
| _____ | STORM DRAIN PIPING |
| _____ | NATURAL GAS PIPING |

- | | |
|---|---|
|  | HYDRANT |
|  | UTILITY POLE |
|  | SEWER MANHOLE |
|  | DRAIN MANHOLE |
|  | EXTRACTION WELLHEAD VAULT |
|  | GROUNDWATER MONITORING WELL |
|  | SURFACE WATER SAMPLING LOCATION |
|  | LANDFILL GAS MONITORING WELL |
|  | CONDENSATE DRAIN VAULT |
|  | HOUSES WITH METHANE MONITORS INSTALLED |
|  | AMBIENT AIR SAMPLE LOCATION (APPROXIMATE) |

GENERAL NOTES

1. THIS PLAN SHOWS THE ELEVATIONS OF THE FINAL GRADING OVER THE LANDFILL, THE HORIZONTAL LIMITS OF HDPE CAP, EXISTING RIPRAP INCLUDING INVERTS OF RIPRAP SWALES, AND THE LOCATION OF EXISTING MONITORING WELLS.
2. TOPOGRAPHY SHOWN HEREON IS THE RESULT OF AN ON THE GROUND DATA ACCUMULATION SURVEY PERFORMED BY WHITMAN & BINGHAM, ASSOC. INC. ON OR BEFORE FEBRUARY 3, 1997. ANY ALTERATIONS TO THE SUBJECT SITE AFTER THE DATE MAY NOT BE REFLECTED ON THIS PLAN
3. ALL ELEVATIONS SHOWN HEREON ARE BASED ON THE 1929 N.G.V.D. BENCH MARK: ESCUTCHEON PIN SET IN A LEAD PLUG LOCATED IN THE NORTH WESTERN PORTION OF THE CONC. BRIDGE RAIL ALONG MECHANIC STREET OVER THE NASHUA RIVER: ELEVATION = 300.87'.
4. THE LOCATION OF THE RESIDENTIAL PROPERTIES DEPICTED ON PLAN ARE APPROXIMATE. THE LOCATIONS WERE TAKEN FROM CITY OF LEOMINSTER TAX ASSESSOR'S RECORDS MAPS.
5. UTILITIES DEPICTED ON THIS PLAN WERE LOCATED BASED ON AVAILABLE DATA PROVIDED BY THE CITY OF LEOMINSTER AND BOSTON GAS COMPANY.
6. LOCATIONS OF UNDERGROUND UTILITIES, INsofar AS SHOWN, HAVE BEEN DEDUCED FROM AVAILABLE PLANS AND OBSERVATIONS OF VISIBLE STRUCTURES. LOCATIONS AND ELEVATIONS OF UNDERGROUND UTILITIES MUST BE VERIFIED IN THE FIELD PRIOR TO EXCAVATION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF WHITMAN & BINGHAM ASSOCIATES, INC.
8. IN ACCORDANCE WITH M.G.L. CHAPTER 82, SECTION 40, INCLUDING AMENDMENTS, ALL CONTRACTORS SHALL NOTIFY UTILITY COMPANIES AND GOVERNMENT AGENCIES, IN WRITING, OF THE INTENT TO EXCAVATE, NO LESS THAN 72 HOURS PRIOR TO SUCH EXCAVATION (EXCLUSIVE OF SATURDAYS & HOLIDAYS) OR CALL "DIG SAFE" AT 1-800-322-4844. UNDERGROUND GAS MAIN IS LOCATED WITHIN MECHANIC STREET.
9. CONTRACTOR SHALL CONTACT BOSTON GAS COMPANY FOR LOCATION. ALL WETLANDS SHOWN ON THIS PLAN WERE IDENTIFIED AND DELINEATED BY NEIL ANDERSON, P.H.D.
10. THE LOCATION OF THE 100 YEAR FLOOD ZONE A WAS DETERMINED BY ELEVATION. ACCORDING TO CITY OF LEOMINSTER FEMA MAP COMMUNITY PANEL NO. 250314 0007 B, DATED SEPTEMBER 16, 1982.
11. THIS PLAN SHOWS THE LOCATION OF THE GAS COLLECTION SYSTEM, ABOVE GROUND FEATURES, AND EXISTING TOPOGRAPHY. TOPOGRAPHY SHOWN HEREON, WITHIN THE FENCED AREA OF THE LANDFILL BETWEEN MECHANIC STREET AND THE LEOMINSTER CONNECTOR, AND ALONG THE GAS COLLECTION PIPE CROSSING THE LEOMINSTER CONNECTOR TO THE FLARE STATION IS THE RESULT OF AN ON GROUND DATA ACCUMULATION SURVEY BEFORE OR DURING JANUARY 2002. ANY ALTERATIONS TO THESE SUBJECT AREAS AFTER THIS DATE MAY NOT BE REFLECTED ON THIS PLAN.
12. LOCATIONS AND TOPOGRAPHY SHOWN OUTSIDE THIS AREA IS TAKEN FROM BREVUE SURVEY JULY 2001 FOR THE PROJECT CONSTRUCTION PLANS.
13. LOCATIONS OF THE GAS COLLECTION PIPING AS SHOWN HEREON WERE TAKEN DURING AUGUST 2001 THROUGH NOVEMBER 2001. FINAL ADJUSTMENTS OF COLLECTION PIPING MAY HAVE BEEN DONE AFTER FIELD LOCATIONS AND PRIOR TO FINAL BURIAL OF PIPING. THEREFORE, PIPE LOCATIONS SHOWN MAY BE APPROXIMATE.

40 Shattuck Road, Suite 110
Andover, Massachusetts 01810
866.702.6371 | www.woodardcurran.com



**Woodward
& Curran**

COMMITMENT & INTEGRITY DRIVE RESULTS

[illegible]

LEOMINSTER HEALTH DEPARTMENT
25 WEST STREET
LEOMINSTER MA 01453

ENVIRONMENTAL MONITORING REPORT MECHANIC STREET LANDFILL

JOB NO.:	0210024.24
DATE:	SEPTEMBER 2023
SCALE:	1"=80'
SHEET:	1 OF 1

FIG 1-1

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:

MECHANIC STREET LANDFILL
566 MECHANIC STREET LEOMINSTER, MA

NAD83 UTM Meters:

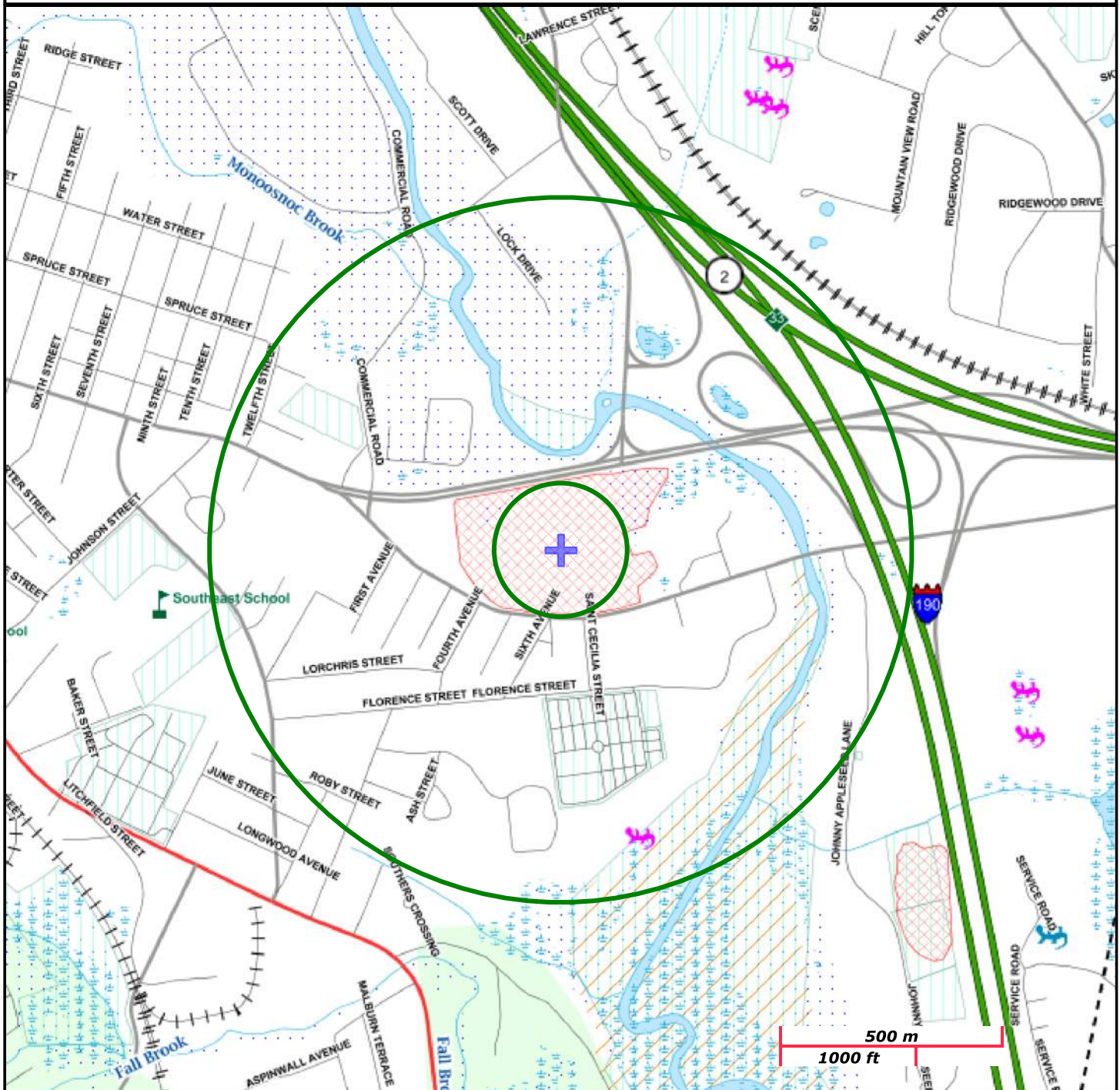
4711103mN , 275418mE (Zone: 19)
July 16, 2018

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<http://www.mass.gov/mgis/>.



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.

**APPENDIX A: GEOLOGICAL FIELD SERVICES, INC. FIELD SUMMARY
REPORT**

GFS GEOLOGICAL FIELD SERVICES, INC.

September 15, 2023

Ms. Kendra Dow
Woodard and Curran
40 Shattuck Road, Suite 110
Andover, MA 01810

RE: Mechanic Street Leominster Land Fill
Environmental Sampling

Dear Ms. Dow:

On September 13, 2023, Geological Field Services, Inc. (GFS) conducted the third quarter environmental sampling at the above referenced site. Field activities included the sampling of four ground water wells, one surface water location, screening of twenty-eight perimeter landfill gas wells, two ambient air samples, and field calibration of fourteen residential methane sensors along Mechanic Street. The concrete pad gas well LGW-25 is destroyed from the salting and plowing of the most recent snow storm and needs to be replaced. The protective casing for gas well LGW-24 is loose and not attached to the ground. The lock also needs to be replaced due to rusting not allowing it to be locked. Gas well LGW-27 was buried under equipment and was not able to be screened. The following is a description of the related field activities.

Residential Methane Detector Calibration

On September 13, 2023, GFS preformed the third quarter field calibration of thirteen of the fourteen methane detectors located in the residential buildings along Mechanic Street in Leominster. New methane detectors were installed in 549 and 645 Mechanic Street, and 7 St Cecelia Street to replaced detectors that would not calibrate during the second quarter event. A new meter was also left at 633 Mechanic Street as a precaution as during the last quarter calibrations the detector needed adjustments and the homeowner did not leave out his meter this quarter to confirm calibration. All of units that were accessed were adjusted and calibrated using the standard calibration delivery gas system set at 0.5 CC/min and according to the manufactures calibration procedures. All of the units responded to the standard gas within the one-minute time limit and returned to normal operation within eight to thirty seconds of the removal of the standard. All calibration records are presented on the attached field form.

Ambient Air Sampling

On September 13, 2023, GFS collected two ambient air samples from the surface of the landfill. One sample was collected from the center of the landfill (Center) and the second was collected from an upwind location, the upwind sample was placed on the west side of the landfill. The samples were collected with a 2.7-liter summa canister and a 4-hour flow regulator. The summa canister was readied with a regulator and deployed in the field. The valve was opened and the initial vacuum of the canister was recorded on the chain-of-custody. After four hours had elapsed the valve was closed and the final vacuum of the canister was recorded on the chain-of-custody. The summa canisters were packed and delivered to Alpha Analytical via a

courier on September 14, 2023.

Landfill Gas Monitoring

On September 13, 2023, GFS conducted the third quarter landfill gas well screening on twenty-eight-perimeter landfill gas wells. A RAE 2000 organic vapor meter (OVM) equipped with a 10.6 eV lamp, calibrated with 100 parts per million (ppm) Isobutylene, was used to screen for VOCs. Percent oxygen, carbon dioxide, methane, and ppm of hydrogen sulfide were screened using a Landtec GEM-5000 infrared gas analyzer. The Landtec was calibrated at the start of the sampling day with 15% methane and 15% carbon dioxide standard gas mix along with 100 ppm of hydrogen sulfide standard gas.

The perimeter landfill gas wells were field screened in accordance with the following procedure. The steel protective casing was opened and the PVC valve was opened or a sampling valve was inserted and the overall condition of the well was observed. The standing air in the well was then purged using the Landtec with a flow rate of 550 cubic centimeters per minute (cc/min). The soil gas was continuously monitored for VOCs, oxygen, carbon dioxide, methane and hydrogen sulfide. The meter readings were recorded after 30 seconds of purging and again at one, two, and five minutes. Field screening results were recorded on landfill gas survey sheets, copies of which are attached.

Gas Monitoring QA/QC

The following quality assurance/quality control measures were implemented during the landfill gas survey. Barometric pressure was observed prior to and during sampling. During the screening event barometric pressure increased from 29.64 to 29.71-inches of mercury. Barometric pressure was measured using the Landtec. Weather during the screening event was a mix of sun, clouds, and rain showers with temperatures ranging from 65 to 72 degrees Fahrenheit. The four days prior to the screening event was a mix of sun, clouds, rain showers and with temperatures in the low 60s to the low 80s. The last recorded precipitation was on September 11, 2023 with about 9-inches of rain accumulation in the city of Leominster. In accordance with DEP guidance, 10 percent of the stations were occupied for duplicate measurements during perimeter gas surveying. Perimeter gas monitoring wells LGW-7 and LGW-24 were occupied twice during the. Duplicate screening results were similar to the initial results.

Gas Sampling Results

Methane, hydrogen sulfide and VOCs were detected in any of the landfill gas wells. Carbon dioxide concentrations measured at the perimeter gas wells ranged from 0.1 percent-by-volume (LGW-5, LGW-7, LGW-7 Dup, LGW-8, LGW-13, LGW-15, LGW-26, and LGW-28) to 6.8 percent-by-volume (LGW-19). Oxygen concentrations ranged from 12.6 percent-by-volume (LGW-19) to 21.5 percent-by-volume (LGW-22 and LGW-23). Field readings are presented on the attached Landfill Gas Survey forms.

Ground Water and Surface Water Sampling

On September 13, 2023, ground water samples were collected from four monitoring wells

identified as MW-3, MW-4, MW-5S, MW-5D and one surface water location SW-1. Water level measurements were taken at ten monitoring wells identified as MW-1, MW-2S, MW-2D, MW-3, MW-4, MW-5S, MW-5D, MW-6, MW-7S and MW-7D. The water level measurements are presented in Table 1. Fieldwork was conducted in accordance with the scope of work provided by Woodard and Curran and with DEP "Standard Reference for Monitoring Wells." Ground water samples were collected from four monitoring wells in accordance with the following procedure. Prior to purging, the ground water level and total depth of the monitoring well were measured to the nearest 0.01-foot using an electronic water level sensing device. The recorded measurements were used to calculate the volume of standing water in the well. Prior to purging, all wells were examined for the presence of free-phase petroleum product by observing the condition of the water level indicator when it was withdrawn from the well. No free-phase petroleum product was observed. Each monitoring well was then purged using a TuBaH inertial lift valve and dedicated HDPE tubing. Field parameters were measured at the start of purging and then again for each well volume. The wells were purged until minimums of three well volumes were removed or until the field parameters stabilized to within 10 percent for three consecutive readings. All ground water levels and field parameter measurements were recorded on field sampling sheets, copies of which are attached. The samples were delivered to Alpha Analytical on September 14, 2023, via a courier for analysis of the parameters stated in the scope of work, a copy of the chain-of-custody is attached. No duplicate sample was taken.

Should you have any questions, please feel free to contact me.

Sincerely,
GEOLOGICAL FIELD SERVICES, INC.



Ryan J. MacKay
Senior Geologist

97117_0923_GasGwResi_rpt

LANDFILL GAS SURVEY

SITE	<u>Leominster Landfill</u>	PROJECT ID	<u>97117</u>
ADDRESS	<u>Mechanic Street, Leominster</u>	DATE	<u>9/13/2023</u>
CLIENT	<u>Woodard and Curran</u>	TIME ONSITE	<u>08:00</u>
PERSONNEL	<u>Nick Federico</u>	TIME OFFSITE	<u>12:30</u>
	<u>Ryan Mackay</u>	PAGE	<u>1 of 4</u>

WEATHER	<u>Sun and cloudy with rain showers. Humid. 65 - 72 F</u>
WEATHER PAST 4 DAYS	<u>Mix of rain showers, clouds, and sun</u>
	<u>Temps in low 60s to low 80s F</u>
LAST RAIN/AMOUNT	<u>9/11/23 ~9 inches local rain</u>
GROUND COVER	<u>Wet Grass and brush</u>

TIME	<u>08:10</u>	<u>10:00</u>	<u>12:30</u>	
BAR. PRESSURE	<u>29.64" Hg</u>	<u>29.71" Hg</u>	<u>29.71" Hg</u>	
TEMPERATURE	<u>65 F</u>	<u>69 F</u>	<u>72 F</u>	
REL. WIND SPEED	<u>Calm</u>	<u>Calm</u>	<u>5 MPH</u>	
WIND DIRECTION	<u>X</u>	<u>X</u>	<u>W</u>	

FIELD EQUIPMENT	CALIBRATION STANDARD	TIME
<u>RAE mini 2000 10.6 eV</u>	<u>100 ppm ISO RF=1</u>	<u>08:10</u>
<u>Landtec GEM-5000</u>	<u>15% CH₄, 15% CO₂</u>	<u>08:10</u>
<u>Landtec GEM-5000</u>	<u>100 ppm H₂S</u>	<u>08:10</u>

SAMPLING DATA

Location Seconds	Start Time	Methane %	PID ppm	LeL %	H ₂ S ppm	O ₂ %	CO ₂ %
<u>LGW-1</u>	<u>10:39</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>21.0</u>	<u>0.0</u>
<u>60</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>21.0</u>	<u>0.0</u>
<u>120</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>21.0</u>	<u>0.0</u>
<u>300</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>21.0</u>	<u>0.0</u>
<u>LGW-2</u>	<u>10:33</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>21.0</u>	<u>0.0</u>
<u>60</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>21.0</u>	<u>0.0</u>
<u>120</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>21.0</u>	<u>0.0</u>
<u>300</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>21.0</u>	<u>0.0</u>
<u>LGW-3</u>	<u>10:26</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.9</u>	<u>0.0</u>
<u>60</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.9</u>	<u>0.0</u>
<u>120</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.9</u>	<u>0.0</u>
<u>300</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.9</u>	<u>0.0</u>
<u>LGW-4</u>	<u>10:20</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.8</u>	<u>0.0</u>
<u>60</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.8</u>	<u>0.0</u>
<u>120</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.8</u>	<u>0.0</u>
<u>300</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.8</u>	<u>0.0</u>
<u>LGW-5</u>	<u>10:14</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.7</u>	<u>0.1</u>
<u>60</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.7</u>	<u>0.1</u>
<u>120</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.7</u>	<u>0.1</u>
<u>300</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>20.7</u>	<u>0.1</u>

SAMPLING DATA

Location Seconds	Start Time	Methane %	PID ppm	LeL %	H2S ppm	O2 %	CO2 %
LGW-6	10:08	0.0	0.0	0.0	0.0	20.8	0.0
60		0.0	0.0	0.0	0.0	20.8	0.0
120		0.0	0.0	0.0	0.0	20.8	0.0
300		0.0	0.0	0.0	0.0	20.8	0.0
LGW-7	10:01	0.0	0.0	0.0	0.0	20.7	0.1
60		0.0	0.0	0.0	0.0	20.7	0.1
120		0.0	0.0	0.0	0.0	20.7	0.1
300		0.0	0.0	0.0	0.0	20.7	0.1
LGW-7 Dup	11:00	0.0	0.0	0.0	0.0	20.7	0.1
60		0.0	0.0	0.0	0.0	20.7	0.1
120		0.0	0.0	0.0	0.0	20.7	0.1
300		0.0	0.0	0.0	0.0	20.7	0.1
LGW-8	09:53	0.0	0.0	0.0	0.0	20.7	0.1
60		0.0	0.0	0.0	0.0	20.7	0.1
120		0.0	0.0	0.0	0.0	20.7	0.1
300		0.0	0.0	0.0	0.0	20.7	0.1
LGW-9	09:48	0.0	0.0	0.0	0.0	20.7	0.2
60		0.0	0.0	0.0	0.0	20.7	0.2
120		0.0	0.0	0.0	0.0	20.7	0.2
300		0.0	0.0	0.0	0.0	20.7	0.2
LGW-10	09:42	0.0	0.0	0.0	0.0	20.9	0.0
60		0.0	0.0	0.0	0.0	20.9	0.0
120		0.0	0.0	0.0	0.0	20.9	0.0
300		0.0	0.0	0.0	0.0	20.9	0.0
LGW-11	09:35	0.0	0.0	0.0	0.0	21.0	0.0
60		0.0	0.0	0.0	0.0	21.0	0.0
120		0.0	0.0	0.0	0.0	21.0	0.0
300		0.0	0.0	0.0	0.0	21.0	0.0
LGW-12	09:29	0.0	0.0	0.0	0.0	21.0	0.0
60		0.0	0.0	0.0	0.0	21.0	0.0
120		0.0	0.0	0.0	0.0	21.0	0.0
300		0.0	0.0	0.0	0.0	21.0	0.0
LGW-13	09:23	0.0	0.0	0.0	0.0	20.9	0.1
60		0.0	0.0	0.0	0.0	20.7	0.2
120		0.0	0.0	0.0	0.0	20.4	0.3
300		0.0	0.0	0.0	0.0	20.6	0.4
LGW-14	09:17	0.0	0.0	0.0	0.0	20.8	0.2
60		0.0	0.0	0.0	0.0	20.8	0.2
120		0.0	0.0	0.0	0.0	20.7	0.2
300		0.0	0.0	0.0	0.0	20.7	0.3
LGW-15	09:11	0.0	0.0	0.0	0.0	20.9	0.1
60		0.0	0.0	0.0	0.0	20.9	0.1
120		0.0	0.0	0.0	0.0	20.9	0.1
300		0.0	0.0	0.0	0.0	20.9	0.1

SAMPLING DATA

Location Seconds		Methane %	PID ppm	LeL %	H2S ppm	O2 %	CO2 %
LGW-16	08:40	0.0	0.0	0.0	0.0	20.0	0.6
60		0.0	0.0	0.0	0.0	19.9	0.6
120		0.0	0.0	0.0	0.0	19.9	0.6
300		0.0	0.0	0.0	0.0	19.9	0.7
LGW-17	08:34	0.0	0.0	0.0	0.0	19.6	0.9
60		0.0	0.0	0.0	0.0	19.3	1.0
120		0.0	0.0	0.0	0.0	19.0	1.3
300		0.0	0.0	0.0	0.0	18.4	1.6
LGW-18	08:27	0.0	0.0	0.0	0.0	20.1	0.5
60		0.0	0.0	0.0	0.0	20.1	0.5
120		0.0	0.0	0.0	0.0	20.0	0.6
300		0.0	0.0	0.0	0.0	18.3	2.0
LGW-19	08:20	0.0	0.0	0.0	0.0	13.5	6.3
60		0.0	0.0	0.0	0.0	12.7	6.8
120		0.0	0.0	0.0	0.0	12.6	6.8
300		0.0	0.0	0.0	0.0	12.6	6.8
LGW-20	08:13	0.0	0.0	0.0	0.0	16.5	4.3
60		0.0	0.0	0.0	0.0	15.7	4.5
120		0.0	0.0	0.0	0.0	15.6	4.4
300		0.0	0.0	0.0	0.0	17.6	4.5
LGW-21	12:10	0.0	0.0	0.0	0.0	20.8	0.3
60		0.0	0.0	0.0	0.0	20.7	0.3
120		0.0	0.0	0.0	0.0	20.7	0.2
300		0.0	0.0	0.0	0.0	20.5	0.4
LGW-22	11:58	0.0	0.0	0.0	0.0	21.5	0.0
60		0.0	0.0	0.0	0.0	21.5	0.0
120		0.0	0.0	0.0	0.0	21.5	0.0
300		0.0	0.0	0.0	0.0	21.5	0.0
LGW-23	11:48	0.0	0.0	0.0	0.0	21.5	0.0
60		0.0	0.0	0.0	0.0	21.5	0.0
120		0.0	0.0	0.0	0.0	21.5	0.0
300		0.0	0.0	0.0	0.0	21.5	0.0
LGW-24	11:37	0.0	0.0	0.0	0.0	19.1	1.1
60		0.0	0.0	0.0	0.0	18.9	1.2
120		0.0	0.0	0.0	0.0	18.7	1.3
300		0.0	0.0	0.0	0.0	17.9	1.7
LGW-24 Dup	12:19	0.0	0.0	0.0	0.0	18.7	0.9
60		0.0	0.0	0.0	0.0	18.0	1.3
120		0.0	0.0	0.0	0.0	17.5	1.7
300		0.0	0.0	0.0	0.0	17.4	1.7
LGW-25	11:22	0.0	0.0	0.0	0.0	19.2	0.9
60		0.0	0.0	0.0	0.0	18.7	1.1
120		0.0	0.0	0.0	0.0	18.2	1.2
300		0.0	0.0	0.0	0.0	16.9	1.6

SAMPLING DATA

Location Seconds	Start Time	Methane %	PID ppm	LeL %	H2S ppm	O2 %	CO2 %
LGW-26	11:14	0.0	0.0	0.0	0.0	21.0	0.1
60		0.0	0.0	0.0	0.0	21.3	0.0
120		0.0	0.0	0.0	0.0	21.3	0.0
300		0.0	0.0	0.0	0.0	21.4	0.0
LGW-27	Buried by equipment						
LGW-28	10:52	0.0	0.0	0.0	0.0	19.1	0.8
60		0.0	0.0	0.0	0.0	18.5	0.7
120		0.0	0.0	0.0	0.0	19.8	0.3
300		0.0	0.0	0.0	0.0	20.9	0.1
LGW-29	10:45	0.0	0.0	0.0	0.0	20.0	0.9
60		0.0	0.0	0.0	0.0	20.4	0.6
120		0.0	0.0	0.0	0.0	20.7	0.3
300		0.0	0.0	0.0	0.0	20.9	0.2
Ambient	8:11	0.0	0.0	0.0	0.0	20.9	0.1
Ambient	10:00	0.0	0.0	0.0	0.0	20.9	0.1
Ambient	11:12	0.0	0.0	0.0	0.0	20.9	0.1
Ambient	12:28	0.0	0.0	0.0	0.0	20.9	0.1

Leominster Landfill
September 13, 2023
Calibration For 2001-10 Sensor

Address	Time	Lamp Color	Time to RED	Time to Green	Proper Calibration	Comments
492 Mechanic Street	12:13	Green	38	17	Yes	
502 Mechanic Street	13:40	Green				No access to rental unit
510 Mechanic Street	13:34	Green	15	22	Yes	
521 Mechanic Street	14:27	Green	22	28	Yes	
549 Mechanic Street	14:31	Green	28	32	Yes	New sensor dropped off on porch no answer
561 Mechanic Street	12:41	Green	8	40	Yes	Unplugged on arrival misunderstood letter unplugged this am
567 Mechanic Street	12:38	Green	5	34	Yes	Unplugged on arrival calibrated after wram up.
577 Mechanic Street	12:05	Green	23	40	Yes	
589 Mechanic Street	11:58	Green	12	35	Yes	
7 St.Cecelia Street	15:25	Green	29	33	Yes	Resident not home left repalcment sensor in the mail box.
8A St.Cecelia Street	14:45	Green	15	27	Yes	
627 Mechanic Street	14:40	Green	16	28	Yes	
633 Mechanic Street	15:30	Green	26	29	Yes	resident not home and did not leave out meter left a new meter instead of cal on old sensor
639 Mechanic Street	11:50	Green	21	18	Yes	
645 Mechanic Street	11:45	Green	30	12	Yes	New sensor left on the porch

Calibration Gas concentration 5000 ppm

All times in seconds

Apply calibration gas if alarm sounds and light turns red within 1 miunte syetem OK

Shut off calibration gas if alarm stops and light truns green within 1 minute system OK.

If sensor does not responde as above adjust response pot until proper calibration achieved.

TABLE 1

Monitoring Well Measurements Leominster Landfill Third Quarter 2023			
Well ID	Date	Water Depth	Ref Point
MW-1	9/13/23	25.98	TOC
MW-2S	9/13/23	16.10	TOC
MW-2D	9/13/23	16.53	TOC
MW-3	9/13/23	11.02	TOC
MW-4	9/13/23	11.50	TOC
MW-5S	9/13/23	7.25	TOC
MW-5D	9/13/23	7.41	TOC
MW-6	9/13/23	23.87	TOC
MW-7S	9/13/23	40.10	TOC
MW-7D	9/13/23	40.26	TOC

TPC: Top of Protective Casing

TOC: Top of Casing

CNM: Could not measure

CNL: could not locate

Geological Field Services, Inc.
Well Development/Sampling Data

Project ID: 97117
Location: Leominster LF
Sampler: Rm
Weather: OVERCAST Humid

Well Number: MW-3
Date: 9-13-27
Time: 755

Protective Casing Present ☒ Y ☐ N
Protective Casing Locked ☒ Y ☐ N
Cap on Well Riser ☒ Y ☐ N
Physical Damage Y ☒ N

Cement Pad Present ☒ Y ☐ N
Standing Water Y ☒ N
Visible Heaving Y ☒ N
Visible Subsidence Y ☒ N

Comment: _____

Depth to Water: 11.02
Depth to Product: _____
Total Depth: 27.13
Water Column: 26.08

Type of Protective Casing: RB SU
Measuring Point: TOC TPC
Well Volume: 4.27

Development/Purge Device: TUBAH

Time 24 Hrs.	Temp Celsius	D.O. mg/L	S.C. umhos/cm	pH su units	Purge gal.
755	13.4	4.24	942	8.15	6
757	13.1	2.61	1021	6.59	4
800	13.6	1.51	1015	6.31	8
804	13.5	1.53	1106	6.26	13

Color: TAY
Odor: Swampy
Sheen: Y ☒ N
Turbidity: L M ☒ VH

Volume Purged: 175
Duration: 13 gl

Comment: _____

Sample Collection

Date: 9/13/2027 Time: 805

Remarks: _____

Signature of Sampler: R

Geological Field Services, Inc.
Well Development/Sampling Data

Project ID: 97117
Location: Leominster LF
Sampler: RM
Weather: overcast to humid

Well Number: MW-4
Date: 9.13.23
Time: 812

Protective Casing Present ☒ Y ☐ N
Protective Casing Locked ☒ Y ☐ N
Cap on Well Riser ☒ Y ☐ N
Physical Damage Y ☒ N

Cement Pad Present ☒ Y ☐ N
Standing Water Y ☒ N
Visible Heaving Y ☒ N
Visible Subsidence Y ☒ N

Comment: _____

Depth to Water: 11.50
Depth to Product: _____
Total Depth: 69.00
Water Column: 57.5

Type of Protective Casing: ☒ RB ☒ SU
Measuring Point: ☒ TOC ☐ TPC
Well Volume: 9.47

Development/Purge Device: 1244 tubalt

Time 24 Hrs.	Temp Celsius	D.O. mg/L	S.C. umhos/cm	pH su units	Purge gal.
812	12.6	4.2	501.5	6.59	2
822	13.0	1.39	268.6	7.15	9.5
832	13.2	1.44	289.5	7.06	19
842	14.5	1.80	182.1	7.08	28.5

Color: clear
Odor: NO
Sheen: Y ☒ N
Turbidity: ☒ 0 M H VH

Volume Purged: 28.5 gal
Duration: 20m

Comment: _____

Sample Collection

Date: 9.13 / 2023

Time: 843

Remarks: _____

Signature of Sampler: _____

Geological Field Services, Inc.
Well Development/Sampling Data

Project ID: 97117
Location: Leominster LF
Sampler: RM
Weather: overcast

Well Number: MW-5S
Date: 9-13-23
Time: 940 930

Protective Casing Present (Y) N
Protective Casing Locked (Y) N
Cap on Well Riser (Y) N
Physical Damage Y (N)

Cement Pad Present (Y) N
Standing Water Y (N)
Visible Heaving Y (N)
Visible Subsidence Y (N)

Comment: _____

Depth to Water: 7.25
Depth to Product: -
Total Depth: 15.61
Water Column: 8.36

Type of Protective Casing: RB (SU)
Measuring Point: (TOC) TPC
Well Volume: 1.37

Development/Purge Device: TubAF

Time	Temp	D.O.	S.C.	pH	Purge
24 Hrs.	Celsius	mg/L	umhos/cm	su units	gal.
<u>930</u>	<u>13.1</u>	<u>4.2</u>	<u>612</u>	<u>6.89</u>	<u>0</u>
<u>935</u>	<u>12.6</u>	<u>3.9</u>	<u>611</u>	<u>7.05</u>	<u>1.4</u>
<u>940</u>	<u>12.9</u>	<u>3.8</u>	<u>621</u>	<u>7.16</u>	<u>2.8</u>
<u>945</u>	<u>13.1</u>	<u>2.6</u>	<u>606</u>	<u>7.12</u>	<u>4.2</u>

Color: Brown
Odor: None
Sheen: Y (N)
Turbidity: L (M) H VH

Volume Purged: 4.2 gal
Duration: 15 min

Comment: _____

Sample Collection

Date: 9/13/2023 Time: 955 945

Remarks: RM

Signature of Sampler: _____

Geological Field Services, Inc.
Well Development/Sampling Data

Project ID: 97117
Location: Leominster LF
Sampler: RM
Weather: Overcast

Well Number: MW-5D
Date: 9-13-27
Time: 950

Protective Casing Present ☒ Y ☐ N
Protective Casing Locked ☒ Y ☐ N
Cap on Well Riser ☒ Y ☐ N
Physical Damage ☐ Y ☒ N

Cement Pad Present ☒ Y ☐ N
Standing Water ☐ Y ☒ N
Visible Heaving ☐ Y ☒ N
Visible Subsidence ☐ Y ☒ N

Comment: _____

Depth to Water: 7.41 / 7.41
Depth to Product: -
Total Depth: 48.51
Water Column: 41.11

Type of Protective Casing: RB ☒ SU
Measuring Point: TOE ☒ TPC

Well Volume: 617

Development/Purge Device: JUBA II

Time 24 Hrs.	Temp Celsius	D.O. mg/L	S.C. umhos/cm	pH su units	Purge gal.
950 1000	11.9	3.06	613	7.23	0
1000	12.1	2.01	601	7.21	6.7
1010	12.5	2.89	598	7.21	13.4
1020	12.6	2.51	576	7.41	20.1

Color: GRAY
Odor: NONE
Sheen: ☐ Y ☒ N
Turbidity: ☐ L ☐ M ☒ H ☐ VH

Volume Purged: 20.1
Duration: 3m

Comment: _____

Sample Collection

Date: 9/14/2023

Time: 1020

Remarks: _____

Signature of Sampler: _____

Geological Field Services, Inc.
Well Development/Sampling Data

Project ID: 97117
Location: Leominster LF
Sampler: RM
Weather: Overcast 70F

Well Number: SW-1
Date: 9-14-27
Time: 1035

Protective Casing Present ~~Y~~ N
Protective Casing Locked ~~Y~~ N
Cap on Well Riser ~~Y~~ N
Physical Damage ~~Y~~ N

Cement Pad Present ~~Y~~ N
Standing Water ~~Y~~ N
Visible Heaving ~~Y~~ N
Visible Subsidence ~~Y~~ N

Comment: _____

Depth to Water: _____
Depth to Product: _____
Total Depth: _____
Water Column: _____

Type of Protective Casing: ~~RB~~ SU
Measuring Point: ~~TOC~~ TPC
Well Volume: _____

Development/Purge Device: _____

Time 24 Hrs.	Temp Celsius	D.O. mg/L	S.C. umhos/cm	pH su units	Purge gal.
1040	17.1	7.40	269.3	7.57	✓

Color: Clean
Odor: None
Sheen: Y ~~(N)~~
Turbidity: ~~(L)~~ M H VH

Volume Purged: ✓
Duration: _____

Comment: _____

Sample Collection

Date: 9/14/2021

Time: 1035



APPENDIX B: LABORATORY ANALYTICAL DATA PACKAGE



ANALYTICAL REPORT

Lab Number:	L2353540
Client:	Woodard & Curran 40 Shattuck Road Suite 110 Andover, MA 01810
ATTN:	Kendra Dow
Phone:	(866) 702-6371
Project Name:	MECHANIC STREET LANDFILL
Project Number:	Not Specified
Report Date:	09/28/23

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

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508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2353540-01	MW-3	WATER	LEOMINSTER, MA	09/13/23 08:05	09/14/23
L2353540-02	MW-4	WATER	LEOMINSTER, MA	09/13/23 08:43	09/14/23
L2353540-03	MW-5S	WATER	LEOMINSTER, MA	09/13/23 09:45	09/14/23
L2353540-04	MW-5D	WATER	LEOMINSTER, MA	09/13/23 10:20	09/14/23
L2353540-05	SW-1	WATER	LEOMINSTER, MA	09/13/23 10:35	09/14/23
L2353540-06	TRIP BLANK	WATER	LEOMINSTER, MA	09/13/23 00:00	09/14/23

Project Name: MECHANIC STREET LANDFILL

Lab Number: L2353540

Project Number: Not Specified

Report Date: 09/28/23

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

Case Narrative (continued)

MCP Related Narratives

Volatile Organics

L2353540-01 through -06: Initial calibration utilized a quadratic fit for: bromoform

In reference to question H:

L2353540-01 through -06: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0036)

Average Response Factor: 1,4-dioxane

L2353540-01 through -06: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. Associated results are considered to be biased high if the %D is negative and biased low if the %D is positive. A copy of the continuing calibration standard is included as an addendum to this report.

Non MCP Related Narratives

Solids, Total Dissolved

The WG1829516-3 Laboratory Duplicate RPD for solids, total dissolved (15%), performed on L2353540-03, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

Sample Receipt

In reference to question H:

A Matrix Spike was not submitted for the analysis of Total Metals.

***THIS NARRATIVE FOR SOIL/SEDIMENT (matrix 3) ONLY -- AND THE FOLLOWING IF APPLICABLE**

Hexavalent Chromium, Total Cyanide, Physiologically Available Cyanide

In reference to question I:

Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

Case Narrative (continued)

All samples were analyzed for a subset of MCP analytes per client request.

In reference to question G:

[samp]: One or more of the target analytes did not achieve the requested CAM reporting limits.

Volatile Organics

JACK2 MCP-21 (09/13/23) -- ICAL RF/QUAD FIT/ICV COMBO Curve reviewed: KJD (09/14/23)

MCP-8260-21-E L2353540-01 through -05: Initial calibration utilized a quadratic fit for: bromoform

In reference to question H:

L2353540-01 through -05: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0036)

Average Response Factor: 1,4-dioxane

Verification: NONE

L2353540-01 through -05: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. Associated results are considered to be biased high if the %D is negative and biased low if the %D is positive. A copy of the continuing calibration standard is included as an addendum to this report.

LAB NOTE

Lowest Cal Standard: NONE

Average RF: NONE

Quadratic fit: NONE

Verification: NONE

END LAB NOTE

Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

Case Narrative (continued)

Solids, Total Dissolved

The WG1829516-3 Laboratory Duplicate RPD for solids, total dissolved (15%), performed on L2353540-03, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Cristin Walker

Title: Technical Director/Representative

Date: 09/28/23

QC OUTLIER SUMMARY REPORT

Project Name: MECHANIC STREET LANDFILL

Lab Number: L2353540

Project Number: Not Specified

Report Date: 09/28/23

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
General Chemistry - Westborough Lab								
2540C	Batch QC (L2353540-03)	WG1829516-3	Solids, Total Dissolved	Duplicate	15	10	03-05	non-directional bias

ORGANICS

VOLATILES

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-01
 Client ID: MW-3
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 08:05
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 14,504.1
 Analytical Date: 09/26/23 15:46
 Analyst: JKH

Extraction Method: EPA 504.1
 Extraction Date: 09/26/23 12:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	A

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-01
 Client ID: MW-3
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 08:05
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 141,8260D
 Analytical Date: 09/25/23 15:41
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	10		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-01
 Client ID: MW-3
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 08:05
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	1.6		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	6.9		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-01

Date Collected: 09/13/23 08:05

Client ID: MW-3

Date Received: 09/14/23

Sample Location: LEOMINSTER, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	113		70-130

Project Name: MECHANIC STREET LANDFILL**Project Number:** Not Specified**Lab Number:** L2353540**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-02
Client ID: MW-4
Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 08:43
Date Received: 09/14/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 09/26/23 16:51
Analyst: JKH

Extraction Method: EPA 504.1
Extraction Date: 09/26/23 12:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	A

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-02
 Client ID: MW-4
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 08:43
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 141,8260D
 Analytical Date: 09/25/23 16:23
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-02
Client ID: MW-4
Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 08:43
Date Received: 09/14/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS****Lab ID:** L2353540-02**Date Collected:** 09/13/23 08:43**Client ID:** MW-4**Date Received:** 09/14/23**Sample Location:** LEOMINSTER, MA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	112		70-130

Project Name: MECHANIC STREET LANDFILL**Project Number:** Not Specified**Lab Number:** L2353540**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-03
 Client ID: MW-5S
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 09:45
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 14,504.1
 Analytical Date: 09/26/23 16:59
 Analyst: JKH

Extraction Method: EPA 504.1
 Extraction Date: 09/26/23 12:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	A

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-03
 Client ID: MW-5S
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 09:45
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 141,8260D
 Analytical Date: 09/25/23 17:05
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-03
Client ID: MW-5S
Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 09:45
Date Received: 09/14/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS****Lab ID:** L2353540-03**Date Collected:** 09/13/23 09:45**Client ID:** MW-5S**Date Received:** 09/14/23**Sample Location:** LEOMINSTER, MA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	115		70-130

Project Name: MECHANIC STREET LANDFILL**Project Number:** Not Specified**Lab Number:** L2353540**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-04
 Client ID: MW-5D
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 10:20
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 14,504.1
 Analytical Date: 09/26/23 17:07
 Analyst: JKH

Extraction Method: EPA 504.1
 Extraction Date: 09/26/23 12:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	A

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-04
 Client ID: MW-5D
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 10:20
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 141,8260D
 Analytical Date: 09/25/23 17:47
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS****Lab ID:** L2353540-04**Date Collected:** 09/13/23 10:20**Client ID:** MW-5D**Date Received:** 09/14/23**Sample Location:** LEOMINSTER, MA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS****Lab ID:** L2353540-04**Date Collected:** 09/13/23 10:20**Client ID:** MW-5D**Date Received:** 09/14/23**Sample Location:** LEOMINSTER, MA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	116		70-130

Project Name: MECHANIC STREET LANDFILL**Project Number:** Not Specified**Lab Number:** L2353540**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-05
 Client ID: SW-1
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 10:35
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 14,504.1
 Analytical Date: 09/26/23 17:15
 Analyst: JKH

Extraction Method: EPA 504.1
 Extraction Date: 09/26/23 12:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	A

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-05
 Client ID: SW-1
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 10:35
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 141,8260D
 Analytical Date: 09/25/23 18:29
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-05
Client ID: SW-1
Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 10:35
Date Received: 09/14/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS****Lab ID:** L2353540-05**Date Collected:** 09/13/23 10:35**Client ID:** SW-1**Date Received:** 09/14/23**Sample Location:** LEOMINSTER, MA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	118		70-130

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-06
 Client ID: TRIP BLANK
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 00:00
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 14,504.1
 Analytical Date: 09/26/23 17:23
 Analyst: JKH

Extraction Method: EPA 504.1
 Extraction Date: 09/26/23 12:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	A

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-06
 Client ID: TRIP BLANK
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 00:00
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 141,8260D
 Analytical Date: 09/25/23 12:51
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-06
 Client ID: TRIP BLANK
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 00:00
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS****Lab ID:** L2353540-06**Date Collected:** 09/13/23 00:00**Client ID:** TRIP BLANK**Date Received:** 09/14/23**Sample Location:** LEOMINSTER, MA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	108		70-130

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23

Method Blank Analysis Batch Quality Control

Analytical Method: 141,8260D
 Analytical Date: 09/25/23 11:26
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-06 Batch: WG1831866-5					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.40	--
cis-1,3-Dichloropropene	ND		ug/l	0.40	--
1,3-Dichloropropene, Total	ND		ug/l	0.40	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23

Method Blank Analysis Batch Quality Control

Analytical Method: 141,8260D
 Analytical Date: 09/25/23 11:26
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-06 Batch: WG1831866-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene, Total	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
Methyl ethyl ketone	ND		ug/l	5.0	--
Methyl isobutyl ketone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 09/25/23 11:26
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-06 Batch: WG1831866-5					
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Diethyl ether	ND		ug/l	2.0	--
Diisopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	110		70-130

Project Name: MECHANIC STREET LANDFILL**Project Number:** Not Specified**Lab Number:** L2353540**Report Date:** 09/28/23**Method Blank Analysis**
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 09/26/23 14:02
Analyst: JKH

Extraction Method: EPA 504.1
Extraction Date: 09/26/23 12:42

Parameter	Result	Qualifier	Units	RL	MDL
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1832069-1					
1,2-Dibromoethane	ND		ug/l	0.010	-- A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	-- A

Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 09/26/23 16:18
Analyst: JKH

Extraction Method: EPA 504.1
Extraction Date: 09/26/23 12:42

Parameter	Result	Qualifier	Units	RL	MDL
Microextractables by GC - Westborough Lab for sample(s): 02-06 Batch: WG1832072-1					
1,2-Dibromoethane	ND		ug/l	0.010	-- A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	-- A

Lab Control Sample Analysis

Batch Quality Control

Project Name: MECHANIC STREET LANDFILL

Project Number: Not Specified

Lab Number: L2353540

Report Date: 09/28/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-06 Batch: WG1831866-3 WG1831866-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	120		110		70-130	9		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	110		110		70-130	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	96		94		70-130	2		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	100		99		70-130	1		20
Chlorobenzene	100		100		70-130	0		20
Trichlorofluoromethane	110		110		70-130	0		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	110		110		70-130	0		20
Bromodichloromethane	110		110		70-130	0		20
trans-1,3-Dichloropropene	96		97		70-130	1		20
cis-1,3-Dichloropropene	99		100		70-130	1		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	92		94		70-130	2		20
1,1,2,2-Tetrachloroethane	100		100		70-130	0		20
Benzene	110		110		70-130	0		20
Toluene	110		100		70-130	10		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	120		120		70-130	0		20
Bromomethane	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: MECHANIC STREET LANDFILL

Project Number: Not Specified

Lab Number: L2353540

Report Date: 09/28/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-06 Batch: WG1831866-3 WG1831866-4								
Vinyl chloride	120		120		70-130	0		20
Chloroethane	120		130		70-130	8		20
1,1-Dichloroethene	110		110		70-130	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	100		98		70-130	2		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	99		97		70-130	2		20
Methyl tert butyl ether	92		94		70-130	2		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	100		110		70-130	10		20
1,2,3-Trichloropropane	100		100		70-130	0		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	99		100		70-130	1		20
Acetone	93		100		70-130	7		20
Carbon disulfide	120		120		70-130	0		20
Methyl ethyl ketone	87		92		70-130	6		20
Methyl isobutyl ketone	89		92		70-130	3		20
2-Hexanone	89		88		70-130	1		20
Bromochloromethane	100		110		70-130	10		20
Tetrahydrofuran	84		86		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: MECHANIC STREET LANDFILL

Project Number: Not Specified

Lab Number: L2353540

Report Date: 09/28/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-06 Batch: WG1831866-3 WG1831866-4								
2,2-Dichloropropane	100		100		70-130	0		20
1,2-Dibromoethane	95		96		70-130	1		20
1,3-Dichloropropane	99		100		70-130	1		20
1,1,1,2-Tetrachloroethane	96		98		70-130	2		20
Bromobenzene	98		96		70-130	2		20
n-Butylbenzene	100		100		70-130	0		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	100		99		70-130	1		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	110		100		70-130	10		20
1,2-Dibromo-3-chloropropane	99		94		70-130	5		20
Hexachlorobutadiene	94		90		70-130	4		20
Isopropylbenzene	100		99		70-130	1		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	92		90		70-130	2		20
n-Propylbenzene	100		100		70-130	0		20
1,2,3-Trichlorobenzene	93		92		70-130	1		20
1,2,4-Trichlorobenzene	91		89		70-130	2		20
1,3,5-Trimethylbenzene	100		100		70-130	0		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
Diethyl ether	100		100		70-130	0		20
Diisopropyl Ether	100		100		70-130	0		20
Ethyl-Tert-Butyl-Ether	89		89		70-130	0		20

Lab Control Sample Analysis**Batch Quality Control****Project Name:** MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-06 Batch: WG1831866-3 WG1831866-4								
Tertiary-Amyl Methyl Ether	90		90		70-130	0		20
1,4-Dioxane	96		106		70-130	10		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	94		96		70-130
Toluene-d8	99		101		70-130
4-Bromofluorobenzene	102		100		70-130
Dibromofluoromethane	101		102		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: MECHANIC STREET LANDFILL

Project Number: Not Specified

Lab Number: L2353540

Report Date: 09/28/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab Associated sample(s): 01 Batch: WG1832069-2									
1,2-Dibromoethane	104		-		70-130	-			A
1,2-Dibromo-3-chloropropane	98		-		70-130	-			A

Lab Control Sample Analysis

Batch Quality Control

Project Name: MECHANIC STREET LANDFILL

Project Number: Not Specified

Lab Number: L2353540

Report Date: 09/28/23

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits	<i>Column</i>
Microextractables by GC - Westborough Lab Associated sample(s): 02-06 Batch: WG1832072-2									
1,2-Dibromoethane	105		-		70-130	-			A
1,2-Dibromo-3-chloropropane	99		-		70-130	-			A

Matrix Spike Analysis

Batch Quality Control

Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>	<i>Column</i>
Microextractables by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1832069-3 QC Sample: L2354786-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.25	0.264	105		-	-		65-135	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.25	0.231	92		-	-		65-135	-		20	A
1,2,3-Trichloropropane	ND	0.25	0.268	107		-	-		65-135	-		20	A

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>	<i>Column</i>
Microextractables by GC - Westborough Lab Associated sample(s): 02-06 QC Batch ID: WG1832072-3 QC Sample: L2353806-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.249	0.262	105		-	-		65-135	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.249	0.253	102		-	-		65-135	-		20	A
1,2,3-Trichloropropane	ND	0.249	0.278	112		-	-		65-135	-		20	A

SEMIVOLATILES

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-01
 Client ID: MW-3
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 08:05
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water
 Analytical Method: 141,8270E-SIM
 Analytical Date: 09/22/23 12:32
 Analyst: TPR

Extraction Method: EPA 3510C
 Extraction Date: 09/20/23 15:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	0.392		ug/l	0.142	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	34			15-110		

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-02
 Client ID: MW-4
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 08:43
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water
 Analytical Method: 141,8270E-SIM
 Analytical Date: 09/22/23 12:53
 Analyst: TPR

Extraction Method: EPA 3510C
 Extraction Date: 09/20/23 15:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.136	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	39			15-110		

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-03
 Client ID: MW-5S
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 09:45
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 141,8270E-SIM
 Analytical Date: 09/22/23 13:14
 Analyst: TPR

Extraction Method: EPA 3510C
 Extraction Date: 09/20/23 15:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.136	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	31			15-110		

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-04
 Client ID: MW-5D
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 10:20
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 141,8270E-SIM
 Analytical Date: 09/22/23 13:35
 Analyst: TPR

Extraction Method: EPA 3510C
 Extraction Date: 09/20/23 15:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.136	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	29			15-110		

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS**

Lab ID: L2353540-05
 Client ID: SW-1
 Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 10:35
 Date Received: 09/14/23
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 141,8270E-SIM
 Analytical Date: 09/22/23 15:41
 Analyst: TPR

Extraction Method: EPA 3510C
 Extraction Date: 09/20/23 15:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.136	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	35			15-110		

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**Method Blank Analysis**
Batch Quality Control

Analytical Method: 141,8270E-SIM

Extraction Method: EPA 3510C

Analytical Date: 09/22/23 10:25

Extraction Date: 09/20/23 15:05

Analyst: TPR

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270E-SIM - Mansfield Lab for sample(s): 01-05 Batch: WG1829807-1					
1,4-Dioxane	ND		ug/l	0.150	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	40		15-110

Lab Control Sample Analysis**Batch Quality Control****Project Name:** MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270E-SIM - Mansfield Lab Associated sample(s): 01-05 Batch: WG1829807-2 WG1829807-3								
1,4-Dioxane	113		115		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	38		37		15-110

INORGANICS & MISCELLANEOUS

Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

SAMPLE RESULTS

Lab ID: L2353540-01
Client ID: MW-3
Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 08:05
Date Received: 09/14/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Cyanide, Total	0.005		mg/l	0.005	--	1	09/21/23 10:50	09/21/23 15:38	97,9014	JER
General Chemistry - Westborough Lab										
Alkalinity, Total	225.		mg CaCO3/L	2.00	NA	1	-	09/27/23 10:13	121,2320B	MW
Solids, Total Dissolved	440		mg/l	13	--	1.3	-	09/20/23 04:46	121,2540C	DEW
Chloride	120		mg/l	10	--	10	-	09/27/23 17:10	1,9251	TLH
Nitrogen, Nitrate	ND		mg/l	0.100	--	1	-	09/15/23 03:49	121,4500NO3-F	KAF
Sulfate	ND		mg/l	10	--	1	09/20/23 12:30	09/20/23 12:30	1,9038	MRW
Chemical Oxygen Demand	120		mg/l	20	--	1	09/19/23 11:00	09/19/23 15:41	121,5220D	MRW



Project Name: MECHANIC STREET LANDFILL

Lab Number: L2353540

Project Number: Not Specified

Report Date: 09/28/23

SAMPLE RESULTS

Lab ID: L2353540-02

Date Collected: 09/13/23 08:43

Client ID: MW-4

Date Received: 09/14/23

Sample Location: LEOMINSTER, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	--	1	09/22/23 14:20	09/22/23 16:52	97,9014	JER
General Chemistry - Westborough Lab										
Alkalinity, Total	36.7		mg CaCO3/L	2.00	NA	1	-	09/27/23 10:26	121,2320B	MW
Solids, Total Dissolved	140		mg/l	13	--	1.3	-	09/20/23 04:46	121,2540C	DEW
Chloride	36.		mg/l	1.0	--	1	-	09/27/23 17:17	1,9251	TLH
Nitrogen, Nitrate	ND		mg/l	0.100	--	1	-	09/15/23 03:53	121,4500NO3-F	KAF
Sulfate	11.		mg/l	10	--	1	09/20/23 12:30	09/20/23 12:30	1,9038	MRW
Chemical Oxygen Demand	ND		mg/l	20	--	1	09/19/23 11:00	09/19/23 15:41	121,5220D	MRW



Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

SAMPLE RESULTS

Lab ID: L2353540-03
Client ID: MW-5S
Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 09:45
Date Received: 09/14/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	--	1	09/22/23 14:20	09/22/23 16:53	97,9014	JER
General Chemistry - Westborough Lab										
Alkalinity, Total	132.		mg CaCO3/L	2.00	NA	1	-	09/27/23 10:28	121,2320B	MW
Solids, Total Dissolved	220		mg/l	13	--	1.3	-	09/20/23 04:45	121,2540C	DEW
Chloride	5.7		mg/l	1.0	--	1	-	09/27/23 15:33	1,9251	TLH
Nitrogen, Nitrate	ND		mg/l	0.100	--	1	-	09/15/23 03:54	121,4500NO3-F	KAF
Sulfate	18.		mg/l	10	--	1	09/20/23 12:30	09/20/23 12:30	1,9038	MRW
Chemical Oxygen Demand	54.		mg/l	20	--	1	09/19/23 11:00	09/19/23 15:42	121,5220D	MRW



Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**SAMPLE RESULTS****Lab ID:** L2353540-04**Date Collected:** 09/13/23 10:20**Client ID:** MW-5D**Date Received:** 09/14/23**Sample Location:** LEOMINSTER, MA**Field Prep:** Not Specified**Sample Depth:****Matrix:** Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	--	1	09/22/23 14:20	09/22/23 16:54	97,9014	JER
General Chemistry - Westborough Lab										
Alkalinity, Total	44.3		mg CaCO3/L	2.00	NA	1	-	09/27/23 10:32	121,2320B	MW
Solids, Total Dissolved	86.		mg/l	13	--	1.3	-	09/20/23 04:45	121,2540C	DEW
Chloride	18.		mg/l	1.0	--	1	-	09/27/23 15:34	1,9251	TLH
Nitrogen, Nitrate	0.786		mg/l	0.100	--	1	-	09/15/23 03:56	121,4500NO3-F	KAF
Sulfate	12.		mg/l	10	--	1	09/20/23 12:30	09/20/23 12:30	1,9038	MRW
Chemical Oxygen Demand	52.		mg/l	20	--	1	09/19/23 11:00	09/19/23 15:42	121,5220D	MRW



Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

SAMPLE RESULTS

Lab ID: L2353540-05
Client ID: SW-1
Sample Location: LEOMINSTER, MA

Date Collected: 09/13/23 10:35
Date Received: 09/14/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	--	1	09/22/23 14:20	09/22/23 16:55	97,9014	JER
General Chemistry - Westborough Lab										
Alkalinity, Total	169.		mg CaCO3/L	2.00	NA	1	-	09/27/23 10:37	121,2320B	MW
Solids, Total Dissolved	190		mg/l	13	--	1.3	-	09/20/23 04:45	121,2540C	DEW
Chloride	1.7		mg/l	1.0	--	1	-	09/27/23 17:17	1,9251	TLH
Nitrogen, Nitrate	0.469		mg/l	0.100	--	1	-	09/15/23 03:57	121,4500NO3-F	KAF
Sulfate	ND		mg/l	10	--	1	09/24/23 10:30	09/24/23 10:30	1,9038	MRW
Chemical Oxygen Demand	ND		mg/l	20	--	1	09/19/23 11:00	09/19/23 15:42	121,5220D	MRW



Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG1827752-1										
Nitrogen, Nitrate	ND		mg/l	0.100	--	1	-	09/15/23 03:40	121,4500NO3-F	KAF
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG1829129-1										
Chemical Oxygen Demand	ND		mg/l	20	--	1	09/19/23 11:00	09/19/23 15:35	121,5220D	MRW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1829515-1										
Solids, Total Dissolved	ND		mg/l	10	--	1	-	09/20/23 04:46	121,2540C	DEW
General Chemistry - Westborough Lab for sample(s): 03-05 Batch: WG1829516-1										
Solids, Total Dissolved	ND		mg/l	10	--	1	-	09/20/23 04:45	121,2540C	DEW
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1829643-1										
Sulfate	ND		mg/l	10	--	1	09/20/23 12:30	09/20/23 12:30	1,9038	MRW
MCP General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1830189-1										
Cyanide, Total	ND		mg/l	0.005	--	1	09/21/23 10:50	09/21/23 15:11	97,9014	JER
MCP General Chemistry - Westborough Lab for sample(s): 02-05 Batch: WG1830791-1										
Cyanide, Total	ND		mg/l	0.005	--	1	09/22/23 14:20	09/22/23 18:10	97,9014	JER
General Chemistry - Westborough Lab for sample(s): 05 Batch: WG1831254-1										
Sulfate	ND		mg/l	10	--	1	09/24/23 10:30	09/24/23 10:30	1,9038	MRW
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG1832519-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	09/27/23 10:02	121,2320B	MW
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG1832639-1										
Chloride	ND		mg/l	1.0	--	1	-	09/27/23 15:12	1,9251	TLH

Lab Control Sample Analysis

Batch Quality Control

Project Name: MECHANIC STREET LANDFILL

Project Number: Not Specified

Lab Number: L2353540

Report Date: 09/28/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG1827752-2								
Nitrogen, Nitrate	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG1829129-2								
Chemical Oxygen Demand	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1829515-2								
Solids, Total Dissolved	100		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 03-05 Batch: WG1829516-2								
Solids, Total Dissolved	96		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1829643-2								
Sulfate	90		-		90-110	-		
MCP General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1830189-2 WG1830189-3								
Cyanide, Total	102		108		80-120	6		20
MCP General Chemistry - Westborough Lab Associated sample(s): 02-05 Batch: WG1830791-2 WG1830791-3								
Cyanide, Total	103		104		80-120	1		20

Lab Control Sample Analysis**Batch Quality Control****Project Name:** MECHANIC STREET LANDFILL**Project Number:** Not Specified**Lab Number:** L2353540**Report Date:** 09/28/23

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 05 Batch: WG1831254-2					
Sulfate	100	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG1832519-2					
Alkalinity, Total	106	-	90-110	-	10
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG1832639-2					
Chloride	100	-	90-110	-	

Matrix Spike Analysis

Batch Quality Control

Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1827752-4 QC Sample: L2353540-01 Client ID: MW-3												
Nitrogen, Nitrate	ND	4	3.76	94		-	-		83-113	-		17
General Chemistry - Westborough Lab Associated sample(s): 05 QC Batch ID: WG1831254-4 QC Sample: L2353540-05 Client ID: SW-1												
Sulfate	ND	20	23	115		-	-		55-147	-		14
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1832639-4 QC Sample: L2353540-01 Client ID: MW-3												
Chloride	120	20	140	100		-	-		58-140	-		7

Lab Duplicate Analysis

Batch Quality Control

Project Name: MECHANIC STREET LANDFILL

Project Number: Not Specified

Lab Number: L2353540

Report Date: 09/28/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1827752-3 QC Sample: L2353540-01 Client ID: MW-3						
Nitrogen, Nitrate	ND	ND	mg/l	NC		17
General Chemistry - Westborough Lab Associated sample(s): 03-05 QC Batch ID: WG1829516-3 QC Sample: L2353540-03 Client ID: MW-5S						
Solids, Total Dissolved	220	190	mg/l	15	Q	10
General Chemistry - Westborough Lab Associated sample(s): 05 QC Batch ID: WG1831254-3 QC Sample: L2353540-05 Client ID: SW-1						
Sulfate	ND	ND	mg/l	NC		14
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1832639-3 QC Sample: L2353540-01 Client ID: MW-3						
Chloride	120	120	mg/l	0		7

Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Serial_No:09282313:27
Lab Number: L2353540
Report Date: 09/28/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler **Custody Seal**
A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2353540-01A	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-01B	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-01C	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-01D	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)
L2353540-01E	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)
L2353540-01F	Plastic 120ml H2SO4 preserved	A	NA		5.1	Y	Absent		COD-5220(28)
L2353540-01G	Plastic 250ml unpreserved/No Headspace	A	NA		5.1	Y	Absent		ALK-T-2320(14)
L2353540-01H	Plastic 250ml NaOH preserved	A	>12	>12	5.1	Y	Absent		MCP-TCN9014-10(14)
L2353540-01I	Amber 250ml unpreserved	A	NA		5.1	Y	Absent		A2-MCP14DXSIM-PPB-21(7)
L2353540-01J	Amber 250ml unpreserved	A	NA		5.1	Y	Absent		A2-MCP14DXSIM-PPB-21(7)
L2353540-01K	Plastic 500ml unpreserved	A	NA		5.1	Y	Absent		SO4-9038(28),NO3-4500(2),TDS-2540(7)
L2353540-02A	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-02B	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-02C	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-02D	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)
L2353540-02E	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)
L2353540-02F	Plastic 120ml H2SO4 preserved	A	<2	<2	5.1	Y	Absent		COD-5220(28)
L2353540-02G	Plastic 250ml unpreserved/No Headspace	A	NA		5.1	Y	Absent		ALK-T-2320(14)
L2353540-02H	Plastic 250ml NaOH preserved	A	>12	>12	5.1	Y	Absent		MCP-TCN9014-10(14)
L2353540-02I	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		A2-MCP14DXSIM-PPB-21(7)
L2353540-02J	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		A2-MCP14DXSIM-PPB-21(7)
L2353540-02K	Plastic 500ml unpreserved	A	7	7	5.1	Y	Absent		SO4-9038(28),NO3-4500(2),TDS-2540(7)
L2353540-03A	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2353540-03B	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-03C	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-03D	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)
L2353540-03E	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)
L2353540-03F	Plastic 120ml H2SO4 preserved	A	<2	<2	5.1	Y	Absent		COD-5220(28)
L2353540-03G	Plastic 250ml unpreserved/No Headspace	A	NA		5.1	Y	Absent		ALK-T-2320(14)
L2353540-03H	Plastic 250ml NaOH preserved	A	>12	>12	5.1	Y	Absent		MCP-TCN9014-10(14)
L2353540-03I	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		A2-MCP14DXSIM-PPB-21(7)
L2353540-03J	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		A2-MCP14DXSIM-PPB-21(7)
L2353540-03K	Plastic 500ml unpreserved	A	7	7	5.1	Y	Absent		SO4-9038(28),NO3-4500(2),TDS-2540(7)
L2353540-04A	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-04B	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-04C	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-04D	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)
L2353540-04E	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)
L2353540-04F	Plastic 120ml H2SO4 preserved	A	<2	<2	5.1	Y	Absent		COD-5220(28)
L2353540-04G	Plastic 250ml unpreserved/No Headspace	A	NA		5.1	Y	Absent		ALK-T-2320(14)
L2353540-04H	Plastic 250ml NaOH preserved	A	>12	>12	5.1	Y	Absent		MCP-TCN9014-10(14)
L2353540-04I	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		A2-MCP14DXSIM-PPB-21(7)
L2353540-04J	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		A2-MCP14DXSIM-PPB-21(7)
L2353540-04K	Plastic 500ml unpreserved	A	7	7	5.1	Y	Absent		SO4-9038(28),NO3-4500(2),TDS-2540(7)
L2353540-05A	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-05B	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-05C	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-05D	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)
L2353540-05E	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)
L2353540-05F	Plastic 120ml H2SO4 preserved	A	<2	<2	5.1	Y	Absent		COD-5220(28)
L2353540-05G	Plastic 250ml unpreserved/No Headspace	A	NA		5.1	Y	Absent		ALK-T-2320(14)

Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Serial_No:09282313:27
Lab Number: L2353540
Report Date: 09/28/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2353540-05H	Plastic 250ml NaOH preserved	A	>12	>12	5.1	Y	Absent		MCP-TCN9014-10(14)
L2353540-05I	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		A2-MCP14DXSIM-PPB-21(7)
L2353540-05J	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		A2-MCP14DXSIM-PPB-21(7)
L2353540-05K	Plastic 500ml unpreserved	A	7	7	5.1	Y	Absent		SO4-9038(28),NO3-4500(2),TDS-2540(7)
L2353540-06A	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-06B	Vial HCl preserved	A	NA		5.1	Y	Absent		MCP-8260-21(14)
L2353540-06C	Vial HCl preserved	NA	NA			Y	Absent		MCP-8260-21(14)
L2353540-06D	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)
L2353540-06E	Vial Na2S2O3 preserved	A	NA		5.1	Y	Absent		504(14)

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name: MECHANIC STREET LANDFILL**Lab Number:** L2353540**Project Number:** Not Specified**Report Date:** 09/28/23**Footnotes**

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: MECHANIC STREET LANDFILL
Project Number: Not Specified

Lab Number: L2353540
Report Date: 09/28/23

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 14 Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water. EPA/600/4-88/039, Revised July 1991.
- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 141 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA and IIB, November 2021.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Method Blank Summary

Form 4

Volatiles

Client	: Woodard & Curran	Lab Number	: L2353540
Project Name	: MECHANIC STREET LANDFILL	Project Number	:
Lab Sample ID	: WG1831866-5	Lab File ID	: J230925A10
Instrument ID	: JACK2		
Matrix	: WATER	Analysis Date	: 09/25/23 11:26

Client Sample No.	Lab Sample ID	Analysis Date
WG1831866-3LCS	WG1831866-3	09/25/23 09:20
WG1831866-4LCSD	WG1831866-4	09/25/23 10:02
TRIP BLANK	L2353540-06	09/25/23 12:51
MW-3	L2353540-01	09/25/23 15:41
MW-4	L2353540-02	09/25/23 16:23
MW-5S	L2353540-03	09/25/23 17:05
MW-5D	L2353540-04	09/25/23 17:47
SW-1	L2353540-05	09/25/23 18:29

Calibration Verification Summary

Form 7

Volatiles

Client : Woodard & Curran
 Project Name : MECHANIC STREET LANDFILL
 Instrument ID : JACK2
 Lab File ID : J230925A04
 Sample No : WG1831866-2
 Channel :

Lab Number : L2353540
 Project Number :
 Calibration Date : 09/25/23 09:20
 Init. Calib. Date(s) : 09/13/23 09/14/23
 Init. Calib. Times : 08:49 06:31

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	167	0
Dichlorodifluoromethane	0.538	0.535	-	0.6	20	151	0
Chloromethane	0.4	0.495	-	-23.7*	20	189	0
Vinyl chloride	0.612	0.717	-	-17.2	20	174	0
Bromomethane	10	10.408	-	-4.1	20	208	0
Chloroethane	0.423	0.519	-	-22.7*	20	183	0
Trichlorofluoromethane	0.68	0.739	-	-8.7	20	171	0
Ethyl ether	0.19	0.19	-	0	20	169	0
1,1-Dichloroethene	0.375	0.407	-	-8.5	20	165	0
Carbon disulfide	1.064	1.255	-	-18	20	181	0
Freon-113	0.424	0.483	-	-13.9	20	174	0
Acrolein	0.048	0.048	-	0	20	181	0
Methylene chloride	0.389	0.421	-	-8.2	20	175	0
Acetone	0.102	0.095	-	6.9	20	155	0
trans-1,2-Dichloroethene	0.416	0.466	-	-12	20	177	0
Methyl acetate	0.235	0.227	-	3.4	20	153	0
Methyl tert-butyl ether	1.05	0.961	-	8.5	20	154	0
tert-Butyl alcohol	0.033	0.03	-	9.1	20	156	0
Diisopropyl ether	1.081	1.09	-	-0.8	20	167	0
1,1-Dichloroethane	0.725	0.846	-	-16.7	20	177	0
Halothane	0.331	0.373	-	-12.7	20	176	0
Acrylonitrile	0.103	0.109	-	-5.8	20	172	0
Ethyl tert-butyl ether	1.069	0.952	-	10.9	20	153	0
Vinyl acetate	0.629	0.632	-	-0.5	20	187	0
cis-1,2-Dichloroethene	0.451	0.484	-	-7.3	20	170	0
2,2-Dichloropropane	0.654	0.688	-	-5.2	20	168	0
Bromochloromethane	0.208	0.219	-	-5.3	20	165	0
Cyclohexane	0.652	0.709	-	-8.7	20	170	0
Chloroform	0.752	0.842	-	-12	20	181	0
Ethyl acetate	0.3	0.281	-	6.3	20	155	0
Carbon tetrachloride	0.61	0.655	-	-7.4	20	172	0
Tetrahydrofuran	0.112	0.095	-	15.2	20	131	0
Dibromofluoromethane	0.316	0.32	-	-1.3	20	165	0
1,1,1-Trichloroethane	0.668	0.726	-	-8.7	20	170	0
2-Butanone	0.137	0.119	-	13.1	20	150	0
1,1-Dichloropropene	0.545	0.593	-	-8.8	20	175	0
Benzene	1.598	1.717	-	-7.4	20	178	0
tert-Amyl methyl ether	0.993	0.892	-	10.2	20	152	0
1,2-Dichloroethane-d4	0.361	0.339	-	6.1	20	157	0
1,2-Dichloroethane	0.539	0.542	-	-0.6	20	160	0
Methyl cyclohexane	0.747	0.71	-	5	20	165	0
Trichloroethene	0.472	0.476	-	-0.8	20	178	0
Dibromomethane	0.249	0.262	-	-5.2	20	171	0

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Volatiles

Client : Woodard & Curran
 Project Name : MECHANIC STREET LANDFILL
 Instrument ID : JACK2
 Lab File ID : J230925A04
 Sample No : WG1831866-2
 Channel :

Lab Number : L2353540
 Project Number :
 Calibration Date : 09/25/23 09:20
 Init. Calib. Date(s) : 09/13/23 09/14/23
 Init. Calib. Times : 08:49 06:31

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.365	0.394	-	-7.9	20	177	0
2-Chloroethyl vinyl ether	0.203	0.185	-	8.9	20	148	0
Bromodichloromethane	0.524	0.571	-	-9	20	172	0
1,4-Dioxane	0.00363	0.00345*	-	5	20	146	0
cis-1,3-Dichloropropene	0.572	0.566	-	1	20	163	0
Chlorobenzene-d5	1	1	-	0	20	170	0
Toluene-d8	1.141	1.124	-	1.5	20	165	0
Toluene	1.033	1.125	-	-8.9	20	179	0
4-Methyl-2-pentanone	0.116	0.103	-	11.2	20	147	0
Tetrachloroethene	0.46	0.472	-	-2.6	20	171	0
trans-1,3-Dichloropropene	0.536	0.512	-	4.5	20	167	0
Ethyl methacrylate	0.417	0.409	-	1.9	20	155	0
1,1,2-Trichloroethane	0.273	0.272	-	0.4	20	172	0
Chlorodibromomethane	0.413	0.397	-	3.9	20	170	0
1,3-Dichloropropane	0.542	0.537	-	0.9	20	171	0
1,2-Dibromoethane	0.345	0.329	-	4.6	20	167	0
2-Hexanone	0.221	0.197	-	10.9	20	140	0
Chlorobenzene	1.187	1.223	-	-3	20	172	0
Ethylbenzene	2.076	2.187	-	-5.3	20	174	0
1,1,1,2-Tetrachloroethane	0.414	0.398	-	3.9	20	165	0
p/m Xylene	0.905	0.911	-	-0.7	20	174	0
o Xylene	0.864	0.86	-	0.5	20	173	0
Styrene	1.457	1.442	-	1	20	171	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	176	0
Bromoform	10	9.198	-	8	20	164	0
Isopropylbenzene	3.579	3.651	-	-2	20	172	0
4-Bromofluorobenzene	0.738	0.756	-	-2.4	20	176	0
Bromobenzene	0.823	0.809	-	1.7	20	169	0
n-Propylbenzene	4.265	4.468	-	-4.8	20	174	0
1,4-Dichlorobutane	0.847	0.867	-	-2.4	20	171	0
1,1,2,2-Tetrachloroethane	0.681	0.71	-	-4.3	20	177	0
4-Ethyltoluene	3.604	3.744	-	-3.9	20	174	0
2-Chlorotoluene	2.802	2.924	-	-4.4	20	172	0
1,3,5-Trimethylbenzene	3.072	3.249	-	-5.8	20	176	0
1,2,3-Trichloropropane	0.558	0.561	-	-0.5	20	169	0
trans-1,4-Dichloro-2-buten	0.206	0.196	-	4.9	20	161	0
4-Chlorotoluene	2.482	2.638	-	-6.3	20	178	0
tert-Butylbenzene	2.65	2.698	-	-1.8	20	170	0
1,2,4-Trimethylbenzene	2.996	3.089	-	-3.1	20	172	0
sec-Butylbenzene	3.982	4.162	-	-4.5	20	172	0
p-Isopropyltoluene	3.475	3.568	-	-2.7	20	172	0
1,3-Dichlorobenzene	1.723	1.745	-	-1.3	20	174	0
1,4-Dichlorobenzene	1.75	1.735	-	0.9	20	172	0

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Volatiles

Client : Woodard & Curran
 Project Name : MECHANIC STREET LANDFILL
 Instrument ID : JACK2
 Lab File ID : J230925A04
 Sample No : WG1831866-2
 Channel :

Lab Number : L2353540
 Project Number :
 Calibration Date : 09/25/23 09:20
 Init. Calib. Date(s) : 09/13/23 09/14/23
 Init. Calib. Times : 08:49 06:31

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	2.224	2.145	-	3.6	20	172	0
n-Butylbenzene	2.997	3.174	-	-5.9	20	173	0
1,2-Dichlorobenzene	1.598	1.593	-	0.3	20	172	0
1,2,4,5-Tetramethylbenzene	2.989	2.799	-	6.4	20	163	0
1,2-Dibromo-3-chloropropan	0.126	0.124	-	1.6	20	171	0
1,3,5-Trichlorobenzene	1.158	1.134	-	2.1	20	162	0
Hexachlorobutadiene	0.453	0.427	-	5.7	20	162	0
1,2,4-Trichlorobenzene	1.009	0.923	-	8.5	20	153	0
Naphthalene	2.636	2.439	-	7.5	20	157	0
1,2,3-Trichlorobenzene	0.917	0.85	-	7.3	20	157	0

* Value outside of QC limits.





ANALYTICAL REPORT

Lab Number:	L2353696
Client:	Woodard & Curran 40 Shattuck Road Suite 110 Andover, MA 01810
ATTN:	Kendra Dow
Phone:	(866) 702-6371
Project Name:	MECHANIC ST LANDFILL
Project Number:	Not Specified
Report Date:	10/20/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0825), DoD (L2474), FL (E87814), IL (200081), IN (C-MA-04), KY (KY98046), LA (85084), ME (MA00030), MD (350), MI (99110), NJ (MA015), NY (11627), NC (685), OH (CL106), OR (MA-0262), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #525-23-107-88708), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: MECHANIC ST LANDFILL
Project Number: Not Specified

Lab Number: L2353696
Report Date: 10/20/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2353696-01	UPWIND	AIR	LEOMINSTER	09/13/23 13:00	09/14/23
L2353696-02	CENTER	AIR	LEOMINSTER	09/13/23 13:07	09/14/23

Project Name: MECHANIC ST LANDFILL
Project Number: Not Specified

Lab Number: L2353696
Report Date: 10/20/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: MECHANIC ST LANDFILL
Project Number: Not Specified

Lab Number: L2353696
Report Date: 10/20/23

Case Narrative (continued)

Methane in Air

Canisters were released from the laboratory on September 11, 2023.

L2353696-01D and -02D: Prior to sample analysis, the canisters were pressurized with UHP Nitrogen in order to facilitate the transfer of sample to the Gas Chromatograph. The addition of Nitrogen resulted in a dilution of the samples. The reporting limits have been elevated accordingly.

L2353696-01D and -02D: The samples were analyzed with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 10/20/23

QC OUTLIER SUMMARY REPORT

Project Name: MECHANIC ST LANDFILL

Lab Number: L2353696

Project Number: Not Specified

Report Date: 10/20/23

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
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There are no QC Outliers associated with this report.

AIR

Project Name: MECHANIC ST LANDFILL**Lab Number:** L2353696**Project Number:** Not Specified**Report Date:** 10/20/23**SAMPLE RESULTS**

Lab ID: L2353696-01 D

Date Collected: 09/13/23 13:00

Client ID: UPWIND

Date Received: 09/14/23

Sample Location: LEOMINSTER

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Extraction Method:

Analytical Method: 51,3C(M)

Analytical Date: 10/19/23 13:39

Analyst: APR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Dissolved Gases in Air - Mansfield Lab

Methane	1.99		ppmV	1.47	--	1.471
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Project Name: MECHANIC ST LANDFILL**Lab Number:** L2353696**Project Number:** Not Specified**Report Date:** 10/20/23**SAMPLE RESULTS**

Lab ID: L2353696-02 D

Date Collected: 09/13/23 13:07

Client ID: CENTER

Date Received: 09/14/23

Sample Location: LEOMINSTER

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Extraction Method:

Analytical Method: 51,3C(M)

Analytical Date: 10/19/23 14:29

Analyst: APR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
-----------	--------	-----------	-------	----	-----	-----------------

Dissolved Gases in Air - Mansfield Lab

Methane	2.26		ppmV	1.39	--	1.389
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Project Name: MECHANIC ST LANDFILL**Lab Number:** L2353696**Project Number:** Not Specified**Report Date:** 10/20/23**Method Blank Analysis**
Batch Quality Control

Analytical Method: 51,3C(M)
Analytical Date: 10/19/23 09:19
Analyst: APR

Parameter	Result	Qualifier	Units	RL	MDL
Dissolved Gases in Air - Mansfield Lab for sample(s): 01-02 Batch: WG1841879-3					
Methane	ND		ppmV	1.00	--

Lab Control Sample Analysis Batch Quality Control

Project Name: MECHANIC ST LANDFILL

Project Number: Not Specified

Lab Number: L2353696

Report Date: 10/20/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Dissolved Gases in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1841879-2								
Methane	109		-		80-120	-		
Ethene	102		-		80-120	-		
Ethane	108		-		80-120	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: MECHANIC ST LANDFILL

Project Number: Not Specified

Lab Number: L2353696

Report Date: 10/20/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Dissolved Gases in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1841879-4 QC Sample: L2353696-01 Client ID: UPWIND						
Methane	1.99	1.93	ppmV	3		5
Dissolved Gases in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1841879-5 QC Sample: L2353696-02 Client ID: CENTER						
Methane	2.26	2.35	ppmV	4		5

Project Name: MECHANIC ST LANDFILL

Serial_No:10202315:45
Lab Number: L2353696

Project Number:

Report Date: 10/20/23

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2353696-01	UPWIND	02183	Flow 5	09/11/23	436027		-	-	-	Pass	9.0	2.5	113
L2353696-01	UPWIND	2769	2.7L Can	09/11/23	436027	L2328590-02	Pass	-29.7	-1.8	-	-	-	-
L2353696-02	CENTER	0842	Flow 5	09/11/23	436027		-	-	-	Pass	9.0	2.7	108
L2353696-02	CENTER	240	2.7L Can	09/11/23	436027	L2324380-07	Pass	-29.7	-3.8	-	-	-	-

Project Name: MECHANIC ST LANDFILL**Lab Number:** L2353696**Project Number:** Not Specified**Report Date:** 10/20/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

NA Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2353696-01A	Canister - 2.7 Liter	NA	NA			Y	Absent		DISSGAS-AIR(30)
L2353696-02A	Canister - 2.7 Liter	NA	NA			Y	Absent		DISSGAS-AIR(30)

Project Name: MECHANIC ST LANDFILL
Project Number: Not Specified

Lab Number: L2353696
Report Date: 10/20/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: MECHANIC ST LANDFILL
Project Number: Not Specified

Lab Number: L2353696
Report Date: 10/20/23

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: MECHANIC ST LANDFILL
Project Number: Not Specified

Lab Number: L2353696
Report Date: 10/20/23

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: MECHANIC ST LANDFILL
Project Number: Not Specified

Lab Number: L2353696
Report Date: 10/20/23

REFERENCES

- 51 Determination of Carbon Dioxide, Methane, Nitrogen and Oxygen from Stationary Sources. Method 3C. Appendix A, Part 60, 40 CFR (Code of Federal Regulations). June 20, 1996.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 20

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Page 1 of 1

Certification Information**The following analytes are not included in our Primary NELAP Scope of Accreditation:****Westborough Facility****EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B**The following analytes are included in our Massachusetts DEP Scope of Accreditation****Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: **Woodman & Curran**
Address: **90 Shattuck RD Suite 110**
ANDOVER MA 01810
Phone:
Fax:

Email: **KDOW@woodmancurran.com**

☒ These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

Project Information

Project Name: **Mechanic St Landfill**
Project Location: **Leominster**
Project #:
Project Manager: **Kendra Dow**
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: **9/14/23** Time: **10:15**

Date Rec'd in Lab: **9/14/23**

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

ALPHA Job #: **L23S3696**

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Res / Comm

ANALYSIS

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	All Columns Below Must Be Filled Out										TO-15	TO-15 SIM	APH	Fixed Gas	Sulfides & Mercaptans	Sample Comments (i.e. PID)
		COLLECTION					Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller						
		End Date	Start Time	End Time	Initial Vacuum	Final Vacuum											
S3696-01	UPWIND Center	9/13/23	900	1300	29.38	1.80	AA	PM	2.7L	2269	2183			X			
02		9/13/23	907	1307	30.04	4.00	AA	PM	2.7L	240	0842			X			

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

S

Relinquished By:

Date/Time

Received By:

Date/Time:

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



**Woodard
& Curran**

woodardcurran.com