HINCKLEY ALLEN

20 Church Street
Hartford, CT 06103-1221

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hinckleyallen.com

MEMORANDUM

TO: Glastonbury Town Plan and Zoning Commission

CC: Rebecca Augur, Director of Planning & Land Use Services
Jonathan Mullen, Planner

FROM: Hinckley, Allen & Snyder LLP (Andrea Gomes, Tim Hollister)

DATE: June 15, 2022

Re: Applicant's Third Set of Supplemental Materials – Application for Site Plan Approval for 74 Rental Apartments at 1199 Manchester Road, Glastonbury, CT, "Buckingham Place"

In anticipation of the June 21, 2022 continued public hearing, and as a supplement to the materials submitted to the Town Plan and Zoning Commission ("Commission") on June 9, this memorandum is intended to provide the Commission with additional information pertaining to the above-captioned application. Narrative responses are below, with accompanying exhibits appended here, as indicated.

1. Supplement to Tab 8 of June 9 Package, Conservation Commission's Questions and Comments:

   a. In the applicant's response to item no. 3, there is a typo. "Heating units will be selected for their high 'specific absorption' or SAR rating" should be "Heating units will be selected for their high SEER rating," which refers to the energy efficient rating of an air-conditioning unit; the ratio of the cooling capacity to the power input. The higher the SEER, the better, as higher-rated units will result in better overall comfort for the residents, and in long-term energy savings. These units are sustainable because they lower energy demand, reduce air emissions by using less energy, and reduce the overall impact on the environment.

   b. The Conservation Commission also requested additional information on environmental testing of the subject property. The applicant has conducted an

analysis of the groundwater on the subject property by analyzing a May 23, 2022 sample from an existing monitoring well. As noted in the attached letter from Boston Environmental Corporation (*see* Tab 1), the results show that metals, barium, chromium, and other parameters were detected below the applicable Connecticut Groundwater Protection Criteria. Uranium and radon were also detected but "significantly below" the drinking water standard. These results are consistent with typical background conditions for the area. The sample also showed no indication that a release of oil or hazardous materials has occurred on the subject property.

The water analysis report at page 7 concludes: "Based on the above results, this water was safe for drinking purposes at the time of collection."

2. Supplement to Tab 9 of June 9 Package, Commission and Public Questions and Comments:

a. With respect to item no. 4(a), regarding the safety of the Manchester Road / Hebron Avenue intersection: The applicant has spoken with Sgt. Pagliughi of the Traffic Division of the Glastonbury Police Department. Sgt. Pagliughi was unaware of any standing issues at this location. He also questioned the Sergeant who had held this position prior to him, and that officer also confirmed that there was no unusual or unexpected level of safety complaints at this location.

3. Architectural and Site Design Review Committee. The applicant received the ASDRC's final advisory report on June 9, after it had submitted its supplemental materials package. The applicant's response to the report is at Tab 2. As reflected in the applicant's June 9 materials, the architectural plans already have been revised in response to the comments made by the ASDRC at its May 17 and May 25 meetings as follows:

a. The building facades have been articulated with more detail to reflect the addition of intersecting gables on the roof, thereby reducing the apparent massing of the building.
b. The main roof has been redesigned as a hipped roof.
c. Additional stone veneer has been added at the first floor of the building and more detailing at the gables has been introduced, including decorative brackets at the pediments of the gables, thereby engaging the pediments into the top story of the building.
d. The floor plans have been modified to reflect the exterior elevation changes.
e. The location of the Housing Opportunity Units have been clarified on the plans.

1

June 14, 2022 BEC Project 20187

Mr. Richard P. Hayes Jr.
Hayes Developers
1481 Pleasant Valley Parkway
Manchester, Connecticut 06041

RE: Groundwater Sampling Results Letter
1199 Manchester Road
Glastonbury, Connecticut

Dear Mr. Hayes:

At the request of Hayes Developers (Hayes) Boston Environmental Corporation (BEC) visited the 1199 Manchester Road, Glastonbury, Connecticut Site to inspect, and collect a groundwater sample from, an existing monitoring well. According to a "Subsurface Exploration & Slope Development at Proposed Apartment Building with Excavation and Removal of Sand and Gravel at 1195 Manchester Road; Glastonbury, CT", report prepared by Welti Geotechnical, P.C. in February 2022, the groundwater sampling location B-3 (well) was installed as part of subsurface explorations completed in 2005. Hayes requested that BEC sample the well for contamination that may be present on the undeveloped land. Figure 1 depicts the general layout of the Site and the approximate location of groundwater sampling point, B-3 (well).

Groundwater Sampling Activities

On May 23, 2022, BEC arrived on Site and inspected the well. B-3 (well) was in good condition with a locking cap secured by a pad lock. After the lock was removed a Solinst Oil Water Probe was used to gauge the well. No light non-aqueous phase liquid (LNAPL) was detected. Groundwater was measured to be 62.24 feet below the top of the metal riser. The bottom of the well was found to be 68.10 feet below the top of the riser. Five well volumes were purged using a 1.5-inch diameter polyvinyl chloride (PVC) bailer. The purge water did not have any odors, nor did it exhibit any signs of contamination. The water was, however, slightly turbid.

After the well was purged groundwater was placed in laboratory provided, pre-labeled sample containers. The sample was analyzed for extractable petroleum hydrocarbons (EPH), volatile petroleum hydrocarbons (VPH), Resource Conservation and Recovery Act (RCRA) eight metals, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs) by Pace New England of East Longmeadow, Massachusetts. Additionally, arsenic, uranium, and radon

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Brockton, MA 02302
P: 508.897.8062 C: 617.877.6648
www.bostonenvcorp.com

were analyzed by Aquatek of Woodbridge, Connecticut. Before leaving the Site, the well was secured with a new pad lock.

Groundwater Results

Results of the groundwater sample collected from B-3 (well) are summarized on the attached Table 1 – Groundwater Analytical Results and the complete laboratory analytical reports are included as Attached A. Results for EPH, VPH, VOC, and SVOCs analysis were all not detected above the laboratory limit. Metals, arsenic, barium, cadmium, chromium, and lead were detected below the applicable Groundwater Protection Criteria. Radionuclides uranium and radon were also detected but significantly below the drinking water standard.

Conclusions

Results of the groundwater sample collected on May 23, 2022, show no indication that a release of oil or hazardous materials has occurred at 1199 Manchester Road, Glastonbury, Connecticut Site. Results are consent with typical background conditions for the area. No parameter was detected at a concentration greater than the applicable Connecticut Groundwater Protection Criteria as established in the Remediation Standard Regulations under 22a-133k-3. Additionally, no parameter exceeded a reportable concentration under the Connecticut Significant Environmental Hazard Reporting Requirements under 22a-6U of the Connecticut General Statues.

Should you have any questions regarding this proposal or if we can be of assistance in any manner, please feel free to contact me at (508) 897-8062 or on my cell at (617)-877-6648.

Sincerely,

T. Michael Toomey
Executive Vice President

CC: R. Stromberg, LSP (BEC)
Attachments:
Figure 1 – Site Sketch
Table 1 – Groundwater Analytical Results
Attachment A – Laboratory Analytical Reports

ATTACHMENTS

FIGURE 1 - SITE SKETCH

1199 MANCHESTER ROAD
GLASTONBURY, CONNECTICUT

BOSTON ENVIRONMENTAL CORPORATION

APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL B-3 SAMPLED BY BEC IN MAY 2022.

1199 Manchester Rd

Google Earth

N

300 ft

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS
HAYES DEVELOPERS
1199 MANCHESTER ROAD
GLASTONBURY, CONNECTICUT
BEC JOB NUMBER 22-120

Parameter	RSR Criteria			Connecticut Water Quality Standards			SAMPLING LOCATION
	GA GWPC	I/C VC	RES VC	WQS ALC FWA	WQS ALC FWC	WQS HHC WO	B-3 (Well)
Sampling Date							5/23/2022 9:45:00 AM
MADEP EPH rev 2.1 (µg/L)							
C9-C18 ALIPHATICS	~	~	~	~	~	~	ND (97)
C19-C36 ALIPHATICS	~	~	~	~	~	~	ND (97)
C11-C22 AROMATICS	~	~	~	~	~	~	ND (97)
ACENAPHTHENE	~	50000	30500	~	~	2.7	ND (1.9)
ANTHRACENE	2000	~	~	~	~	0.44	ND (1.9)
FLUORANTHENE	280	~	~	~	~	1.01	ND (1.9)
FLUORENE	280	~	~	~	~	4.37	ND (1.9)
2-METHYLNAPHTHALENE	28	13100	1000	~	~	~	ND (1.9)
NAPHTHALENE	280	~	~	~	~	677	ND (1.9)
PYRENE	200	~	~	~	~	4.37	ND (1.9)
MADEP-VPH-Feb 2018 Rev 2.1 (µg/L)							
C5-C8 ALIPHATICS	~	~	~	~	~	~	ND (100)
C9-C12 ALIPHATICS	~	~	~	~	~	~	ND (100)
C9-C10 AROMATICS	~	~	~	~	~	~	ND (100)
BENZENE	1	530	215	~	~	1.2	ND (1.0)
ETHYLBENZENE	700	50000	50000	~	~	700	ND (1.0)
MTBE	100	50000	50000	~	~	~	ND (1.0)
NAPHTHALENE	280	~	~	~	~	677	ND (5.0)
TOLUENE	1000	50000	23500	~	~	1000	ND (1.0)
M/P-XYLENE	530	50000	21300	~	~	~	ND (2.0)
O-XYLENE	530	50000	21300	~	~	~	ND (1.0)
SW-846 6020B (µg/L)							
Arsenic	50	~	~	340	150	0.011	3.1
Barium	1000	~	~	~	~	~	540
Cadmium	5	~	~	2.02	0.125	5	0.33
Chromium	50	~	~	~	~	~	16
LEAD	15	~	~	30	1.2	15	14
Selenium	50	~	~	20	5	50	ND (5.0)
Silver	36	~	~	1.02	~	175	ND (0.20)
SW-846 7470A (mg/L)							
Mercury	0.002	~	~	0.0014	0.00077	0.00005	ND (0.00010)
EPA 200.8 (µg/L)							
Arsenic	50	~	~	340	150	0.011	2.4
Uranium (Mass)	30	~	~	~	~	~	16.1
SM 7500-RN (pCi/L)							
Radon Water Single	~	~	~	~	~	~	560

BOSTON ENVIRONMENTAL CORPORATION

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS
HAYES DEVELOPERS
1199 MANCHESTER ROAD
GLASTONBURY, CONNECTICUT
BEC JOB NUMBER 22-120

Parameter	RSR Criteria			Connecticut Water Quality Standards			SAMPLING LOCATION
	GA GWPC	I/C VC	RES VC	WQS ALC FWA	WQS ALC FWC	WQS HHC WO	B-3 (Well)
Sampling Date							5/23/2022 9:45:00 AM
SW-846 8260D (µg/L)							
ACETONE	700	50000	50000	~	~	~	ND (10)
ACRYLONITRILE	0.5	50000	37100	~	~	0.059	ND (2.0)
BENZENE	1	530	215	~	~	1.2	ND (0.50)
BROMOBENZENE	~	~	~	~	~	~	ND (0.50)
BROMODICHLOROMETHANE	1	35	1.1	~	~	0.56	ND (0.50)
BROMOFORM	4	2300	75	~	~	4.3	ND (0.50)
BROMOMETHANE	3.5	1100	83	~	~	48	ND (2.0)
2-BUTANONE (MEK)	400	50000	50000	~	~	~	ND (5.0)
N-BUTYLBENZENE	350	21800	1600	~	~	~	ND (1.0)
SEC-BUTYLBENZENE	350	1500	20100	~	~	~	ND (1.0)
TERT-BUTYLBENZENE	350	25300	1900	~	~	~	ND (1.0)
CARBON DISULFIDE	40	2100	5200	~	~	~	ND (5.0)
CARBON TETRACHLORIDE	5	14	5.3	~	~	0.25	ND (0.50)
CHLOROBENZENE	100	23000	1800	~	~	100	ND (0.50)
CHLORODIBROMOMETHANE	0.5	~	~	~	~	0.41	ND (0.50)
CHLOROETHANE	7.4	360	22	~	~	~	ND (0.50)
CHLOROFORM	6	62	26	~	~	5.7	ND (0.50)
CHLOROMETHANE	18	1800	130	~	~	5.7	ND (0.60)
2-CHLOROTOLUENE	140	28300	2100	~	~	~	ND (0.50)
4-CHLOROTOLUENE	140	25200	1900	~	~	~	ND (0.50)
1,2-DIBROMO-3-CHLOROPROPANE	0.2	~	~	~	~	~	ND (1.0)
1,2-DIBROMOETHANE (EDB)	0.05	11	0.3	~	~	~	ND (0.50)
DIBROMOMETHANE	~	~	~	~	~	~	ND (0.50)
1,2-DICHLOROBENZENE	600	50000	5100	~	~	2700	ND (0.50)
1,3-DICHLOROBENZENE	600	50000	4300	~	~	400	ND (0.50)
1,4-DICHLOROBENZENE	75	3400	1400	~	~	400	ND (0.50)
TRANS-1,4-DICHLORO-2-BUTENE	~	~	~	~	~	~	ND (2.0)
DICHLORODIFLUOROMETHANE	350	720	53	~	~	~	ND (0.50)
1,1-DICHLOROETHANE	70	41000	3000	~	~	~	ND (0.50)
1,2-DICHLOROETHANE	1	68	6.5	~	~	0.38	ND (0.50)
1,1-DICHLOROETHYLENE	7	920	190	~	~	0.057	ND (0.50)
CIS-1,2-DICHLOROETHYLENE	70	~	~	~	~	~	ND (0.50)
TRANS-1,2-DICHLOROETHYLENE	100	~	~	~	~	100	ND (1.0)
1,2-DICHLOROPROPANE	5	58	7.4	~	~	0.52	ND (0.50)
1,3-DICHLOROPROPANE	~	~	~	~	~	~	ND (0.50)
2,2-DICHLOROPROPANE	~	~	~	~	~	~	ND (0.50)
1,1-DICHLOROPROPENE	~	~	~	~	~	~	ND (0.50)
CIS-1,3-DICHLOROPROPENE	0.5	360	11	~	~	10	ND (0.50)
TRANS-1,3-DICHLOROPROPENE	0.5	360	11	~	~	10	ND (0.50)
ETHYLBENZENE	700	50000	50000	~	~	700	ND (0.50)
HEXACHLOROBUTADIENE	7.4	~	~	~	~	0.44	ND (0.60)
2-HEXANONE	35	94000	7600	~	~	~	ND (5.0)
ISOPROPYLBENZENE	25	2200	900	~	~	~	ND (0.50)
P-ISOPROPYLTOLUENE	25	2100	870	~	~	~	ND (0.50)
MTBE	100	50000	50000	~	~	~	ND (0.50)
METHYLENE CHLORIDE	5	2200	160	~	~	4.7	ND (5.0)
MIBK	350	50000	13000	~	~	~	ND (5.0)
NAPHTHALENE	280	~	~	~	~	677	ND (2.0)
N-PROPYLBENZENE	50	2900	1200	~	~	~	ND (1.0)
STYRENE	100	42000	3100	~	~	~	ND (1.0)
1,1,1,2-TETRACHLOROETHANE	1	64	2	~	~	~	ND (0.50)
1,1,2,2-TETRACHLOROETHANE	0.5	54	1.8	~	~	0.17	ND (0.50)
TETRACHLOROETHYLENE	5	810	340	~	~	0.8	ND (1.0)
TETRAHYDROFURAN	4	3700	250	~	~	~	ND (10)
TOLUENE	1000	50000	23500	~	~	1000	ND (1.0)
1,2,3-TRICHLOROBENZENE	~	~	~	~	~	~	ND (1.0)
1,2,4-TRICHLOROBENZENE	70	660	12	~	~	70	ND (0.50)
1,1,1-TRICHLOROETHANE	200	16000	650	~	~	~	ND (0.50)
1,1,2-TRICHLOROETHANE	5	2900	220	~	~	0.6	ND (0.50)
TRICHLOROETHYLENE	5	67	27	~	~	2.7	ND (1.0)
TRICHLOROFLUOROMETHANE	1000	4300	1300	~	~	~	ND (2.0)
1,2,3-TRICHLOROPROPANE	~	~	~	~	~	~	ND (0.50)
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	1000	810	330	~	~	~	ND (0.50)
1,2,4-TRIMETHYLBENZENE	140	12800	940	~	~	~	ND (0.50)
1,3,5-TRIMETHYLBENZENE	140	10000	730	~	~	~	ND (0.50)
VINYL CHLORIDE	2	52	1.6	~	~	2	ND (1.0)
M/P-XYLENE	530	50000	21300	~	~	~	ND (2.0)
O-XYLENE	530	50000	21300	~	~	~	ND (1.0)
SW-846 8270E (µg/L)							
ACENAPHTHYLENE	420	~	~	~	~	4.37	ND (0.19)
BENZO(A)ANTHRACENE	0.06	~	~	~	~	0.044	ND (0.049)
BENZO(A)PYRENE	0.2	~	~	~	~	0.0044	ND (0.097)
BENZO(B)FLUORANTHENE	0.08	~	~	~	~	0.044	ND (0.049)
BENZO(G,H,I)PERYLENE	0.48	~	~	~	~	0.44	ND (0.097)
BENZO(K)FLUORANTHENE	0.5	~	~	~	~	0.044	ND (0.19)
CHRYSENE	4.8	~	~	~	~	0.44	ND (0.097)
DIBENZ(A,H)ANTHRACENE	0.1	~	~	~	~	0.0009	ND (0.097)
INDENO(1,2,3-CD)PYRENE	0.1	~	~	~	~	0.044	ND (0.097)
PHENANTHRENE	200	~	~	~	~	4.37	ND (0.049)

NOTES:
1. ND = Not detected above the lab reporting limits shown in parenthesis.
2. ~ = No Standard available
3. For water samples shaded values exceed the RSR Groundwater (GWP), Surface (SWP), or Volatilization (RES Vol. or I/C Vol.) criteria for the parameter.
4. For water samples bolded values exceed the Connecticut Water Quality Standards (Appendix D).
5. RSR criteria are in the same units as the analyte.

BOSTON ENVIRONMENTAL CORPORATION

Aquatek LABS
3 Research Drive - Woodbridge, CT 06525

Water Analysis Report

TEST ID: B052422038
DATE SAMPLED: 5/23/2022
SAMPLE POINT: OTHER
NO TREATMENT
SAMPLED BY: GENE FERCODINI

TO: ADVANCED WATER SYSTEMS 436

PROPERTY LOCATION: 1199 MANCHESTER ROAD WELL B 3 - GLASTONBURY , CT

CHEMICALS	RESULT	UNITS	LIMITS		MRL	REF	METHOD
Arsenic	2.4	ug/L	10.0	P	1.0		EPA 200.8
Uranium (Mass)	16.1	ug/L	30	P	1.0		EPA 200.8
RADON WATER SINGLE	**RESULT**	**UNITS**	**LIMITS**		**MRL**	**REF**	**METHOD**
Radon Water Single	560	pCi/L	5000	S	51		SM 7500-RN

CONCLUSION: Based on the above results, this water was safe for drinking purposes at the time of collection.

P = Primary limit, used to judge potability
S = Secondary limit, recommended but not required
MRL = Minimum Reportable Level
* Limit exceeded
ND = None Detected
CT License #PH-0466, Aquatek Labs

R = Reference Lab Work

Austin Xu Ph.D.
Laboratory Director

Rachel Kolva
Laboratory Co-Director

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

June 7, 2022

Mike Toomy
Boston Environmental Corp. - Brockton, MA
338 Howard Street
Brockton, MA 02302

Project Location: 1199 Manchester Rd., Glastonbury, CT
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 22E1539

Enclosed are results of analyses for samples as received by the laboratory on May 23, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee
Project Manager

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Boston Environmental Corp. - Brockton, MA
338 Howard Street
Brockton, MA 02302
ATTN: Mike Toomy

REPORT DATE: 6/7/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22E1539

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 1199 Manchester Rd., Glastonbury, CT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
B-3 (Well)	22E1539-01	Ground Water		MADEP EPH rev 2.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020B SW-846 7470A SW-846 8260D SW-846 8270E	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8270E, only a select list of PAHs was analyzed and reported in order to achieve lower detection limits than possible with EPH analysis.

SW-846 7470A

Qualifications:

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Mercury
B309943-BSD1

SW-846 8260D

Qualifications:

L-01

Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Bromoform
B309151-BS1, S071957-CCV1

Bromomethane
B309151-BS1, S071957-CCV1

V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

Chloroethane
B309151-BS1, S071957-CCV1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Bromoform
B309151-BS1, S071957-CCV1

Bromomethane
B309151-BS1, S071957-CCV1

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MADEP-VPH-Feb 2018 Rev 2.1

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

Analytical column used for VPH analysis is Restek, Rtx-502.2, 105meter, 0.53mmID, 3um df. Trap used for VPH analysis is Carbopack B/CarboSieveS-III.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 1199 Manchester Rd., Glastonbur Sample Description: Work Order: 22E1539

Date Received: 5/23/2022

Field Sample #: B-3 (Well) Sampled: 5/23/2022 09:45

Sample ID: 22E1539-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Acrylonitrile	ND	2.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Benzene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Bromobenzene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Bromoform	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
2-Butanone (MEK)	ND	5.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Carbon Disulfide	ND	5.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Carbon Tetrachloride	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Chlorobenzene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Chloroethane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Chloroform	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Chloromethane	ND	0.60	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
2-Chlorotoluene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
4-Chlorotoluene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Dibromomethane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,2-Dichlorobenzene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,3-Dichlorobenzene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,4-Dichlorobenzene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Dichlorodifluoromethane (Freon 12)	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,1-Dichloroethane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,2-Dichloroethane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,1-Dichloroethylene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
cis-1,2-Dichloroethylene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,2-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
2,2-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Ethylbenzene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
2-Hexanone (MBK)	ND	5.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Isopropylbenzene (Cumene)	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
p-Isopropyltoluene (p-Cymene)	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 1199 Manchester Rd., Glastonbur Sample Description: Work Order: 22E1539

Date Received: 5/23/2022

Field Sample #: B-3 (Well) Sampled: 5/23/2022 09:45

Sample ID: 22E1539-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Methyl tert-Butyl Ether (MTBE)	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
4-Methyl-2-pentanone (MIBK)	ND	5.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,1,1-Trichloroethane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,1,2-Trichloroethane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,2,3-Trichloropropane	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
Vinyl Chloride	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260D	5/24/22	5/24/22 18:02	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		5/24/22 18:02
Toluene-d8	99.0	70-130		5/24/22 18:02
4-Bromofluorobenzene	100	70-130		5/24/22 18:02

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 1199 Manchester Rd., Glastonbur Sample Description: Work Order: 22E1539

Date Received: 5/23/2022

Field Sample #: B-3 (Well) Sampled: 5/23/2022 09:45

Sample ID: 22E1539-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthylene (SIM)	ND	0.19	µg/L	1		SW-846 8270E	5/28/22	6/6/22 17:15	IMR
Benzo(a)anthracene (SIM)	ND	0.049	µg/L	1		SW-846 8270E	5/28/22	6/6/22 17:15	IMR
Benzo(a)pyrene (SIM)	ND	0.097	µg/L	1		SW-846 8270E	5/28/22	6/6/22 17:15	IMR
Benzo(b)fluoranthene (SIM)	ND	0.049	µg/L	1		SW-846 8270E	5/28/22	6/6/22 17:15	IMR
Benzo(g,h,i)perylene (SIM)	ND	0.097	µg/L	1		SW-846 8270E	5/28/22	6/6/22 17:15	IMR
Benzo(k)fluoranthene (SIM)	ND	0.19	µg/L	1		SW-846 8270E	5/28/22	6/6/22 17:15	IMR
Chrysene (SIM)	ND	0.097	µg/L	1		SW-846 8270E	5/28/22	6/6/22 17:15	IMR
Dibenz(a,h)anthracene (SIM)	ND	0.097	µg/L	1		SW-846 8270E	5/28/22	6/6/22 17:15	IMR
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.097	µg/L	1		SW-846 8270E	5/28/22	6/6/22 17:15	IMR
Phenanthrene (SIM)	ND	0.049	µg/L	1		SW-846 8270E	5/28/22	6/6/22 17:15	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
o-Terphenyl (OTP)	72.6	30-130		6/6/22 17:15

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Project Location: 1199 Manchester Rd., Glastonbur Sample Description: Work Order: 22E1539

Date Received: 5/23/2022

Field Sample #: B-3 (Well) Sampled: 5/23/2022 09:45

Sample ID: 22E1539-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	97	µg/L	1		MADEP EPH rev 2.1	5/28/22	6/6/22 15:07	TYH
C19-C36 Aliphatics	ND	97	µg/L	1		MADEP EPH rev 2.1	5/28/22	6/6/22 15:07	TYH
Unadjusted C11-C22 Aromatics	ND	97	µg/L	1		MADEP EPH rev 2.1	5/28/22	6/6/22 15:07	TYH
C11-C22 Aromatics	ND	97	µg/L	1		MADEP EPH rev 2.1	5/28/22	6/6/22 15:07	TYH
Acenaphthene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	5/28/22	6/6/22 15:07	TYH
Anthracene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	5/28/22	6/6/22 15:07	TYH
Fluoranthene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	5/28/22	6/6/22 15:07	TYH
Fluorene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	5/28/22	6/6/22 15:07	TYH
2-Methylnaphthalene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	5/28/22	6/6/22 15:07	TYH
Naphthalene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	5/28/22	6/6/22 15:07	TYH
Pyrene	ND	1.9	µg/L	1		MADEP EPH rev 2.1	5/28/22	6/6/22 15:07	TYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	68.6	40-140		6/6/22 15:07
o-Terphenyl (OTP)	69.2	40-140		6/6/22 15:07
2-Bromonaphthalene	93.9	40-140		6/6/22 15:07
2-Fluorobiphenyl	90.8	40-140		6/6/22 15:07

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Project Location: 1199 Manchester Rd., Glastonbur Sample Description: Work Order: 22E1539

Date Received: 5/23/2022

Field Sample #: B-3 (Well) Sampled: 5/23/2022 09:45

Sample ID: 22E1539-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	5/25/22	5/25/22 19:28	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,5-Dibromotoluene (FID)	116	70-130		5/25/22 19:28
2,5-Dibromotoluene (PID)	118	70-130		5/25/22 19:28

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 1199 Manchester Rd., Glastonbur Sample Description: Work Order: 22E1539

Date Received: 5/23/2022

Field Sample #: B-3 (Well) Sampled: 5/23/2022 09:45

Sample ID: 22E1539-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.1	0.80	µg/L	1		SW-846 6020B	5/24/22	5/25/22 14:58	QNW
Barium	540	10	µg/L	1		SW-846 6020B	5/24/22	5/25/22 14:58	QNW
Cadmium	0.33	0.20	µg/L	1		SW-846 6020B	5/24/22	5/25/22 14:58	QNW
Chromium	16	1.0	µg/L	1		SW-846 6020B	5/24/22	5/25/22 14:58	QNW
Lead	14	0.50	µg/L	1		SW-846 6020B	5/24/22	5/25/22 14:58	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/3/22	6/7/22 11:57	TDK
Selenium	ND	5.0	µg/L	1		SW-846 6020B	5/24/22	5/25/22 14:58	QNW
Silver	ND	0.20	µg/L	1		SW-846 6020B	5/24/22	5/25/22 14:58	QNW

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Sample Extraction Data

Prep Method: SW-846 3510C **Analytical Method: MADEP EPH rev 2.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1539-01 [B-3 (Well)]	B309495	975	1.90	05/28/22

Prep Method: MA VPH **Analytical Method: MADEP-VPH-Feb 2018 Rev 2.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1539-01 [B-3 (Well)]	B309212	5	5.00	05/25/22

Prep Method: SW-846 3005A **Analytical Method: SW-846 6020B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1539-01 [B-3 (Well)]	B309128	50.0	50.0	05/24/22

Prep Method: SW-846 7470A/7471A **Analytical Method: SW-846 7470A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E1539-01 [B-3 (Well)]	B309943	10.0	10.0	06/03/22

Prep Method: SW-846 5030B **Analytical Method: SW-846 8260D**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1539-01 [B-3 (Well)]	B309151	5	5.00	05/24/22

Prep Method: SW-846 3510C **Analytical Method: SW-846 8270E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1539-01 [B-3 (Well)]	B309746	975	1.90	05/28/22

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309151 - SW-846 5030B										
Blank (B309151-BLK1)				Prepared & Analyzed: 05/24/22						
Acetone	ND	10	µg/L							
Acrylonitrile	ND	2.0	µg/L							
Benzene	ND	0.50	µg/L							
Bromobenzene	ND	0.50	µg/L							
Bromodichloromethane	ND	0.50	µg/L							
Bromoform	ND	0.50	µg/L							
Bromomethane	ND	2.0	µg/L							
2-Butanone (MEK)	ND	5.0	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	0.50	µg/L							
Chlorobenzene	ND	0.50	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	0.50	µg/L							
Chloroform	ND	0.50	µg/L							
Chloromethane	ND	0.60	µg/L							
2-Chlorotoluene	ND	0.50	µg/L							
4-Chlorotoluene	ND	0.50	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	1.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	0.50	µg/L							
1,2-Dichlorobenzene	ND	0.50	µg/L							
1,3-Dichlorobenzene	ND	0.50	µg/L							
1,4-Dichlorobenzene	ND	0.50	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	0.50	µg/L							
1,1-Dichloroethane	ND	0.50	µg/L							
1,2-Dichloroethane	ND	0.50	µg/L							
1,1-Dichloroethylene	ND	0.50	µg/L							
cis-1,2-Dichloroethylene	ND	0.50	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	0.50	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	0.50	µg/L							
1,1-Dichloropropene	ND	0.50	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	0.50	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	5.0	µg/L							
Isopropylbenzene (Cumene)	ND	0.50	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	0.50	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	0.50	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	5.0	µg/L							
Naphthalene	ND	2.0	µg/L							
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B309151 - SW-846 5030B											
Blank (B309151-BLK1)				Prepared & Analyzed: 05/24/22							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L								
Tetrachloroethylene	ND	1.0	µg/L								
Tetrahydrofuran	ND	10	µg/L								
Toluene	ND	1.0	µg/L								
1,2,3-Trichlorobenzene	ND	1.0	µg/L								
1,2,4-Trichlorobenzene	ND	0.50	µg/L								
1,1,1-Trichloroethane	ND	0.50	µg/L								
1,1,2-Trichloroethane	ND	0.50	µg/L								
Trichloroethylene	ND	1.0	µg/L								
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L								
1,2,3-Trichloropropane	ND	0.50	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	µg/L								
1,2,4-Trimethylbenzene	ND	0.50	µg/L								
1,3,5-Trimethylbenzene	ND	0.50	µg/L								
Vinyl Chloride	ND	1.0	µg/L								
m+p Xylene	ND	2.0	µg/L								
o-Xylene	ND	1.0	µg/L								
Surrogate: 1,2-Dichloroethane-d4	*25.2*		µg/L	25.0		101		70-130			
Surrogate: Toluene-d8	*25.1*		µg/L	25.0		100		70-130			
Surrogate: 4-Bromofluorobenzene	*25.6*		µg/L	25.0		102		70-130			
LCS (B309151-BS1)				Prepared & Analyzed: 05/24/22							
Acetone	93.9	10	µg/L	100		93.9		40-160			
Acrylonitrile	10.1	2.0	µg/L	10.0		101		70-130			
Benzene	9.41	0.50	µg/L	10.0		94.1		70-130			
Bromobenzene	10.8	0.50	µg/L	10.0		108		70-130			
Bromodichloromethane	10.3	0.50	µg/L	10.0		103		70-130			
Bromoform	13.1	0.50	µg/L	10.0		**131**	*	70-130			L-01, V-20
Bromomethane	16.4	2.0	µg/L	10.0		**164**	*	40-160			L-01, V-20
2-Butanone (MEK)	86.9	5.0	µg/L	100		86.9		40-160			
n-Butylbenzene	9.80	1.0	µg/L	10.0		98.0		70-130			
sec-Butylbenzene	10.3	1.0	µg/L	10.0		103		70-130			
tert-Butylbenzene	10.5	1.0	µg/L	10.0		105		70-130			
Carbon Disulfide	114	5.0	µg/L	100		114		70-130			
Carbon Tetrachloride	11.2	0.50	µg/L	10.0		112		70-130			
Chlorobenzene	11.4	0.50	µg/L	10.0		114		70-130			
Chlorodibromomethane	11.2	0.50	µg/L	10.0		112		40-160			
Chloroethane	12.5	0.50	µg/L	10.0		125		70-130			V-06
Chloroform	10.6	0.50	µg/L	10.0		106		70-130			
Chloromethane	9.53	0.60	µg/L	10.0		95.3		40-160			
2-Chlorotoluene	10.2	0.50	µg/L	10.0		102		70-130			
4-Chlorotoluene	10.7	0.50	µg/L	10.0		107		70-130			
1,2-Dibromo-3-chloropropane (DBCP)	10.0	1.0	µg/L	10.0		100		70-130			
1,2-Dibromoethane (EDB)	11.7	0.50	µg/L	10.0		117		70-130			
Dibromomethane	11.2	0.50	µg/L	10.0		112		70-130			
1,2-Dichlorobenzene	10.9	0.50	µg/L	10.0		109		70-130			
1,3-Dichlorobenzene	10.9	0.50	µg/L	10.0		109		70-130			
1,4-Dichlorobenzene	10.7	0.50	µg/L	10.0		107		70-130			
trans-1,4-Dichloro-2-butene	8.99	2.0	µg/L	10.0		89.9		70-130			
Dichlorodifluoromethane (Freon 12)	10.0	0.50	µg/L	10.0		100		40-160			
1,1-Dichloroethane	9.67	0.50	µg/L	10.0		96.7		70-130			
1,2-Dichloroethane	10.3	0.50	µg/L	10.0		103		70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309151 - SW-846 5030B										
LCS (B309151-BS1)				Prepared & Analyzed: 05/24/22						
1,1-Dichloroethylene	10.6	0.50	µg/L	10.0		106	70-130			
cis-1,2-Dichloroethylene	9.78	0.50	µg/L	10.0		97.8	70-130			
trans-1,2-Dichloroethylene	9.76	1.0	µg/L	10.0		97.6	70-130			
1,2-Dichloropropane	9.92	0.50	µg/L	10.0		99.2	70-130			
1,3-Dichloropropane	10.9	0.50	µg/L	10.0		109	70-130			
2,2-Dichloropropane	10.6	0.50	µg/L	10.0		106	70-130			
1,1-Dichloropropene	10.3	0.50	µg/L	10.0		103	70-130			
cis-1,3-Dichloropropene	9.87	0.50	µg/L	10.0		98.7	70-130			
trans-1,3-Dichloropropene	9.82	0.50	µg/L	10.0		98.2	70-130			
1,4-Dioxane	102	50	µg/L	100		102	40-160			†
Ethylbenzene	11.0	0.50	µg/L	10.0		110	70-130			
Hexachlorobutadiene	10.6	0.60	µg/L	10.0		106	40-160			
2-Hexanone (MBK)	92.2	5.0	µg/L	100		92.2	70-130			
Isopropylbenzene (Cumene)	11.1	0.50	µg/L	10.0		111	70-130			
p-Isopropyltoluene (p-Cymene)	10.3	0.50	µg/L	10.0		103	70-130			
Methyl tert-Butyl Ether (MTBE)	9.68	0.50	µg/L	10.0		96.8	70-130			
Methylene Chloride	10.2	5.0	µg/L	10.0		102	70-130			
4-Methyl-2-pentanone (MIBK)	92.2	5.0	µg/L	100		92.2	40-160			
Naphthalene	9.85	2.0	µg/L	10.0		98.5	70-130			
n-Propylbenzene	10.8	1.0	µg/L	10.0		108	70-130			
Styrene	11.2	1.0	µg/L	10.0		112	70-130			
1,1,1,2-Tetrachloroethane	12.2	0.50	µg/L	10.0		122	70-130			
1,1,2,2-Tetrachloroethane	11.7	0.50	µg/L	10.0		117	70-130			
Tetrachloroethylene	11.7	1.0	µg/L	10.0		117	70-130			
Tetrahydrofuran	8.66	10	µg/L	10.0		86.6	70-130			
Toluene	10.6	1.0	µg/L	10.0		106	70-130			
1,2,3-Trichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130			
1,2,4-Trichlorobenzene	10.1	0.50	µg/L	10.0		101	70-130			
1,1,1-Trichloroethane	11.3	0.50	µg/L	10.0		113	70-130			
1,1,2-Trichloroethane	11.6	0.50	µg/L	10.0		116	70-130			
Trichloroethylene	11.2	1.0	µg/L	10.0		112	70-130			
Trichlorofluoromethane (Freon 11)	11.2	2.0	µg/L	10.0		112	40-160			
1,2,3-Trichloropropane	11.6	0.50	µg/L	10.0		116	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.4	0.50	µg/L	10.0		114	70-130			
1,2,4-Trimethylbenzene	10.3	0.50	µg/L	10.0		103	70-130			
1,3,5-Trimethylbenzene	11.0	0.50	µg/L	10.0		110	70-130			
Vinyl Chloride	10.1	1.0	µg/L	10.0		101	70-130			
m+p Xylene	21.9	2.0	µg/L	20.0		110	70-130			
o-Xylene	10.9	1.0	µg/L	10.0		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	*25.2*		µg/L	25.0		101	70-130			
Surrogate: Toluene-d8	*24.7*		µg/L	25.0		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	*25.7*		µg/L	25.0		103	70-130			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309495 - SW-846 3510C										
Blank (B309495-BLK1)				Prepared: 05/28/22 Analyzed: 06/02/22						
C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	*87.3*		µg/L	100		87.3	40-140			
Surrogate: o-Terphenyl (OTP)	*83.9*		µg/L	100		83.9	40-140			
Surrogate: 2-Bromonaphthalene	*104*		µg/L	100		104	40-140			
Surrogate: 2-Fluorobiphenyl	*96.6*		µg/L	100		96.6	40-140			
LCS (B309495-BS1)				Prepared: 05/28/22 Analyzed: 06/02/22						
C9-C18 Aliphatics	502	100	µg/L	600		83.7	0-200			
C19-C36 Aliphatics	753	100	µg/L	800		94.1	0-200			
Unadjusted C11-C22 Aromatics	1590	100	µg/L	1700		93.6	0-200			
Acenaphthene	83.4	2.0	µg/L	100		83.4	40-140			
Anthracene	88.5	2.0	µg/L	100		88.5	40-140			
Fluoranthene	90.9	2.0	µg/L	100		90.9	40-140			
Fluorene	89.9	2.0	µg/L	100		89.9	40-140			
2-Methylnaphthalene	79.2	2.0	µg/L	100		79.2	40-140			
Naphthalene	74.6	2.0	µg/L	100		74.6	40-140			
Pyrene	91.3	2.0	µg/L	100		91.3	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	*95.5*		µg/L	100		95.5	40-140			
Surrogate: o-Terphenyl (OTP)	*84.9*		µg/L	100		84.9	40-140			
Surrogate: 2-Bromonaphthalene	*103*		µg/L	100		103	40-140			
Surrogate: 2-Fluorobiphenyl	*96.2*		µg/L	100		96.2	40-140			
LCS Dup (B309495-BSD1)				Prepared: 05/28/22 Analyzed: 06/02/22						
C9-C18 Aliphatics	510	100	µg/L	600		84.9	0-200	1.46		
C19-C36 Aliphatics	750	100	µg/L	800		93.7	0-200	0.435		
Unadjusted C11-C22 Aromatics	1580	100	µg/L	1700		92.6	0-200	1.02		
Acenaphthene	83.5	2.0	µg/L	100		83.5	40-140	0.158	25	
Anthracene	87.6	2.0	µg/L	100		87.6	40-140	0.993	25	
Fluoranthene	89.8	2.0	µg/L	100		89.8	40-140	1.22	25	
Fluorene	90.0	2.0	µg/L	100		90.0	40-140	0.104	25	
2-Methylnaphthalene	79.2	2.0	µg/L	100		79.2	40-140	0.0530	25	
Naphthalene	74.4	2.0	µg/L	100		74.4	40-140	0.217	25	
Pyrene	90.5	2.0	µg/L	100		90.5	40-140	0.961	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	*97.6*		µg/L	100		97.6	40-140			
Surrogate: o-Terphenyl (OTP)	*85.0*		µg/L	100		85.0	40-140			
Surrogate: 2-Bromonaphthalene	*101*		µg/L	100		101	40-140			
Surrogate: 2-Fluorobiphenyl	*94.4*		µg/L	100		94.4	40-140			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309212 - MA VPH										
Blank (B309212-BLK1)				Prepared & Analyzed: 05/25/22						
Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Butylcyclohexane	ND	1.0	µg/L							
Decane	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
2-Methylpentane	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Nonane	ND	1.0	µg/L							
Pentane	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
2,2,4-Trimethylpentane	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	*39.9*		µg/L	40.0		99.7	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	*45.3*		µg/L	40.0		113	70-130			
LCS (B309212-BS1)				Prepared & Analyzed: 05/25/22						
Benzene	45.0	1.0	µg/L	50.0		90.1	70-130			
Butylcyclohexane	63.1	1.0	µg/L	50.0		126	70-130			
Decane	51.1	1.0	µg/L	50.0		102	70-130			
Ethylbenzene	48.6	1.0	µg/L	50.0		97.2	70-130			
Methyl tert-Butyl Ether (MTBE)	43.9	1.0	µg/L	50.0		87.8	70-130			
2-Methylpentane	50.5	1.0	µg/L	50.0		101	70-130			
Naphthalene	54.5	5.0	µg/L	50.0		109	70-130			
Nonane	61.7	1.0	µg/L	50.0		123	30-130			
Pentane	47.2	1.0	µg/L	50.0		94.3	70-130			
Toluene	45.4	1.0	µg/L	50.0		90.9	70-130			
1,2,4-Trimethylbenzene	50.5	1.0	µg/L	50.0		101	70-130			
2,2,4-Trimethylpentane	45.6	1.0	µg/L	50.0		91.2	70-130			
m+p Xylene	97.8	2.0	µg/L	100		97.8	70-130			
o-Xylene	48.5	1.0	µg/L	50.0		97.0	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	*50.0*		µg/L	40.0		125	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	*51.4*		µg/L	40.0		129	70-130			
LCS Dup (B309212-BSD1)				Prepared & Analyzed: 05/25/22						
Benzene	56.6	1.0	µg/L	50.0		113	70-130	22.8	25	
Butylcyclohexane	63.8	1.0	µg/L	50.0		128	70-130	1.04	25	
Decane	51.2	1.0	µg/L	50.0		102	70-130	0.213	25	
Ethylbenzene	57.9	1.0	µg/L	50.0		116	70-130	17.4	25	
Methyl tert-Butyl Ether (MTBE)	50.3	1.0	µg/L	50.0		101	70-130	13.6	25	
2-Methylpentane	63.4	1.0	µg/L	50.0		127	70-130	22.5	25	
Naphthalene	54.6	5.0	µg/L	50.0		109	70-130	0.174	25	
Nonane	63.3	1.0	µg/L	50.0		127	30-130	2.63	25	
Pentane	52.9	1.0	µg/L	50.0		106	70-130	11.4	25	
Toluene	55.9	1.0	µg/L	50.0		112	70-130	20.7	25	
1,2,4-Trimethylbenzene	55.6	1.0	µg/L	50.0		111	70-130	9.72	25	

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309212 - MA VPH										
LCS Dup (B309212-BSD1)				Prepared & Analyzed: 05/25/22						
2,2,4-Trimethylpentane	56.0	1.0	µg/L	50.0		112	70-130	20.5	25	
m+p Xylene	114	2.0	µg/L	100		114	70-130	15.6	25	
o-Xylene	59.8	1.0	µg/L	50.0		120	70-130	20.8	25	
Surrogate: 2,5-Dibromotoluene (FID)	*47.1*		µg/L	40.0		118	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	*51.2*		µg/L	40.0		128	70-130			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309128 - SW-846 3005A										
Blank (B309128-BLK1)				Prepared: 05/24/22 Analyzed: 05/25/22						
Arsenic	ND	0.80	µg/L							
Barium	ND	10	µg/L							
Cadmium	ND	0.20	µg/L							
Chromium	ND	1.0	µg/L							
Lead	ND	0.50	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.20	µg/L							
LCS (B309128-BS1)				Prepared: 05/24/22 Analyzed: 05/25/22						
Arsenic	474	8.0	µg/L	500		94.8	80-120			
Barium	472	100	µg/L	500		94.3	80-120			
Cadmium	459	2.0	µg/L	500		91.8	80-120			
Chromium	480	10	µg/L	500		95.9	80-120			
Lead	459	5.0	µg/L	500		91.8	80-120			
Selenium	484	50	µg/L	500		96.7	80-120			
Silver	465	2.0	µg/L	500		92.9	80-120			
LCS Dup (B309128-BSD1)				Prepared: 05/24/22 Analyzed: 05/25/22						
Arsenic	446	8.0	µg/L	500		89.3	80-120	6.03	20	
Barium	448	100	µg/L	500		89.7	80-120	5.04	20	
Cadmium	438	2.0	µg/L	500		87.6	80-120	4.73	20	
Chromium	453	10	µg/L	500		90.6	80-120	5.71	20	
Lead	440	5.0	µg/L	500		87.9	80-120	4.39	20	
Selenium	459	50	µg/L	500		91.7	80-120	5.29	20	
Silver	445	2.0	µg/L	500		89.0	80-120	4.36	20	
Batch B309943 - SW-846 7470A/7471A										
Blank (B309943-BLK1)				Prepared: 06/03/22 Analyzed: 06/07/22						
Mercury	ND	0.00010	mg/L							
LCS (B309943-BS1)				Prepared: 06/03/22 Analyzed: 06/07/22						
Mercury	0.00480	0.00010	mg/L	0.00402		119	80-120			
LCS Dup (B309943-BSD1)				Prepared: 06/03/22 Analyzed: 06/07/22						
Mercury	0.00490	0.00010	mg/L	0.00402		**122** *	80-120	2.09	20	L-07

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-01	Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP EPH rev 2.1 in Water	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
MADEP-VPH-Feb 2018 Rev 2.1 in Water	
Unadjusted C5-C8 Aliphatics	CT,NC,ME,NH-P
C5-C8 Aliphatics	CT,NC,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C10 Aromatics	CT,NC,ME,NH-P
Benzene	CT,NC,ME,NH-P
Ethylbenzene	CT,NC,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,ME,NH-P
Naphthalene	CT,NC,ME,NH-P
Toluene	CT,NC,ME,NH-P
m+p Xylene	CT,NC,ME,NH-P
o-Xylene	CT,NC,ME,NH-P
SW-846 6020B in Water	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,RI,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8260D in Water	
Acetone	CT,NH,NY,ME
Acrylonitrile	CT,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NY
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	NY,ME
sec-Butylbenzene	NY,ME

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
tert-Butylbenzene	NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	NY,ME
4-Chlorotoluene	NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NY
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
trans-1,4-Dichloro-2-butene	NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	CT,NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	NY,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,ME
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NH,NY,ME
1,2,4-Trichlorobenzene	CT,NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NY
1,2,4-Trimethylbenzene	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	NH,NY,ME
o-Xylene	NH,NY,ME

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

22E1539

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CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Doc # 381 Rev 5_07/13/2021

Page 1 of 1

Access COC's and Support Requests

Company Name: Boston Environmental Corp
Address: 338 Howard Street, Brockton, MA
Phone: 508-897-8008
Project Name: 1199 Manchester Road
Project Location: Glastonbury, CT
Project Number:
Project Manager: Mike Toomey CC: Bill Podsiad
Pace Quote Name/Number:
Invoice Recipient: Jimmy
Sampled By: BP

Requested Turnaround Time
7-Day ☐ 10-Day ☐
PFAS 10-Day (std) ☐ Due Date: 5-Day

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other:
CLP Like Data Pkg Required: ☐
Email To:
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET ☐
NON SOXHLET ☐

ANALYSIS REQUESTED

Pace Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	# SOX	# EPH	# VPH	# 8-Metals
	[redacted]														
	B-3 (Well)	5/23/22	945a	G	GW	U	4	2	1	/	/	1	1	1	1

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS 4
GLASS 2
PLASTIC 1
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N

*Pace Analytical is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time:	Client Comments:
	5/23/2022	-CT-Standards & Methods.
Received by: (signature)	Date/Time:	-5-Day TAT.
	5-23-22 1515	
Relinquished by: (signature)	Date/Time:	
	5/23-22 1650	
Received by: (signature)	Date/Time:	
	5/23/22 1650	
Relinquished by: (signature)	Date/Time:	
	5/23/22 1830	
Received by: (signature)	Date/Time:	
	5/23/22 1830	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
NA

Special Requirements
☐ MA MCP Required
☐ MCP Certification Form Required
☒ CT RCP Required
☐ RCP Certification Form Required
☐ MA State DW Required

Other
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

Lab Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine wha analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pac Analytical values your partnership on each project and will try to assist with missing information, but wi not be held accountable.

Table of Contents

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client BEC

Received By _____ Date 5/23/20 Time 1830

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____ Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 3 Actual Temp -2.0 By Blank # _____ Actual Temp -

Was Custody Seal Intact? n/a Were Samples Tampered with? n/a

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? F MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? Acid T Base n/a

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	2	1 Liter Plastic		16 oz Amb.	
HCL-	4	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	1	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Con-Test, a Pace Analytical Laboratory

Client: Boston Environmental Corp. - Brockton, M

Project Location: 1199 Manchester Rd., Glastonbury, CT

Project Number: 22E1539

Laboratory Sample ID(s):

22E1539-01

Sample Date(s):

05/23/2022

List RCP Methods Used:

MADEP EPH rev 2.1, MADEP-VPH-Feb 2018 Rev 2.1, SW-846 6020B, SW-846 7470A, SW-846 8260D, SW-846 8270E

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	☑ Yes ☐ No
1A	Were the method specified preservation and holding time requirements met?	☑ Yes ☐ No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	☑ Yes ☐ No ☐ N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	☑ Yes ☐ No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	☑ Yes ☐ No ☐ N/A
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	☐ Yes ☑ No
5A	Were reporting limits specified or referenced on the chain-of-custody?	☐ Yes ☑ No
5B	Were these reporting limits met?	☐ Yes ☐ No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	☐ Yes ☑ No
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	☐ Yes ☑ No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."
This form may not be altered and all questions must be answered.

Lisa A. Worthington

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.

Authorized Signature: Lisa Worthington **Position:** Technical Representative

Printed Name: Lisa A. Worthington **Date:** 06/07/22

Name of Laboratory: Con-Test, a Pace Analytical Laboratory

This certification form is to be used for RCP methods only.

2

Responses to ASDRC Advisory Report
Unanimously Approved, May 25, 2022

1. The Committee notes that the building is of large scale in relation to its surroundings, and would prefer to see fewer stories; however, understanding conditions created by the State statute, many of the recommendations below are intended to soften and visually reduce the mass and height of the building as viewed from adjoining streets, and to add detailing which will further reduce the perceived height.

   Response: Noted.

2. The Committee support the way that the design is "stepped" into the grade, such that the southern and western first floor walls function as retaining walls, rather than creating a separate, very large retaining wall like the previous CVS application.

   Response: Noted.

3. The ASCRC recommends approval of the proposed affordable housing development at 1199 Manchester Road subject to the following conditions and modifications.

   Response: Noted.

4. There should be a sidewalk along the Manchester Road and Hebron Avenue frontages, connecting with the existing sidewalk and crosswalk.

   Response: Sidewalks have been added to the site frontage along Hebron Avenue and Manchester Road. The applicant will continue to cooperate with the Town of Glastonbury and Connecticut Department of Transportation regarding further improvements to the Town's pedestrian network in the area.

5. Street trees should be included along the Hebron Avenue and Manchester Road frontages either on the property or within the State right of way, if permitted by the State DOT.

Response: Four columnar red maple trees have been incorporated within the State right-of-way, along the street

6. Use of native species in landscaping should strive towards 80%. The capital and maintenance costs would not necessarily increase due to this objective. Any invasive plants, per the current Connecticut Invasive Plant List, should not be used.

Response: The 252 individual plants originally proposed have been increased to 320 individual plants, 241 of which, or 81%, are native. The vast majority of the shrubs and trees provided are pollinators. Pollinators also have been added to the conservation mix originally proposed for the slope. None of the proposed plants are on the Connecticut Invasive Plant List.

7. The building exterior should be modified to:

   A) Reduce the impact of its massing by:

      i. Adding brackets and detail at the top floor to engage the eave of the top floor with the floor below

      ii. Extending pediments, providing vertical brackets

      iii. Changing the ground floor exterior material to stone

      iv. Changing the ends of the building to hip roofs

Response: The building elevations have been modified to incorporate these recommendations, including: more articulation of the building façade; the addition of details such as eave brackets at the gable roof elements; and the incorporation of stone veneer to the first floor of the building. The roof also has been redesigned as a hipped roof, and modified to increase the slope of the roof (nearly 8 in 12) to keep the maximum building height permitted by the Connecticut State Building Code.

B) Create a more traditional character by:

i. Modifying the pediments to be more reflective of and related to the building massing on the levels below.

ii. Changing all roof slopes to at least 10/12 pitch

iii. Treat pediments and gable ends with detail and material reflective of traditional architecture

Response: *See* response to No. 7(A), above.

C) Create a building entry more in scale with the building, and more identifiable and welcoming by including a pediment or a decorative element at the portico.

An illustrative concept of these exterior modifications is attached.

Response: The front entrance roof structure has been modified to provide better definition of the front entry location, as well as a structure that relates to the design of the remainder of the building, as revised.

8. The Committee recommends utilization of stone instead of concrete for the four-foot retaining wall along Hebron Avenue, and further recommends the retaining walls at the Hebron Avenue entrance driveway be stepped to reduce its mass and provide additional planting area.

Response: The retaining walls along Hebron Avenue, and on the west side of the Hebron Avenue driveway, have been removed, and the grading in those areas has been revised accordingly.

9. The retaining walls should have additional landscaping, such as climbing plant material, with additional landscaping between the top of the frontage retaining wall and the

parking lot pavement. Being a vacant site, the applicant should explore alternatives, such as a slight shift in the building program that could accommodate parking lot screening.

Response: *See* response to No. 8, above. In addition, the frontage of the site has been modified to allow for plantings that will block car lights, and also be adaptable to snow loading.

10. There should be an enclosure for the trash storage area. The enclosure should constructed of materials compatible with the building exterior.

Response: The trash storage area enclosure detail has been added to the revised plans. The design matches the materials and colors that are shown on the exterior of the main building.

11. The plant bed width along Manchester Road that graduates from approximately 4 feet to 12 feet could be planted with additional shrubs in the bed, some in a staggered pattern to increase screening capacity. North American native examples include Fothergilla gardenii or Fothergilla major (spring flowers and red fall leaves on both), Ilex glabra (evergreen), Bayberry, (near evergreen, billowy form which is already present in the planting plan near the end of the retaining wall) and can be pruned to fit in more confined planting beds.

Response: The planting area along Manchester Road is narrow. The proposed plantings will fill out as expected of their growth characteristics. Additional infill of plants will result in the need for heavy pruning and will, therefore, require more maintenance.

12. In accordance with the responsibilities, and in the professional opinion of the architects and landscape architects on the ASDRC, the foregoing conditions and modifications should not have a substantial adverse impact on the viability of the affordable housing development or the degree of affordability of the affordable dwelling units.

Response: Noted.