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Memorandum

To	Marie Esten, Tony Silva, Natalie McClaine	Page	1
Project No.	60633277		
Subject	New Bedford Harbor Groundwater Monitoring – September 2020 Summary		

From	Briley Barra
Date	November 6, 2020

Introduction

This Technical Report presents a summary of the groundwater monitoring activities conducted at the Sawyer Street Confined Disposal Facility (CDF) at the New Bedford Harbor Superfund Site (Site) in New Bedford, Massachusetts during the Fall 2020 monitoring period. Field activities were conducted in accordance with the FSP (AECOM, 2020a), Uniform Federal Policy Quality Assurance Project Plan (UFP-QAPP) Addendum Revision 10.2 (AECOM, 2020b), and Accident Prevention Plan (APP) (AECOM, 2020c). No deviations from the FSP, QAPP, or APP were noted.

Field Activity Summary

The six groundwater wells located around the perimeter of the CDF were sampled on September 16, 2020, continuing the monitoring program that has been ongoing since 2001 (Figure 1). Samples were collected in accordance with SOP NBH-W-04, Low Flow Groundwater Sampling, and the EPA Region I Low Stress (flow) Purging and Sampling Groundwater Procedure for the Collection of Groundwater Samples from Monitoring Wells, Rev.4, September 19, 2017 (EPA, 2017). The objective of the monitoring program is to provide data that can be used to evaluate the integrity of the Sawyer Street CDF, as well as assess trends in groundwater concentrations of polychlorinated biphenyls (PCBs) as Aroclors, selected metals (cadmium, chromium, copper, and lead), volatile organic compounds (VOCs), and total suspended solids (TSS). Results from the sampling will be used to support compliance of ongoing remediation activities at the Site.

The Fall groundwater sampling program consisted of sampling the six wells located around the perimeter of the CDF; MW-1, MW-3, MW-4A, MW-5, MW-6, and MW-7A (Figure 1). Prior to the sampling, the CDF wells were screened for headspace using a photoionization detector (PID). Wells were developed in October 2018, so redevelopment of the wells was not included in the scope of work for the 2020 sampling event.

With the exception of MW-3, groundwater was removed from each monitoring well using a bladder pump system and dedicated Teflon bladders and tubing. The riser of MW-3 is offset such that a bladder pump cannot be deployed, so groundwater samples were collected from MW-3 using a peristaltic pump with Teflon tubing. As noted during previous groundwater sampling events, MW-3 appears to have a disconnected riser below the ground surface but above the top of the water

column. No repairs are scheduled for this well at this time. In accordance with low flow sampling protocol, groundwater was slowly purged from each of the wells prior to sampling until it was representative of groundwater within the aquifer. This determination was made by taking successive measurements of water quality parameters (dissolved oxygen [DO], temperature, conductivity, oxidation reduction potential [ORP], pH, and turbidity) to ensure that the groundwater had reached a steady state condition prior to sampling. Groundwater levels were measured throughout the purging of the wells to ensure that drawdown was minimized during the pumping and water was withdrawn from approximately the middle of the well screen or the middle of the water column (if the screened interval was not identifiable). Sampling logs are included as Attachment A.

Upon arrival for sample collection, the water level in each well was measured with a decontaminated water level tape and the well volume was calculated. Decontamination procedures, as described in the FSP (AECOM, 2020a), were followed for the water level tape between wells to remove any potential contaminants. A different, clean bladder pump was used at each monitoring well to prevent cross contamination. The dedicated bladder pump was then connected to the dedicated tubing, placed in the well, and activated for pumping at a low rate. The pumping rate was adjusted intermittently when required to ensure that the drawdown in the well was minimized. In-situ measurements were made using a calibrated YSI® multi-meter with a flow-thru cell, used in accordance with the manufacturer's specifications. The flow-thru cell was disconnected from the discharge line during sample collection.

Certified clean sample containers were provided by the analytical laboratories. Sample bottles were pre-preserved by the analytical lab using a preservative type and volume suitable to the analysis performed. Cross-contamination was avoided by using dedicated bladders and/or tubing in each of the wells. In this way, the water samples never came in contact with a bladder or piece of tubing that had contact with water from any other well.

Representative water samples were collected from each of the wells, and sample integrity was maintained until the samples were received by the analytical laboratories. A Field Replicate was collected from MW-4A. A matrix spike/matric spike duplicate (MS/MSD) sample was collected from MW-5. In addition, an equipment blank was collected off a bladder pump with Teflon bladder and tubing and VOC samples were accompanied by a laboratory prepared trip blank. All samples were sent under chain of custody via courier to Alpha Analytical in Mansfield, Massachusetts.

In situ Water Quality Summary

Prior to sample collection, water quality parameters were measured during the initial purging of groundwater at each well. In situ measurements were made using a Yellow Springs Instruments (YSI®) multi-meter sonde and a flow-through cell. The YSI® sonde was calibrated and used according to the manufacturer's specifications. Once the diagnostic parameters had stabilized, sample collection was initiated. In situ measurements are summarized in Table 1.

Chemistry Water Quality Summary

Chemical analyses were performed according to the project Uniform Federal Policy Quality Assurance Project Plan (UFP-QAPP) Addendum (AECOM, 2020b). Groundwater samples were analyzed for PCBs (as Aroclors), select metals (cadmium, chromium, copper, and lead), VOCs, and TSS. Analyses were performed by Alpha Analytical in Mansfield, Massachusetts.

Sample results are summarized in Table 2 and are compared to the Massachusetts Contingency Plan (MCP) Method 1 Category GW-3 criteria for groundwater that has a potential to discharge to a

surface water body (Massachusetts Department of Environmental Protection [MADEP], 2017). Complete laboratory data packages with test results are provided in Attachment B.

Quality Control

Field and laboratory QC results for the 2020 groundwater survey are summarized below. The types of QC samples used to assess data quality are summarized in Table 3. Data quality was assessed in terms of accuracy/bias and precision. The project QAPP defined the validation levels as Tier 1 Stage 2A (PCB Aroclors, metals and VOC) or Tier 1 Stage 1 (TSS). The data validation was performed using EPA New England Environmental Data Review Supplement for Regional Data Review Elements and Superfund Specific Guidance/Procedures (April 2013), EPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, January 2017, EPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 and criteria listed in the task order QAPP.

The data have been determined to be useable for the purpose of assessing the presence/absence and quantitative concentrations of the analytes in the media tested (groundwater). Results of the validation are summarized in the data validation report provided in Attachment C.

Summary

Monitoring was performed in September 2020 at the Sawyer Street CDF as part of an ongoing groundwater monitoring program. Groundwater levels, water quality parameters, organic contaminants, and metals were monitored and/or analyzed in all six wells at the facility. Concentrations of constituents of concern were either non-detect or were below the applicable MCP GW-3 criteria. Overall, groundwater data collected during the 2020 monitoring suggest that the integrity of the CDF is currently maintained.

References

AECOM, 2020a. Draft Final Groundwater Monitoring Field Sampling Plan. New Bedford Harbor Superfund Site, New Bedford, MA. Draft Final August 2020.

AECOM, 2020b. Draft Final Quality Assurance Project Plan Addendum Revision 10.2. Environmental Monitoring, Sampling, and Analysis. New Bedford Harbor Superfund Site, New Bedford, Massachusetts. August 2020.

AECOM, 2020c. Accident Prevention Plan. Environmental Monitoring, Sampling, and Analysis. New Bedford Harbor Superfund Site, New Bedford, Massachusetts. August 2020.

AECOM, 2019d. New Bedford Harbor Groundwater Monitoring – October 2018 Summary. New Bedford Harbor Superfund Site, New Bedford, Massachusetts.

EPA, 2017. EPA Region I Low Stress (flow) Purging and Sampling Groundwater Procedure for the Collection of Groundwater Samples from Monitoring Wells, Rev. 4, September 19, 2017.

Massachusetts Contingency Plan (MCP), 2017. Method 1 MCP GW-3 standard from 310 CMR 40.0974(2), December 2017.

Figures

N
W E
S

0 50 100 200 Feet

Well Locations

New Bedford Harbor Sawyer Street CDF Groundwater Well Locations

SCALE	DATE	PROJECT NO.
1:1300	11/18	60565200

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Figure Number

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Tables

Table 1. Summary of In Situ Groundwater Data Collected Immediately Prior to Sampling

	Location ID:	MW-1	MW-3	MW-4A	MW-5	MW-6	MW-7A
	Sample ID:	MW01-091620	MW03-091620	MW04A-091620	MW05-091620	MW06-091620	MW07A-091620
	Date:	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020
	Sample Time:	16:10	10:55	12:50/12:55 (FD)	13:10	17:10	15:50
Parameters	**Units**						
Depth to Water	ft	22.02	23.2	15.78	14.23	14.15	11.55
pH	--	7.22	6.72	6.92	7.30	7.20	6.79
Specific Conductivity	µS/cm	541	5847	12620	9418	2594	601
Temperature	°C	17.2	16.8	15.70	16.0	15.2	16.70
DO	mg/L	6.96	2.04	0.02	0.18	0.06	0.07
Turbidity	NTU	2.01	2.80	5.07	4.67	5.05	1.23
ORP	mV	-6.8	-90.6	-335.2	-298.7	-170.8	-39.6
Purge Volume	L	13.0	6.65	9.0	9.0	15.0	13.0
Flow Rate	mL/min	200	100	200	200	300	300
Color/Odor	--	clear/none	clear/petroleum	clear/slight petroleum	clear/none	clear/none	clear/none

Notes:
ft - feet
µS/cm - microsiemens per centimeter
°C - Celsius
mg/L - milligrams per liter
NTU - Nephelometric Turbidity Unit
mV - millivolts
L - liters
mL/min - milliliters per min

Table 2. PCB, Metal, VOC and TSS Groundwater Results with Final Qualifiers, September 2020 Sampling Event

			Location ID:	MW-1	MW-3	MW-4A	MW-4A	MW-5	MW-6	MW-7A	EB-01	TB-01
			Sample ID:	MW-1-091620	MW-3-091620	MW-4A-091620	FD-01-091620	MW-5-091620	MW-6-091620	MW-7A-091620	EB-01-091620	TB-01-091620
			Type:	N	N	N	FD	N	N	N	EB	TB
			Date:	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/14/2020
Analyte	**CAS No.**	**Unit**	**MCP GW-3 (a)**									
Total Suspended Solids (TSS) - 2540D												
Total suspended solids	None	mg/L	--	2.0	24	14	14	13	25	1.0 U	--	--
Metals - 6020B												
Cadmium, Total	7440-43-9	mg/L	4	0.00001 J	< 0.00002 UJ	< 0.00002 UJ	0.00002 UJ	0.00002 UJ	0.00002 UJ	0.00004 J	0.00002 U	--
Chromium, Total	7440-47-3	mg/L	300	0.00158	0.00239 J	0.00101 J	0.00500 UJ	0.00339 J	0.00500 UJ	0.00100 U	0.00100 U	--
Copper, Total	7440-50-8	mg/L	--	0.00490 J	0.00525 J	0.00188 J	0.00128 J	0.00093 J	0.00178 J	0.00407 J	0.00164	
Lead, Total	7439-92-1	mg/L	10	0.00027 J	< 0.00010 UJ	< 0.00010 UJ	0.00010 UJ	0.00010 UJ	0.00010 UJ	0.00010 UJ	0.00005 J	--
Polychlorinated Biphenyls - 8082A												
Aroclor-1016	12674-11-2	µg/L	10	0.020 U	0.023 U	0.020 U	0.018 U	0.018 U	0.018 U	0.019 U	0.019 U	--
Aroclor-1221	11104-28-2	µg/L	10	0.020 U	0.023 U	0.020 U	0.018 U	0.018 U	0.018 U	0.019 U	0.019 U	--
Aroclor-1232	11141-16-5	µg/L	10	0.020 U	0.023 U	0.020 U	0.018 U	0.018 U	0.018 U	0.019 U	0.019 U	--
Aroclor-1242	53469-21-9	µg/L	10	0.020 U	0.023 U	0.020 U	0.018 U	0.018 U	0.018 U	0.019 U	0.019 U	--
Aroclor-1248	12672-29-6	µg/L	10	0.020 U	0.023 U	0.020 U	0.018 U	0.018 U	0.018 U	0.019 U	0.019 U	--
Aroclor-1254	11097-69-1	µg/L	10	0.020 U	0.023 U	0.020 U	0.018 U	0.018 U	0.018 U	0.019 U	0.019 U	--
Aroclor-1260	11096-82-5	µg/L	10	0.020 U	0.023 U	0.020 U	0.018 U	0.018 U	0.018 U	0.019 U	0.019 U	--
Aroclor-1262	37324-23-5	µg/L	10	0.020 U	0.023 U	0.020 U	0.018 U	0.018 U	0.018 U	0.019 U	0.019 U	--
Aroclor-1268	11100-14-4	µg/L	10	0.020 U	0.023 U	0.020 U	0.018 U	0.018 U	0.018 U	0.019 U	0.019 U	--
Total 9 PCB Aroclors	1336-36-3	µg/L	10	0.020 U	0.023 U	0.020 U	0.018 U	0.018 U	0.018 U	0.019 U	0.019 U	--
Volatile Organic Compounds (VOCs) - 8260B												
1,1,1,2-Tetrachloroethane	630-20-6	µg/L	50000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,1-Trichloroethane	71-55-6	µg/L	20000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	50000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	79-00-5	µg/L	50000	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane	75-34-3	µg/L	20000	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene	75-35-4	µg/L	30000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1-Dichloropropene	563-58-6	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2,3-Trichlorobenzene	87-61-6	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2,3-Trichloropropane	96-18-4	µg/L	--	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene	120-82-1	µg/L	50000	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2,4-Trimethylbenzene	95-63-6	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dibromo-3-Chloropropane	96-12-8	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dibromoethane	106-93-4	µg/L	50000	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	95-50-1	µg/L	2000	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichloroethane	107-06-2	µg/L	20000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichloropropane	78-87-5	µg/L	50000	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
1,3,5-Trimethylbenzene	108-67-8	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,3-Dichlorobenzene	541-73-1	µg/L	50000	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,3-Dichloropropane	142-28-9	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,4-Dichlorobenzene	106-46-7	µg/L	8,000	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,4-Dioxane (P-Dioxane)	123-91-1	µg/L	50000	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
2,2-Dichloropropane	594-20-7	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-Butanone	78-93-3	µg/L	50000	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Chlorotoluene	95-49-8	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-Hexanone	591-78-6	µg/L	--	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Chlorotoluene	106-43-4	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
4-Methyl-2-Pentanone	108-10-1	µg/L	50000	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

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			Location ID:	MW-1	MW-3	MW-4A	MW-4A	MW-5	MW-6	MW-7A	EB-01	TB-01
			Sample ID:	MW-1-091620	MW-3-091620	MW-4A-091620	FD-01-091620	MW-5-091620	MW-6-091620	MW-7A-091620	EB-01-091620	TB-01-091620
			Type:	N	N	N	FD	N	N	N	EB	TB
			Date:	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/14/2020
Analyte	**CAS No.**	**Unit**	**MCP GW-3 (a)**									
Acetone	67-64-1	µg/L	50000	5.0 U	2.5 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	71-43-2	µg/L	10000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromobenzene	108-86-1	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromochloromethane	74-97-5	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromodichloromethane	75-27-4	µg/L	50000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	75-25-2	µg/L	50000	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	74-83-9	µg/L	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	75-15-0	µg/L	--	5.0 U	5.0 U	0.43 J	0.67 J	0.44 J	0.39 J	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	56-23-5	µg/L	5000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlorobenzene	108-90-7	µg/L	1000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chloroethane	75-00-3	µg/L	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	67-66-3	µg/L	20000	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Chloromethane	74-87-3	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Cis-1,2-Dichloroethene	156-59-2	µg/L	50000	0.50 U	0.20 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Cis-1,3-Dichloropropene	10061-01-5	µg/L	200	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Di-Isopropyl Ether	108-20-3	µg/L	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dibromochloromethane	124-48-1	µg/L	50000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromoethane	74-95-3	µg/L	--	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane	75-71-8	µg/L	--	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Diethyl Ether	60-29-7	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Ethyl Tertiary-Butyl Ether	637-92-3	µg/L	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	100-41-4	µg/L	5000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Hexachlorobutadiene	87-68-3	µg/L	3000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Isopropylbenzene	98-82-8	µg/L	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Methyl Tert-Butyl Ether	1634-04-4	µg/L	50000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	75-09-2	µg/L	50000	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
N-Butylbenzene	104-51-8	µg/L	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
N-Propylbenzene	103-65-1	µg/L	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Naphthalene	91-20-3	µg/L	20000	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
O-Xylene	95-47-6	µg/L	5000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
P-Isopropyltoluene	99-87-6	µg/L	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
P/M Xylene	179601-23-1	µg/L	5000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Sec-Butylbenzene	135-98-8	µg/L	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Styrene	100-42-5	µg/L	6000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	98-06-6	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Tertiary-Amyl Methyl Ether	994-05-8	µg/L	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	127-18-4	µg/L	30000	0.50 U	2.4	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Tetrahydrofuran	109-99-9	µg/L	--	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	108-88-3	µg/L	40000	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trans-1,2-Dichloroethene	156-60-5	µg/L	50000	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trans-1,3-Dichloropropene	10061-02-6	µg/L	200	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Trichloroethene	79-01-6	µg/L	5000	0.50 U	0.49 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Trichlorofluoromethane	75-69-4	µg/L	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl Chloride	75-01-4	µg/L	50000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Notes:
U - The analyte was not detected.
UJ - The analyte was not detected. The sample detection limit is an estimated value.
J - Estimated value.
µg/L - micrograms per liter
TSS -Total Suspended Solids
PCB - Polychlorinated Biphenyls

VOC - Volatile Organic Compounds
TB = Trip Blank
EB = Equipment Blank
FD = Field Duplicate
MCP = Massachusetts Contingency Plan
(a) Massachusetts Contingency Plan (MCP), Method 1 MCP GW-3 standard from 310 CMR 40.0974(2), December 2017.

Table 3. Summary of the Number of Sample Sets Required for Collection

Analyte	Analytical Method	Field Sample (1 per well)	Field Replicate	MS	MSD	Trip Blank	Equipment Blank	Sample Totals
VOC	EPA 8260	6	1	1	1	1	1	11
PCB Aroclors	EPA 8082	6	1	1	1	0	1	10
Metals	EPA 6020A	6	1	1	1	0	1	10
TSS	EPA 2540D	6	1	0	0	0	0	7

Attachment A

Monitoring Well Sampling Logs

Well ID: MW-1

Low Flow Ground Water Sample Collection Record

Client: USACE Date: 9/16/20 Time: Start 1145 am/pm
Project No: Finish 1315 am/pm
Site Location: New Bedford MA
Weather Conds: Sunny | windy 60s°F Collector(s): H. Jones

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 24.15 c. Length of Water Column 7.51 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 16.64 d. Calculated System Volume (see back) 4.6 L

2. WELL PURGE DATA

a. Purge Method: low flow - bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS	19K100866 / 19K100691
	LaMotte	2020WE	754-101
	Heron	Dipper-T	09588

Time (24hr)	Volume Remove (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1505	1	17.4	7.42	686	1.36	-6.5	5.47	250	17.35	clear
1510	2	16.8	7.19	656	0.59	3.4	3.07	200	18.78	
1515	3	16.9	7.12	644	0.66	5.4	2.77	200	19.10	
1520	4	16.9	7.13	636	0.98	7.7	2.62	200	19.53	
1525	5	16.9	7.20	625	1.96	15.2	2.71	200	19.97	
1530	6	17.2	7.22	619	2.04	15.3	2.67	200	20.31	
1535	7	17.5	7.24	603	2.15	15.8	2.55	200	20.52	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method low flow - bladder

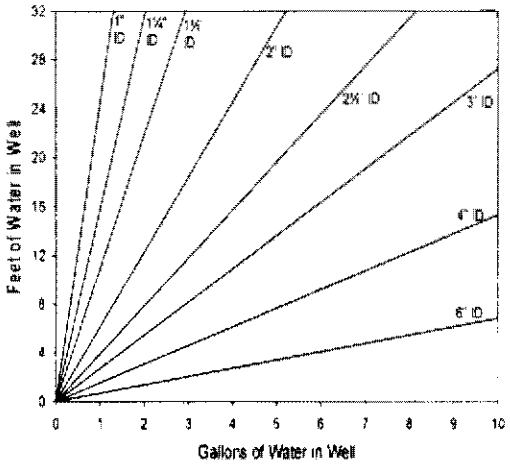
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req	Time
MW-1-091620	3x HCl VOA, 2x 500mL amber, 1x HNO3 250mL poly, 1x 1L poly			VOC, PCBs, select metals, TSS	1610

Comments

Signature Date 9/16/20

MW-1

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1540	8	17.7	7.23	590	3.22	14.6	2.32	200	20.74	clear
1545	9	17.5	7.23	550	5.06	8.4	1.85	200	20.92	
1550	10	17.3	7.21	541	5.64	3.7	2.43	200	21.36	
1555	11	17.3	7.21	538	6.40	-1.0	3.56	200	21.59	
1600	12	17.3	7.21	540	6.70	-2.7	2.03	200	21.86	
1605	13	17.2	7.22	541	6.96	-6.8	2.01	200	22.02	

Well ID: MW-3

Low Flow Ground Water Sample Collection Record

Client: 60633277.08 ↘ Date: 09/16/20 Time: Start 1000 am/pm
Project No: USACE ↙ Finish 1130 am/pm
Site Location: NBH
Weather Conds: SUNNY, 60°F Collector(s): 09/16/20

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 24.50 c. Length of Water Column 10.02 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 14.48 d. Calculated System Volume (see back) 6.19L

2. WELL PURGE DATA

a. Purge Method: Low flow - peristaltic

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

PID = 1.1 ppm

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro DSS	20F101335
Lamotte	2020we	9134-1917
Ion Nacr	T-115150	

Time (24hr)	Volume Remove (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1010	2.0	14.3	6.72	4334	0.37	-126.6	1.87	200	19.2	clear / ~~none~~ petro
1015	2.9	14.7	6.74	4051	0.32	-133.3	2.59	180	19.6	clear / ~~none~~
1020	3.85	15.3	6.62	4025	0.36	-113.3	5.30	150	21.15	clear / ~~none~~
1025	4.15	16.2	6.61	4260	0.58	-103.1	4.37	100	21.80	clear / ~~none~~
1030	4.65	16.8	6.64	4752	1.05	-100.9	4.24	100	22.30	clear / ~~none~~
1035	5.15	17.1	6.67	5273	1.23	-98.1	3.43	100	22.60	clear / petro
1040	5.65	16.8	6.70	5787	1.88	-94.3	3.14	100	22.90	clear / petro

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low flow-peristaltic

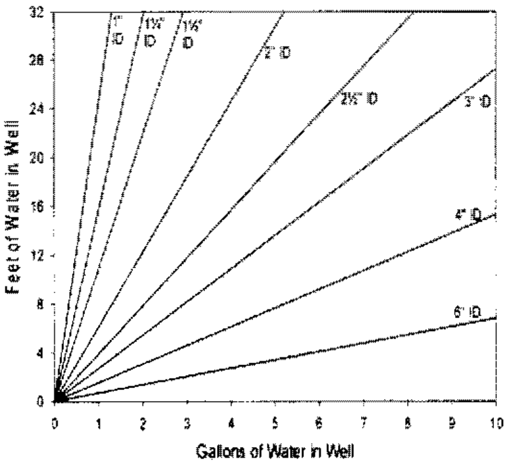
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req	Time
MW-3-091620	1 L Poly	1	NONE	TSS	1055
	500mL amber	2	NONE	PCB	
	250mL Poly	1	HNO_3	Total metals	
	VOA	3	HCl	VOC - 8260	

Comments

Signature Bailey Bassa Date 09/16/20

MW-3

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1045	6.15	16.8	6.7	5854	2.00	-91.9	2.95	100	23.1	clear/petro
1050	6.65	16.8	6.72	5847	2.04	-90.6	2.80	100	23.3	clear/petro

BB 09/16/20

Well ID: MW- 4A

Low Flow Ground Water Sample Collection Record

Client: USACE Date: 09/16/20 Time: Start 1203 am/pm
Project No: 60633277.08 Finish 1315 am/pm
Site Location: NBH
Weather Conds: SUNNY, 60°F Collector(s): B. Barna

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 23.70 c. Length of Water Column 12.42 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 11.28 d. Calculated System Volume (see back) 7.67L

2. WELL PURGE DATA

a. Purge Method: Low flow - Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

PID = 0.8 ppm

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	PRODSS	20F101335
	Lamotte	WAVE	9134-1917
	ION DACK	T-115150	

Time (24hr)	Volume Remove (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1210	3.0	15.0	6.87	12762	0.09	-320.5	6.04	300	15.45	clear/petro Slight
1215	4.0	15.80	6.90	12681	0.05	-325.7	5.75	200	15.55	clear/petro slight
1220	5.0	15.8	6.90	12668	0.05	-325.6	5.90	200	15.62	clear/SI petro
1225	6.0	15.8	6.88	12790	0.03	-326.6	6.93	200	15.70	clear/SI petro
1230	7.0	15.7	6.9	12702	0.03	-329.6	7.55	200	15.70	clear/SI petro
1235	8.0	15.7	6.92	12636	0.02	-332.2	6.97	200	15.75	clear/SI petro
1240	9.0	15.1	6.92	12620	0.02	-335.2	5.07	200	15.78	clear/SI petro

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low flow - Bladder

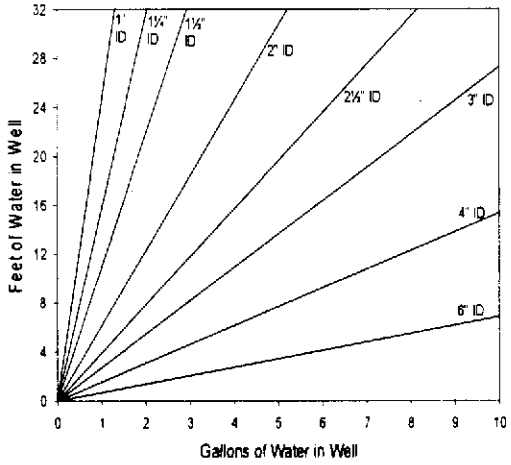
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-4A-091620	1L Poly	1	None	TSS	1250
	500ml Amber	2	None	PCB	
	250ml poly	1	HNO_3	Total metals	
	VOA	3	HCl	VOC 8260	

Comments FD-01-091620 @ 1255

Signature Bailey Barna Date 09/16/20

MW-4A

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

Well ID: MW-5

Low Flow Ground Water Sample Collection Record

Client: USACE Date: 9/16/20 Time: Start 1145 am/pm
Project No: Finish 1315 am/pm
Site Location: New Bedford, MA
Weather Conds: Sunny 65°F Collector(s): H. Jones

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 18.60 c. Length of Water Column 8.39 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 10.21 d. Calculated System Volume (see back) 5.2L PID = 0.3 ppm

2. WELL PURGE DATA

a. Purge Method: bladder pump - low flow

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI Pro DSS		19K100866 / 19K100691
	LaMotte	2020WE	754-1011
	Heron	Dipper-T	095881...

Time (24hr)	Volume Remove (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1225	1	16.6	7.18	9766	1.72	-231.5	11.08	200	11.23	clear
1230	2	16.0	7.20	9706	0.53	-250.3	13.18	200	11.27	↓
1235	3	16.0	7.24	9644	0.63	-278.5	11.01	200	11.91	
1240	4	16.0	7.25	9563	0.57	-284.8	7.61	200	12.38	
1245	5	16.1	7.28	9436	0.28	-290.4	7.63	200	12.61	
1250	6	16.0	7.29	9406	0.20	-293.2	5.01	200	13.26	
1255	7	16.0	7.30	9390	0.19	-294.7	5.00	200	13.73	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: low flow bladder

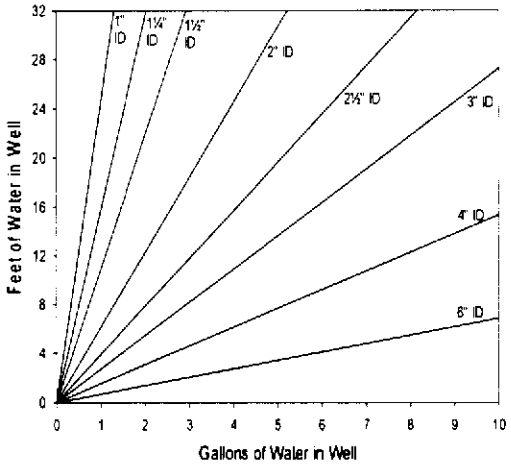
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req	Time
MW-5-091620	3x VOA, 2x 500mL Amber, 1x 250 mL poly		HNO3, 1x 1L poly	VOC, PCBs, TSS, metals (select)	1310
- collected MS/MSD -					

Comments

Signature Date 9/16/20

MW-5

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1300	8	16.0	7.30	9394	0.19	-297.1	4.91	200	14.01	clear
1305	9	16.0	7.30	9418	0.18	-298.7	4.67	200	14.23	clear

Well ID: MW-6

Low Flow Ground Water Sample Collection Record

Client: USACE Date: 09/16/20 Time: Start 1615 am/pm
Project No: 606333277.08 Finish 1745 am/pm
Site Location: NBH
Weather Conds: clear, 60°F Collector(s): B. Barna

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 19.10 c. Length of Water Column _____ (a-b)

b. Water Table Depth 13.2 d. Calculated System Volume (see back) _____

Casing Diameter/Material 2" PVC

2. WELL PURGE DATA

a. Purge Method: Low flow - bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

PID - 0.0 ppm

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI PRODSS	20F101335	
Lamotte 2020we	9134-1917	
Ion Tiger	T-115150	

Time (24hr)	Volume Remove (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1625	3.0	15.7	7.17	2494	0.23	-142.0	107.8	300	13.73	orange/none
1630	4.5	15.3	7.17	2562	0.19	-154.7	68.70	300	13.80	lt OR/none
1635	6.0	15.5	7.18	2587	0.16	-158.0	50.38	300	14.15	lt OR/none
1640	7.5	15.5	7.18	2600	0.15	-158.6	43.84	300	14.15	lt OR/none
1645	9.0	15.4	7.18	2630	0.11	-163.8	19.5	300	14.15	clear/none
1650	10.5	15.3	7.19	2617	0.09	-166.5	14.8	300	14.15	clear/none
1655	12.0	15.3	7.20	2605	0.07	-168.9	9.21	300	14.15	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below

3. SAMPLE COLLECTION: Method Low flow - bladder

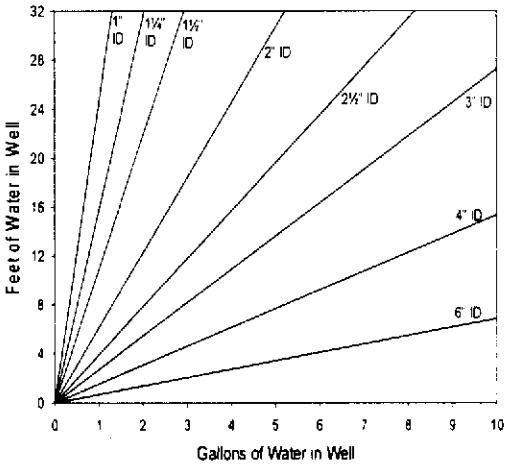
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-6-091620	1L Poly	1	None	TSS	1710
	500ml Amber	2	None	PCB	
	250ml Poly	1	HNO_3	Total Metals	
	VOA	3	HCl	VOC-8260	

Comments _____

Signature Bailey Barna Date 09/16/20

Purge Volume Calculation

MW-6



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1700	13.5	15.2	7.20	2600	0.07	-170.2	9.21	300	14.15	clear/none
1705	15.0	15.2	7.20	2594	0.06	-170.8	5.05	300	14.15	clear/none

BBO 9/16/20

Well ID: MW - 7A

Low Flow Ground Water Sample Collection Record

Client: USACE Date: 09/16/20 Time: Start 1500 am/pm
Project No: 60603327.08 Finish 1600 am/pm
Site Location: NBH
Weather Conds: SUNNY, 60°F Collector(s): B. BARRA

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 14.43 c. Length of Water Column 3.43 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 11.0 d. Calculated System Volume (see back) 2.12L

2. WELL PURGE DATA

a. Purge Method: Low flow - bladder

PID = 0.9ppm

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProDSS	20F101335
Lamotte	WE2020	9134-1917
Ion Nacr	T-115150	

Time (24hr)	Volume Remove (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor	
1510	3.0	17.0	6.92	579	0.21	-18.4	1.18	300	11.40	clear	None
1515	4.5	16.9	6.85	590	0.14	-27.6	1.17	300	11.55	clear	None
1520	6.0	16.8	6.83	595	0.11	-35.0	1.20	300	11.55	clear	None
1525	7.5	16.7	6.83	598	0.10	-37.9	1.20	300	11.55	clear	None
1530	9.0	16.8	6.81	601	0.08	-39.0	1.17	300	11.55	clear	None
1535	11.5	16.7	6.81	603	0.07	-39.2	1.21	300	11.55	clear	None
1540	13.0	16.7	6.79	601	0.07	-39.6	1.23	300	11.55	clear	None

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low flow - bladder

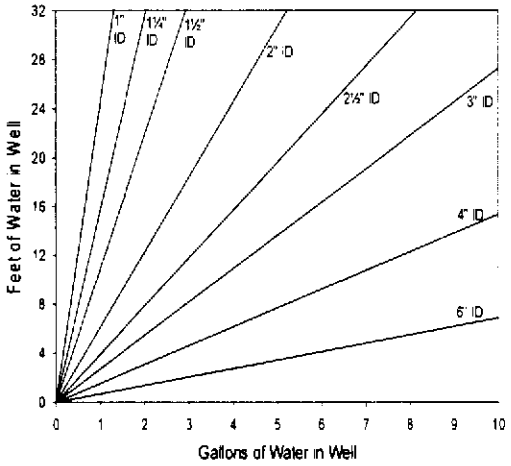
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req	Time
MW-7A-091620	1L Poly	1	None	TSS	1550
	500ml amber	2	None	PCB	
	250ml Poly	1	HNO_3	Total metal	
	VOA	3	HCl	VOC 8260	

Comments

Signature Bailey Barra Date 09/16/20

MW-7A

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

Attachment B

Laboratory Report

ANALYTICAL REPORT

Lab Number:	L2038938
Client:	AECOM 250 Apollo Drive Chelmsford, MA 01824
ATTN:	Will Humphries
Phone:	(978) 833-6950
Project Name:	NBH- GROUNDWATER
Project Number:	60597627
Report Date:	10/16/20

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), 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: NBH- GROUNDWATER
Project Number: 60597627

Lab Number: L2038938
Report Date: 10/16/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2038938-01	MW-1-091620	WATER	NEW BEDFORD, MA	09/16/20 16:10	09/17/20
L2038938-02	MW-3-091620	WATER	NEW BEDFORD, MA	09/16/20 10:55	09/17/20
L2038938-03	MW-4A-091620	WATER	NEW BEDFORD, MA	09/16/20 12:50	09/17/20
L2038938-04	FD-01-091620	WATER	NEW BEDFORD, MA	09/16/20 12:55	09/17/20
L2038938-05	MW-5-091620	WATER	NEW BEDFORD, MA	09/16/20 13:10	09/17/20
L2038938-06	MW-6-091620	WATER	NEW BEDFORD, MA	09/16/20 17:10	09/17/20
L2038938-07	MW-7A-091620	WATER	NEW BEDFORD, MA	09/16/20 15:50	09/17/20
L2038938-08	EB-01-091620	WATER	NEW BEDFORD, MA	09/16/20 13:30	09/17/20
L2038938-09	TB-01-091620	WATER	NEW BEDFORD, MA	09/14/20 09:00	09/17/20

Project Name:	NBH- GROUNDWATER	**Lab Number:**	L2038938
Project Number:	60597627	**Report Date:**	10/16/20

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: NBH- GROUNDWATER **Lab Number:** L2038938
Project Number: 60597627 **Report Date:** 10/16/20

Case Narrative (continued)

Report Reissue

This report replaces the report issued on October 9, 2020. The VOC report list has been revised.

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

The WG1415356-3/-4 LCS/LCSD recoveries and RPD, associated with L2038938-01 through -09, are below the individual acceptance criteria for 2-chloroethylvinyl ether (33%/14%R and 81%RPD), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

The WG1415356-6/-7 MS/MSD recoveries, performed on L2038938-05, are below the acceptance criteria for trans-1,4-dichloro-2-butene (57%/58%); however, the associated LCS/LCSD recoveries are within overall method allowances. The results of the native sample are considered to have a potentially low bias for this compound.

PCBs

The WG1412585-4/-5 MS/MSD RPD, performed on L2038938-05, is outside the acceptance criteria for Aroclor 1260 (70%).

Total Metals

L2038938-02 through -06: The samples have elevated detection limits for chromium, due to the dilution required by the high concentrations of non-target elements.

The WG1418614-3/-4 MS/MSD recovery, performed on L2038938-05, is outside the acceptance criteria for cadmium (1%-MS only) and lead (7%/127%). A post digestion spike was performed and was within acceptance criteria. In addition, the WG1418614-3/-4 MS/MSD RPDs for cadmium (196%) and lead (179%) are above the acceptance criteria.

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: Elizabeth Porta

Title: Technical Director/Representative Date: 10/16/20

ORGANICS

VOLATILES

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-01
Client ID: MW-1-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 16:10
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/20 11:21
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-01 Date Collected: 09/16/20 16:10

Client ID: MW-1-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-01 Date Collected: 09/16/20 16:10

Client ID: MW-1-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	96		70-130

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-02
Client ID: MW-3-091620
Sample Location: NEW BEDFORD, MA
Date Collected: 09/16/20 10:55
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/20 11:42
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	2.4		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-02 Date Collected: 09/16/20 10:55

Client ID: MW-3-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	0.20	J	ug/l	0.50	0.16	1
Trichloroethene	0.49	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.20	J	ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	2.5	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-02 Date Collected: 09/16/20 10:55

Client ID: MW-3-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-03
Client ID: MW-4A-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 12:50
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/20 12:03
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-03 Date Collected: 09/16/20 12:50

Client ID: MW-4A-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	0.43	J	ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-03 Date Collected: 09/16/20 12:50

Client ID: MW-4A-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	105		70-130

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-04
Client ID: FD-01-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 12:55
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/20 12:25
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-04 Date Collected: 09/16/20 12:55

Client ID: FD-01-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	0.67	J	ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-04 Date Collected: 09/16/20 12:55

Client ID: FD-01-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	102		70-130

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-05
Client ID: MW-5-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 13:10
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/20 12:46
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-05 Date Collected: 09/16/20 13:10

Client ID: MW-5-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	0.44	J	ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-05 Date Collected: 09/16/20 13:10

Client ID: MW-5-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	101		70-130

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-06
Client ID: MW-6-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 17:10
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/20 13:08
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-06 Date Collected: 09/16/20 17:10

Client ID: MW-6-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	0.39	J	ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-06 Date Collected: 09/16/20 17:10

Client ID: MW-6-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	102		70-130

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-07
Client ID: MW-7A-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 15:50
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/20 13:29
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-07 Date Collected: 09/16/20 15:50

Client ID: MW-7A-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-07 Date Collected: 09/16/20 15:50

Client ID: MW-7A-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	100		70-130

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-08
Client ID: EB-01-091620
Sample Location: NEW BEDFORD, MA
Date Collected: 09/16/20 13:30
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/20 13:51
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-08 Date Collected: 09/16/20 13:30

Client ID: EB-01-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-08 Date Collected: 09/16/20 13:30

Client ID: EB-01-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-09
Client ID: TB-01-091620
Sample Location: NEW BEDFORD, MA
Date Collected: 09/14/20 09:00
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/20 14:13
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-09 Date Collected: 09/14/20 09:00

Client ID: TB-01-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-09 Date Collected: 09/14/20 09:00

Client ID: TB-01-091620 Date Received: 09/17/20

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	101		70-130

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/27/20 09:33
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-09 Batch: WG1415356-5					
Methylene chloride	ND		ug/l	3.0	0.68
1,1-Dichloroethane	ND		ug/l	0.75	0.21
Chloroform	ND		ug/l	0.75	0.22
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.8	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	0.50	0.18
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	0.75	0.20
Ethylbenzene	ND		ug/l	0.50	0.17
Chloromethane	ND		ug/l	2.5	0.20
Bromomethane	ND		ug/l	1.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	1.0	0.13
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/27/20 09:33
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-09 Batch: WG1415356-5					
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
Methyl tert butyl ether	ND		ug/l	1.0	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
Dibromomethane	ND		ug/l	5.0	0.36
1,4-Dichlorobutane	ND		ug/l	5.0	0.46
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	0.30
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	0.31
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Ethyl methacrylate	ND		ug/l	5.0	0.61
Acrylonitrile	ND		ug/l	5.0	0.43
Bromochloromethane	ND		ug/l	2.5	0.15
Tetrahydrofuran	ND		ug/l	5.0	0.52
2,2-Dichloropropane	ND		ug/l	2.5	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.5	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16
Bromobenzene	ND		ug/l	2.5	0.15

Project Name: NBH- GROUNDWATER **Lab Number:** L2038938

Project Number: 60597627 **Report Date:** 10/16/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/27/20 09:33
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-09 Batch: WG1415356-5					
n-Butylbenzene	ND		ug/l	0.50	0.19
sec-Butylbenzene	ND		ug/l	0.50	0.18
tert-Butylbenzene	ND		ug/l	2.5	0.20
o-Chlorotoluene	ND		ug/l	2.5	0.22
p-Chlorotoluene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
Hexachlorobutadiene	ND		ug/l	0.50	0.22
Isopropylbenzene	ND		ug/l	0.50	0.19
p-Isopropyltoluene	ND		ug/l	0.50	0.19
Naphthalene	ND		ug/l	2.5	0.22
n-Propylbenzene	ND		ug/l	0.50	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21
Ethyl ether	ND		ug/l	2.5	0.16

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH- GROUNDWATER

Project Number: 60597627

Lab Number: L2038938

Report Date: 10/16/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 Batch: WG1415356-3 WG1415356-4								
Methylene chloride	83		83		70-130	0		20
1,1-Dichloroethane	95		95		70-130	0		20
Chloroform	92		91		70-130	1		20
Carbon tetrachloride	99		95		63-132	4		20
1,2-Dichloropropane	95		95		70-130	0		20
Dibromochloromethane	86		86		63-130	0		20
1,1,2-Trichloroethane	92		90		70-130	2		20
Tetrachloroethene	92		85		70-130	8		20
Chlorobenzene	98		94		75-130	4		25
Trichlorofluoromethane	99		95		62-150	4		20
1,2-Dichloroethane	86		84		70-130	2		20
1,1,1-Trichloroethane	92		88		67-130	4		20
Bromodichloromethane	88		88		67-130	0		20
trans-1,3-Dichloropropene	89		90		70-130	1		20
cis-1,3-Dichloropropene	89		89		70-130	0		20
1,1-Dichloropropene	96		91		70-130	5		20
Bromoform	82		87		54-136	6		20
1,1,2,2-Tetrachloroethane	86		89		67-130	3		20
Benzene	96		95		70-130	1		25
Toluene	99		93		70-130	6		25
Ethylbenzene	98		94		70-130	4		20
Chloromethane	96		94		64-130	2		20
Bromomethane	82		82		39-139	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH- GROUNDWATER

Project Number: 60597627

Lab Number: L2038938

Report Date: 10/16/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 Batch: WG1415356-3 WG1415356-4								
Vinyl chloride	100		100		55-140	0		20
Chloroethane	97		98		55-138	1		20
1,1-Dichloroethene	96		92		61-145	4		25
trans-1,2-Dichloroethene	94		93		70-130	1		20
Trichloroethene	94		92		70-130	2		25
1,2-Dichlorobenzene	96		95		70-130	1		20
1,3-Dichlorobenzene	99		98		70-130	1		20
1,4-Dichlorobenzene	100		97		70-130	3		20
Methyl tert butyl ether	86		84		63-130	2		20
p/m-Xylene	100		95		70-130	5		20
o-Xylene	100		95		70-130	5		20
cis-1,2-Dichloroethene	93		94		70-130	1		20
Dibromomethane	86		87		70-130	1		20
1,4-Dichlorobutane	92		90		70-130	2		20
1,2,3-Trichloropropane	89		87		64-130	2		20
Styrene	100		95		70-130	5		20
Dichlorodifluoromethane	110		110		36-147	0		20
Acetone	82		81		58-148	1		20
Carbon disulfide	92		91		51-130	1		20
2-Butanone	87		93		63-138	7		20
Vinyl acetate	85		84		70-130	1		20
4-Methyl-2-pentanone	83		82		59-130	1		20
2-Hexanone	85		82		57-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NBH- GROUNDWATER
Project Number: 60597627

Lab Number: L2038938
Report Date: 10/16/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 Batch: WG1415356-3 WG1415356-4								
Ethyl methacrylate	80		79		70-130	1		20
Acrylonitrile	86		89		70-130	3		20
Bromochloromethane	90		87		70-130	3		20
Tetrahydrofuran	81		77		58-130	5		20
2,2-Dichloropropane	96		92		63-133	4		20
1,2-Dibromoethane	85		86		70-130	1		20
1,3-Dichloropropane	91		90		70-130	1		20
1,1,1,2-Tetrachloroethane	95		93		64-130	2		20
Bromobenzene	98		95		70-130	3		20
n-Butylbenzene	99		95		53-136	4		20
sec-Butylbenzene	100		96		70-130	4		20
tert-Butylbenzene	88		85		70-130	3		20
o-Chlorotoluene	99		96		70-130	3		20
p-Chlorotoluene	100		98		70-130	2		20
1,2-Dibromo-3-chloropropane	78		78		41-144	0		20
Hexachlorobutadiene	90		87		63-130	3		20
Isopropylbenzene	100		98		70-130	2		20
p-Isopropyltoluene	100		99		70-130	1		20
Naphthalene	83		85		70-130	2		20
n-Propylbenzene	100		97		69-130	3		20
1,2,3-Trichlorobenzene	90		90		70-130	0		20
1,2,4-Trichlorobenzene	92		91		70-130	1		20
1,3,5-Trimethylbenzene	100		97		64-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NBH- GROUNDWATER
Project Number: 60597627

Lab Number: L2038938
Report Date: 10/16/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 Batch: WG1415356-3 WG1415356-4								
1,2,4-Trimethylbenzene	100		98		70-130	2		20
trans-1,4-Dichloro-2-butene	86		84		70-130	2		20
Ethyl ether	90		89		59-134	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	90		91		70-130
Toluene-d8	101		99		70-130
4-Bromofluorobenzene	100		100		70-130
Dibromofluoromethane	98		95		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG1415356-6 WG1415356-7 QC Sample: L2038938-05 Client ID: MW-5-091620												
Methylene chloride	ND	10	8.4	84		9.0	90		70-130	7		20
1,1-Dichloroethane	ND	10	9.5	95		10	100		70-130	5		20
Chloroform	ND	10	9.2	92		9.5	95		70-130	3		20
Carbon tetrachloride	ND	10	9.4	94		9.6	96		63-132	2		20
1,2-Dichloropropane	ND	10	9.5	95		9.8	98		70-130	3		20
Dibromochloromethane	ND	10	8.5	85		9.2	92		63-130	8		20
1,1,2-Trichloroethane	ND	10	9.3	93		9.4	94		70-130	1		20
Tetrachloroethene	ND	10	8.8	88		8.9	89		70-130	1		20
Chlorobenzene	ND	10	9.4	94		9.8	98		75-130	4		25
Trichlorofluoromethane	ND	10	9.7	97		10	100		62-150	3		20
1,2-Dichloroethane	ND	10	8.6	86		9.1	91		70-130	6		20
1,1,1-Trichloroethane	ND	10	8.8	88		9.2	92		67-130	4		20
Bromodichloromethane	ND	10	8.8	88		9.5	95		67-130	8		20
trans-1,3-Dichloropropene	ND	10	8.2	82		8.7	87		70-130	6		20
cis-1,3-Dichloropropene	ND	10	8.2	82		8.6	86		70-130	5		20
1,1-Dichloropropene	ND	10	9.2	92		9.6	96		70-130	4		20
Bromoform	ND	10	8.7	87		8.6	86		54-136	1		20
1,1,2,2-Tetrachloroethane	ND	10	9.1	91		9.1	91		67-130	0		20
Benzene	ND	10	9.6	96		10	100		70-130	4		25
Toluene	ND	10	9.3	93		9.6	96		70-130	3		25
Ethylbenzene	ND	10	9.1	91		9.5	95		70-130	4		20
Chloromethane	ND	10	12	120		12	120		64-130	0		20
Bromomethane	ND	10	6.2	62		6.1	61		39-139	2		20

Matrix Spike Analysis

Batch Quality Control

Project Name: NBH- GROUNDWATER

Project Number: 60597627

Lab Number: L2038938

Report Date: 10/16/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG1415356-6 WG1415356-7 QC Sample: L2038938-05 Client ID: MW-5-091620												
Vinyl chloride	ND	10	11	110		12	120		55-140	9		20
Chloroethane	ND	10	11	110		10	100		55-138	10		20
1,1-Dichloroethene	ND	10	9.4	94		10	100		61-145	6		25
trans-1,2-Dichloroethene	ND	10	9.7	97		9.9	99		70-130	2		20
Trichloroethene	ND	10	9.3	93		9.6	96		70-130	3		25
1,2-Dichlorobenzene	ND	10	9.4	94		9.7	97		70-130	3		20
1,3-Dichlorobenzene	ND	10	9.5	95		9.4	94		70-130	1		20
1,4-Dichlorobenzene	ND	10	9.4	94		9.7	97		70-130	3		20
Methyl tert butyl ether	ND	10	8.4	84		8.8	88		63-130	5		20
p/m-Xylene	ND	20	19	95		19	95		70-130	0		20
o-Xylene	ND	20	19	95		20	100		70-130	5		20
cis-1,2-Dichloroethene	ND	10	9.5	95		9.9	99		70-130	4		20
Dibromomethane	ND	10	9.2	92		9.5	95		70-130	3		20
1,4-Dichlorobutane	ND	10	9.2	92		9.3	93		70-130	1		20
1,2,3-Trichloropropane	ND	10	8.8	88		9.2	92		64-130	4		20
Styrene	ND	20	19	95		20	100		70-130	5		20
Dichlorodifluoromethane	ND	10	12	120		12	120		36-147	0		20
Acetone	ND	10	11	110		11	110		58-148	0		20
Carbon disulfide	0.44J	10	10	100		11	110		51-130	10		20
2-Butanone	ND	10	8.7	87		8.8	88		63-138	1		20
Vinyl acetate	ND	10	8.3	83		8.8	88		70-130	6		20
4-Methyl-2-pentanone	ND	10	8.6	86		9.1	91		59-130	6		20
2-Hexanone	ND	10	8.6	86		8.8	88		57-130	2		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG1415356-6 WG1415356-7 QC Sample: L2038938-05 Client ID: MW-5-091620												
Ethyl methacrylate	ND	10	8.2	82		8.5	85		70-130	4		20
Acrylonitrile	ND	10	9.0	90		9.3	93		70-130	3		20
Bromochloromethane	ND	10	9.6	96		9.6	96		70-130	0		20
Tetrahydrofuran	ND	10	8.3	83		9.7	97		58-130	16		20
2,2-Dichloropropane	ND	10	7.8	78		8.0	80		63-133	3		20
1,2-Dibromoethane	ND	10	8.7	87		9.5	95		70-130	9		20
1,3-Dichloropropane	ND	10	9.3	93		9.2	92		70-130	1		20
1,1,1,2-Tetrachloroethane	ND	10	9.3	93		9.7	97		64-130	4		20
Bromobenzene	ND	10	9.6	96		9.7	97		70-130	1		20
n-Butylbenzene	ND	10	9.1	91		9.1	91		53-136	0		20
sec-Butylbenzene	ND	10	9.5	95		9.5	95		70-130	0		20
tert-Butylbenzene	ND	10	8.3	83		8.3	83		70-130	0		20
o-Chlorotoluene	ND	10	9.3	93		9.3	93		70-130	0		20
p-Chlorotoluene	ND	10	9.3	93		9.2	92		70-130	1		20
1,2-Dibromo-3-chloropropane	ND	10	8.1	81		8.1	81		41-144	0		20
Hexachlorobutadiene	ND	10	8.5	85		8.4	84		63-130	1		20
Isopropylbenzene	ND	10	9.6	96		9.6	96		70-130	0		20
p-Isopropyltoluene	ND	10	9.5	95		9.4	94		70-130	1		20
Naphthalene	ND	10	8.5	85		8.9	89		70-130	5		20
n-Propylbenzene	ND	10	9.3	93		9.5	95		69-130	2		20
1,2,3-Trichlorobenzene	ND	10	9.0	90		9.4	94		70-130	4		20
1,2,4-Trichlorobenzene	ND	10	9.0	90		9.3	93		70-130	3		20
1,3,5-Trimethylbenzene	ND	10	9.3	93		9.5	95		64-130	2		20

Matrix Spike Analysis

Batch Quality Control

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG1415356-6 WG1415356-7 QC Sample: L2038938-05 Client ID: MW-5-091620												
1,2,4-Trimethylbenzene	ND	10	9.5	95		9.4	94		70-130	1		20
trans-1,4-Dichloro-2-butene	ND	10	5.7	**57**	Q	5.8	**58**	Q	70-130	2		20
Ethyl ether	ND	10	8.9	89		8.9	89		59-134	0		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		95		70-130
4-Bromofluorobenzene	98		97		70-130
Dibromofluoromethane	101		101		70-130
Toluene-d8	99		99		70-130

PCBS

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-01
Client ID: MW-1-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 16:10
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 10/01/20 17:10
Analyst: DP

Extraction Method: EPA 3510C
Extraction Date: 09/21/20 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/l	0.020	0.008	1	A
Aroclor 1221	ND		ug/l	0.020	0.010	1	A
Aroclor 1232	ND		ug/l	0.020	0.008	1	A
Aroclor 1242	ND		ug/l	0.020	0.009	1	A
Aroclor 1248	ND		ug/l	0.020	0.009	1	A
Aroclor 1254	ND		ug/l	0.020	0.007	1	A
Aroclor 1260	ND		ug/l	0.020	0.009	1	A
Aroclor 1262	ND		ug/l	0.020	0.007	1	A
Aroclor 1268	ND		ug/l	0.020	0.003	1	A
PCBs, Total	ND		ug/l	0.020	0.003	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	57		30-150	A
DCB - Surrogate	35		30-150	A
Tetrachloro-meta-Xylene	51		30-150	B
DCB - Surrogate	46		30-150	B

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-02
Client ID: MW-3-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 10:55
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 10/01/20 17:22
Analyst: DP

Extraction Method: EPA 3510C
Extraction Date: 09/21/20 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/l	0.023	0.009	1	A
Aroclor 1221	ND		ug/l	0.023	0.011	1	A
Aroclor 1232	ND		ug/l	0.023	0.010	1	A
Aroclor 1242	ND		ug/l	0.023	0.011	1	A
Aroclor 1248	ND		ug/l	0.023	0.011	1	A
Aroclor 1254	ND		ug/l	0.023	0.008	1	A
Aroclor 1260	ND		ug/l	0.023	0.010	1	A
Aroclor 1262	ND		ug/l	0.023	0.008	1	A
Aroclor 1268	ND		ug/l	0.023	0.004	1	A
PCBs, Total	ND		ug/l	0.023	0.004	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	48		30-150	A
DCB - Surrogate	41		30-150	A
Tetrachloro-meta-Xylene	49		30-150	B
DCB - Surrogate	45		30-150	B

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-03
Client ID: MW-4A-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 12:50
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 10/01/20 17:34
Analyst: DP

Extraction Method: EPA 3510C
Extraction Date: 09/21/20 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/l	0.020	0.008	1	A
Aroclor 1221	ND		ug/l	0.020	0.010	1	A
Aroclor 1232	ND		ug/l	0.020	0.008	1	A
Aroclor 1242	ND		ug/l	0.020	0.009	1	A
Aroclor 1248	ND		ug/l	0.020	0.009	1	A
Aroclor 1254	ND		ug/l	0.020	0.007	1	A
Aroclor 1260	ND		ug/l	0.020	0.009	1	A
Aroclor 1262	ND		ug/l	0.020	0.007	1	A
Aroclor 1268	ND		ug/l	0.020	0.003	1	A
PCBs, Total	ND		ug/l	0.020	0.003	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	67		30-150	A
DCB - Surrogate	50		30-150	A
Tetrachloro-meta-Xylene	52		30-150	B
DCB - Surrogate	58		30-150	B

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-04
Client ID: FD-01-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 12:55
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 10/06/20 12:15
Analyst: DP

Extraction Method: EPA 3510C
Extraction Date: 09/21/20 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/l	0.018	0.007	1	A
Aroclor 1221	ND		ug/l	0.018	0.009	1	A
Aroclor 1232	ND		ug/l	0.018	0.007	1	A
Aroclor 1242	ND		ug/l	0.018	0.009	1	A
Aroclor 1248	ND		ug/l	0.018	0.008	1	A
Aroclor 1254	ND		ug/l	0.018	0.006	1	A
Aroclor 1260	ND		ug/l	0.018	0.008	1	A
Aroclor 1262	ND		ug/l	0.018	0.006	1	A
Aroclor 1268	ND		ug/l	0.018	0.003	1	A
PCBs, Total	ND		ug/l	0.018	0.003	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	54		30-150	A
DCB - Surrogate	60		30-150	A
Tetrachloro-meta-Xylene	42		30-150	B
DCB - Surrogate	63		30-150	B

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-05
Client ID: MW-5-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 13:10
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 10/06/20 12:27
Analyst: DP

Extraction Method: EPA 3510C
Extraction Date: 09/21/20 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/l	0.018	0.007	1	A
Aroclor 1221	ND		ug/l	0.018	0.009	1	A
Aroclor 1232	ND		ug/l	0.018	0.007	1	A
Aroclor 1242	ND		ug/l	0.018	0.009	1	A
Aroclor 1248	ND		ug/l	0.018	0.008	1	A
Aroclor 1254	ND		ug/l	0.018	0.006	1	A
Aroclor 1260	ND		ug/l	0.018	0.008	1	A
Aroclor 1262	ND		ug/l	0.018	0.006	1	A
Aroclor 1268	ND		ug/l	0.018	0.003	1	A
PCBs, Total	ND		ug/l	0.018	0.003	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	58		30-150	A
DCB - Surrogate	41		30-150	A
Tetrachloro-meta-Xylene	61		30-150	B
DCB - Surrogate	56		30-150	B

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-06
Client ID: MW-6-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 17:10
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 10/01/20 18:33
Analyst: DP

Extraction Method: EPA 3510C
Extraction Date: 09/21/20 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/l	0.018	0.007	1	A
Aroclor 1221	ND		ug/l	0.018	0.009	1	A
Aroclor 1232	ND		ug/l	0.018	0.008	1	A
Aroclor 1242	ND		ug/l	0.018	0.009	1	A
Aroclor 1248	ND		ug/l	0.018	0.009	1	A
Aroclor 1254	ND		ug/l	0.018	0.006	1	A
Aroclor 1260	ND		ug/l	0.018	0.008	1	A
Aroclor 1262	ND		ug/l	0.018	0.006	1	A
Aroclor 1268	ND		ug/l	0.018	0.003	1	A
PCBs, Total	ND		ug/l	0.018	0.003	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	46		30-150	A
DCB - Surrogate	34		30-150	A
Tetrachloro-meta-Xylene	46		30-150	B
DCB - Surrogate	44		30-150	B

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-07
Client ID: MW-7A-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 15:50
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 10/01/20 18:45
Analyst: DP

Extraction Method: EPA 3510C
Extraction Date: 09/21/20 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/l	0.019	0.007	1	A
Aroclor 1221	ND		ug/l	0.019	0.009	1	A
Aroclor 1232	ND		ug/l	0.019	0.008	1	A
Aroclor 1242	ND		ug/l	0.019	0.009	1	A
Aroclor 1248	ND		ug/l	0.019	0.009	1	A
Aroclor 1254	ND		ug/l	0.019	0.006	1	A
Aroclor 1260	ND		ug/l	0.019	0.008	1	A
Aroclor 1262	ND		ug/l	0.019	0.007	1	A
Aroclor 1268	ND		ug/l	0.019	0.003	1	A
PCBs, Total	ND		ug/l	0.019	0.003	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	52		30-150	A
DCB - Surrogate	37		30-150	A
Tetrachloro-meta-Xylene	51		30-150	B
DCB - Surrogate	47		30-150	B

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-08
Client ID: EB-01-091620
Sample Location: NEW BEDFORD, MA

Date Collected: 09/16/20 13:30
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 10/01/20 18:57
Analyst: DP

Extraction Method: EPA 3510C
Extraction Date: 09/21/20 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Mansfield Lab							
Aroclor 1016	ND		ug/l	0.019	0.007	1	A
Aroclor 1221	ND		ug/l	0.019	0.009	1	A
Aroclor 1232	ND		ug/l	0.019	0.008	1	A
Aroclor 1242	ND		ug/l	0.019	0.009	1	A
Aroclor 1248	ND		ug/l	0.019	0.009	1	A
Aroclor 1254	ND		ug/l	0.019	0.006	1	A
Aroclor 1260	ND		ug/l	0.019	0.008	1	A
Aroclor 1262	ND		ug/l	0.019	0.007	1	A
Aroclor 1268	ND		ug/l	0.019	0.003	1	A
PCBs, Total	ND		ug/l	0.019	0.003	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	59		30-150	A
DCB - Surrogate	44		30-150	A
Tetrachloro-meta-Xylene	58		30-150	B
DCB - Surrogate	54		30-150	B

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 10/01/20 16:35
Analyst: DP

Extraction Method: EPA 3510C
Extraction Date: 09/21/20 16:35

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Mansfield Lab for sample(s): 01-08 Batch: WG1412585-1						
Aroclor 1016	ND		ug/l	0.020	0.008	A
Aroclor 1221	ND		ug/l	0.020	0.010	A
Aroclor 1232	ND		ug/l	0.020	0.008	A
Aroclor 1242	ND		ug/l	0.020	0.009	A
Aroclor 1248	ND		ug/l	0.020	0.009	A
Aroclor 1254	ND		ug/l	0.020	0.007	A
Aroclor 1260	ND		ug/l	0.020	0.009	A
Aroclor 1262	ND		ug/l	0.020	0.007	A
Aroclor 1268	ND		ug/l	0.020	0.003	A
PCBs, Total	ND		ug/l	0.020	0.003	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	50		30-150	A
DCB - Surrogate	47		30-150	A
Tetrachloro-meta-Xylene	43		30-150	B
DCB - Surrogate	51		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH- GROUNDWATER

Project Number: 60597627

Lab Number: L2038938

Report Date: 10/16/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Mansfield Lab Associated sample(s): 01-08 Batch: WG1412585-2 WG1412585-3									
Aroclor 1016	53		86		40-140	46		50	A
Aroclor 1260	52		72		40-140	31		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
Tetrachloro-meta-Xylene	46		67		30-150	A
DCB - Surrogate	47		60		30-150	A
Tetrachloro-meta-Xylene	38		61		30-150	B
DCB - Surrogate	50		70		30-150	B

Matrix Spike Analysis

Batch Quality Control

Project Name: NBH- GROUNDWATER

Project Number: 60597627

Lab Number: L2038938

Report Date: 10/16/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1412585-4 WG1412585-5 QC Sample: L2038938-05 Client ID: MW-5-091620													
Aroclor 1016	ND	0.98	0.554	56		0.648	65		40-140	16		50	A
Aroclor 1260	ND	0.98	1.01	103		0.485	48		40-140	**70**	Q	50	A

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
DCB - Surrogate	36		37		30-150	A
Tetrachloro-meta-Xylene	59		67		30-150	A
DCB - Surrogate	46		50		30-150	B
Tetrachloro-meta-Xylene	51		58		30-150	B

METALS

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-01
Client ID: MW-1-091620
Sample Location: NEW BEDFORD, MA
Date Collected: 09/16/20 16:10
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	0.00001	J	mg/l	0.00002	NA	1	10/07/20 19:04	10/08/20 17:15	EPA 3005A	1,6020B	AM
Chromium, Total	0.00158		mg/l	0.00100	0.00017	1	10/07/20 15:56	10/08/20 11:16	EPA 3005A	1,6020B	AM
Copper, Total	0.00490		mg/l	0.00010	0.00003	1	10/07/20 19:04	10/08/20 17:15	EPA 3005A	1,6020B	AM
Lead, Total	0.00027		mg/l	0.00010	0.00003	1	10/07/20 19:04	10/08/20 17:15	EPA 3005A	1,6020B	AM

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-02
Client ID: MW-3-091620
Sample Location: NEW BEDFORD, MA
Date Collected: 09/16/20 10:55
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.00002	NA	1	10/07/20 19:04	10/08/20 17:20	EPA 3005A	1,6020B	AM
Chromium, Total	0.00239	J	mg/l	0.00500	0.00089	5	10/07/20 15:56	10/08/20 09:28	EPA 3005A	1,6020B	AM
Copper, Total	0.00525		mg/l	0.00020	0.00003	1	10/07/20 19:04	10/08/20 17:20	EPA 3005A	1,6020B	AM
Lead, Total	ND		mg/l	0.00010	0.00003	1	10/07/20 19:04	10/08/20 17:20	EPA 3005A	1,6020B	AM

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-03
Client ID: MW-4A-091620
Sample Location: NEW BEDFORD, MA
Date Collected: 09/16/20 12:50
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.00002	NA	1	10/07/20 19:04	10/08/20 17:25	EPA 3005A	1,6020B	AM
Chromium, Total	0.00101	J	mg/l	0.00500	0.00089	5	10/07/20 15:56	10/08/20 09:57	EPA 3005A	1,6020B	AM
Copper, Total	0.00188		mg/l	0.00020	0.00003	1	10/07/20 19:04	10/08/20 17:25	EPA 3005A	1,6020B	AM
Lead, Total	0.00003	J	mg/l	0.00010	0.00003	1	10/07/20 19:04	10/08/20 17:25	EPA 3005A	1,6020B	AM

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-04
Client ID: FD-01-091620
Sample Location: NEW BEDFORD, MA
Date Collected: 09/16/20 12:55
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.00002	NA	1	10/07/20 19:04	10/08/20 17:45	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00500	0.00089	5	10/07/20 15:56	10/08/20 10:02	EPA 3005A	1,6020B	AM
Copper, Total	0.00128		mg/l	0.00020	0.00003	1	10/07/20 19:04	10/08/20 17:45	EPA 3005A	1,6020B	AM
Lead, Total	0.00007	J	mg/l	0.00010	0.00003	1	10/07/20 19:04	10/08/20 17:45	EPA 3005A	1,6020B	AM

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-05
Client ID: MW-5-091620
Sample Location: NEW BEDFORD, MA
Date Collected: 09/16/20 13:10
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.00002	NA	1	10/07/20 19:04	10/08/20 17:10	EPA 3005A	1,6020B	AM
Chromium, Total	0.00339	J	mg/l	0.00500	0.00089	5	10/07/20 15:56	10/08/20 09:18	EPA 3005A	1,6020B	AM
Copper, Total	0.00093		mg/l	0.00020	0.00003	1	10/07/20 19:04	10/08/20 17:10	EPA 3005A	1,6020B	AM
Lead, Total	ND		mg/l	0.00010	0.00003	1	10/07/20 19:04	10/08/20 17:10	EPA 3005A	1,6020B	AM

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-06
Client ID: MW-6-091620
Sample Location: NEW BEDFORD, MA
Date Collected: 09/16/20 17:10
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.00002	NA	1	10/07/20 19:04	10/08/20 17:50	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00500	0.00089	5	10/07/20 15:56	10/08/20 10:07	EPA 3005A	1,6020B	AM
Copper, Total	0.00178		mg/l	0.00020	0.00003	1	10/07/20 19:04	10/08/20 17:50	EPA 3005A	1,6020B	AM
Lead, Total	ND		mg/l	0.00010	0.00003	1	10/07/20 19:04	10/08/20 17:50	EPA 3005A	1,6020B	AM

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-07
Client ID: MW-7A-091620
Sample Location: NEW BEDFORD, MA
Date Collected: 09/16/20 15:50
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	0.00004		mg/l	0.00002	NA	1	10/07/20 19:04	10/08/20 17:55	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	10/07/20 15:56	10/08/20 11:21	EPA 3005A	1,6020B	AM
Copper, Total	0.00407		mg/l	0.00020	0.00003	1	10/07/20 19:04	10/08/20 17:55	EPA 3005A	1,6020B	AM
Lead, Total	0.00006	J	mg/l	0.00010	0.00003	1	10/07/20 19:04	10/08/20 17:55	EPA 3005A	1,6020B	AM

Project Name: NBH- GROUNDWATER
Lab Number: L2038938
Project Number: 60597627
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-08
Client ID: EB-01-091620
Sample Location: NEW BEDFORD, MA
Date Collected: 09/16/20 13:30
Date Received: 09/17/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.00002	NA	1	10/07/20 19:04	10/08/20 18:00	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	10/07/20 15:56	10/08/20 10:17	EPA 3005A	1,6020B	AM
Copper, Total	0.00164		mg/l	0.00020	0.00003	1	10/07/20 19:04	10/08/20 18:00	EPA 3005A	1,6020B	AM
Lead, Total	0.00005	J	mg/l	0.00010	0.00003	1	10/07/20 19:04	10/08/20 18:00	EPA 3005A	1,6020B	AM

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-08 Batch: WG1418614-1										
Cadmium, Total	ND		mg/l	0.00002	NA	1	10/07/20 19:04	10/08/20 16:46	1,6020B	AM
Copper, Total	0.00019	J	mg/l	0.00020	0.00003	1	10/07/20 19:04	10/08/20 16:46	1,6020B	AM
Lead, Total	ND		mg/l	0.00010	0.00003	1	10/07/20 19:04	10/08/20 16:46	1,6020B	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-08 Batch: WG1419411-1										
Chromium, Total	ND		mg/l	0.00100	0.00017	1	10/07/20 15:56	10/08/20 08:53	1,6020B	AM

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH- GROUNDWATER

Project Number: 60597627

Lab Number: L2038938

Report Date: 10/16/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 Batch: WG1418614-2								
Cadmium, Total	86		-		80-120	-		20
Copper, Total	102		-		80-120	-		20
Lead, Total	120		-		80-120	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-08 Batch: WG1419411-2								
Chromium, Total	89		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH- GROUNDWATER
Project Number: 60597627

Lab Number: L2038938
Report Date: 10/16/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1418614-3 WG1418614-4 QC Sample: L2038938-05 Client ID: MW-5-091620												
Cadmium, Total	ND	0.00255	0.00002	**1**	Q	0.00204	80		75-125	**196**	Q	20
Copper, Total	0.00093	0.0125	0.0116	85		0.0135	100		75-125	15		20
Lead, Total	ND	0.0255	0.00177	**7**	Q	0.0324	**127**	Q	75-125	**179**	Q	20
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1419411-3 WG1419411-4 QC Sample: L2038938-05 Client ID: MW-5-091620												
Chromium, Total	0.00339J	0.2	0.200	100		0.197	98		75-125	2		20

INORGANICS
&
MISCELLANEOUS

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-01
Client ID: MW-1-091620
Sample Location: NEW BEDFORD, MA
Sample Depth:
Matrix: Water

Date Collected: 09/16/20 16:10
Date Received: 09/17/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	2.0		mg/l	1.0	NA	1	-	09/22/20 06:50	121,2540D	JT

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-02
Client ID: MW-3-091620
Sample Location: NEW BEDFORD, MA
Sample Depth:
Matrix: Water

Date Collected: 09/16/20 10:55
Date Received: 09/17/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	24.		mg/l	1.0	NA	1	-	09/22/20 06:50	121,2540D	JT

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-03
Client ID: MW-4A-091620
Sample Location: NEW BEDFORD, MA
Sample Depth:
Matrix: Water

Date Collected: 09/16/20 12:50
Date Received: 09/17/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	14.		mg/l	1.0	NA	1	-	09/22/20 06:50	121,2540D	JT

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-04
Client ID: FD-01-091620
Sample Location: NEW BEDFORD, MA
Sample Depth:
Matrix: Water

Date Collected: 09/16/20 12:55
Date Received: 09/17/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	14.		mg/l	1.0	NA	1	-	09/22/20 06:50	121,2540D	JT

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-05
Client ID: MW-5-091620
Sample Location: NEW BEDFORD, MA
Sample Depth:
Matrix: Water

Date Collected: 09/16/20 13:10
Date Received: 09/17/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	13.		mg/l	1.0	NA	1	-	09/22/20 06:50	121,2540D	JT

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-06
Client ID: MW-6-091620
Sample Location: NEW BEDFORD, MA
Sample Depth:
Matrix: Water

Date Collected: 09/16/20 17:10
Date Received: 09/17/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	25.		mg/l	2.0	NA	2	-	09/22/20 06:50	121,2540D	JT

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

SAMPLE RESULTS

Lab ID: L2038938-07
Client ID: MW-7A-091620
Sample Location: NEW BEDFORD, MA
Sample Depth:
Matrix: Water

Date Collected: 09/16/20 15:50
Date Received: 09/17/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	ND		mg/l	1.0	NA	1	-	09/22/20 06:50	121,2540D	JT

Project Name: NBH- GROUNDWATER
Project Number: 60597627
Lab Number: L2038938
Report Date: 10/16/20

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): 01-07 Batch: WG1412755-1										
Solids, Total Suspended	ND		mg/l	1.0	NA	1	-	09/22/20 06:50	121,2540D	JT

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH- GROUNDWATER

Project Number: 60597627

Lab Number: L2038938

Report Date: 10/16/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-07 Batch: WG1412755-2								
Solids, Total Suspended	88		-		80-120	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: NBH- GROUNDWATER

Project Number: 60597627

Lab Number: L2038938

Report Date: 10/16/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG1412755-3 QC Sample: L2038242-01 Client ID: DUP Sample						
Solids, Total Suspended	190	170	mg/l	11		29

Project Name: NBH- GROUNDWATER
Project Number: 60597627

Lab Number: L2038938
Report Date: 10/16/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
B	Absent
D	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2038938-01A	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-01B	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-01C	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-01D	Plastic 250ml HNO3 preserved	B	<2	<2	2.6	Y	Absent		A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-CU-6020T(180)
L2038938-01E	Amber 500ml unpreserved	B	7	7	2.6	Y	Absent		A2-PCB-8082(7)
L2038938-01F	Amber 500ml unpreserved	B	7	7	2.6	Y	Absent		A2-PCB-8082(7)
L2038938-01G	Plastic 950ml unpreserved	B	7	7	2.6	Y	Absent		TSS-2540-LOW(7)
L2038938-02A	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-02B	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-02C	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-02D	Plastic 250ml HNO3 preserved	D	<2	<2	2.0	Y	Absent		A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-CU-6020T(180)
L2038938-02E	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-02F	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-02G	Plastic 950ml unpreserved	B	7	7	2.6	Y	Absent		TSS-2540-LOW(7)
L2038938-03A	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-03B	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-03C	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-03D	Plastic 250ml HNO3 preserved	D	<2	<2	2.0	Y	Absent		A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-CU-6020T(180)
L2038938-03E	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-03F	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-03G	Plastic 950ml unpreserved	B	7	7	2.6	Y	Absent		TSS-2540-LOW(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2038938-04A	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-04B	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-04C	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-04D	Plastic 250ml HNO3 preserved	B	<2	<2	2.6	Y	Absent		A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-CU-6020T(180)
L2038938-04E	Amber 500ml unpreserved	B	7	7	2.6	Y	Absent		A2-PCB-8082(7)
L2038938-04F	Amber 500ml unpreserved	B	7	7	2.6	Y	Absent		A2-PCB-8082(7)
L2038938-04G	Plastic 950ml unpreserved	B	7	7	2.6	Y	Absent		TSS-2540-LOW(7)
L2038938-05A	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-05A1	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-05A2	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-05B	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-05B1	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-05B2	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-05C	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-05C1	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-05C2	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-05D	Plastic 250ml HNO3 preserved	B	<2	<2	2.6	Y	Absent		A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-CU-6020T(180)
L2038938-05D1	Plastic 250ml HNO3 preserved	B	<2	<2	2.6	Y	Absent		A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-CU-6020T(180)
L2038938-05D2	Plastic 250ml HNO3 preserved	D	<2	<2	2.0	Y	Absent		A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-CU-6020T(180)
L2038938-05E	Amber 500ml unpreserved	B	7	7	2.6	Y	Absent		A2-PCB-8082(7)
L2038938-05E1	Amber 500ml unpreserved	B	7	7	2.6	Y	Absent		A2-PCB-8082(7)
L2038938-05E2	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-05F	Amber 500ml unpreserved	B	7	7	2.6	Y	Absent		A2-PCB-8082(7)
L2038938-05F1	Amber 500ml unpreserved	B	7	7	2.6	Y	Absent		A2-PCB-8082(7)
L2038938-05F2	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-05G	Plastic 950ml unpreserved	B	7	7	2.6	Y	Absent		TSS-2540-LOW(7)
L2038938-06A	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)

*Values in parentheses indicate holding time in days

Project Name: NBH- GROUNDWATER
Project Number: 60597627

Lab Number: L2038938
Report Date: 10/16/20

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2038938-06B	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-06C	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-06D	Plastic 250ml HNO3 preserved	D	<2	<2	2.0	Y	Absent		A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-CU-6020T(180)
L2038938-06E	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-06F	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-06G	Plastic 950ml unpreserved	B	7	7	2.6	Y	Absent		TSS-2540-LOW(7)
L2038938-07A	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-07B	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-07C	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-07D	Plastic 250ml HNO3 preserved	D	<2	<2	2.0	Y	Absent		A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-CU-6020T(180)
L2038938-07E	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-07F	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-07G	Plastic 950ml unpreserved	B	7	7	2.6	Y	Absent		TSS-2540-LOW(7)
L2038938-08A	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-08B	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-08C	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L2038938-08D	Plastic 250ml HNO3 preserved	D	<2	<2	2.0	Y	Absent		A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-CU-6020T(180)
L2038938-08E	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-08F	Amber 500ml unpreserved	D	7	7	2.0	Y	Absent		A2-PCB-8082(7)
L2038938-09A	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)
L2038938-09B	Vial HCl preserved	B	NA		2.6	Y	Absent		8260(14)

*Values in parentheses indicate holding time in days

Project Name:	NBH- GROUNDWATER	**Lab Number:**	L2038938
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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: DU Report with 'J' Qualifiers

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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.

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'.

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. If a 'Total' result is requested, the results of its individual components will also be reported.

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.)

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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: DU Report with 'J' Qualifiers

Project Name:	NBH- GROUNDWATER	**Lab Number:**	L2038938
Project Number:	60597627	**Report Date:**	10/16/20

Data Qualifiers

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.

Report Format: DU Report with 'J' Qualifiers

Project Name:	NBH- GROUNDWATER	**Lab Number:**	L2038938
Project Number:	60597627	**Report Date:**	10/16/20

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

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 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
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.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **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), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

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.

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.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 9/17/20

ALPHA Job #: L2038938

ALPHA ANALYTICAL
8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Client Information

Client: AECOM
Address: 250 Apollo Dr.
Chelmsford MA 01842
Phone: 978-905-2248
Email: helen.jones@gmail.com

Additional Project Information:

Project Information

Project Name: NBH - Groundwater
Project Location: New Bedford MA
Project #:
Project Manager: Will Humphries
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☒ PCB ☐ PEST 8082 - 608.2
TPH: ☐ Quant Only ☐ Fingerprint
TSS 2540D
Cadmium, Chromium, Copper, Lead via 6020A

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS	EPH	VPH	PCB	TPH	TSS	Cd,Cr,Cu,Pb via 6020A	Sample Comments	TOTAL # BOTTLES
38938-01	MW-1-091620	9/16/20	1610	Ag	HJ	X					X		X	X		7
-02	MW-3-091620	9/16/20	1055	Ag	BB	X					X		X	X		7
-03	MW-4A-091620	9/16/20	1250	Ag	BB	X					X		X	X		7
-04	FD01-091620	9/16/20	1255	Ag	BB	X					X		X	X		7
-05	MW-5-091620	9/16/20	1310	Ag	HJ	X					X		X	X	MS/MSD	19
-06	MW-6-091620	9/16/20	1710	Ag	BB	X					X		X	X		7
-07	MW-7A-091620	9/16/20	1550	Ag	BB	X					X		X	X		7
-08	EB01-091620	9/16/20	1330	AG	HJ	X					X		(HB)	X		6
-09	TB-01-091620	9/14/20	0900	Ag	TR	X										2
	Container Type					V					A		P	P		
	Preservative					HU					A		A	C		

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
AECOM	9/17/20 1240		9/17/20 1240
	9/17/20 1810		9/17/20 1810
	9/17/20 2110		9/17/20 2110
	9/17/20 2050		9/17/20 2050

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)