



October 12, 2016

Planning Board
60 Pleasant Street
P.O. Box 550
Newburyport, MA 01950

Re: Evergreen Commons OSRD
Newburyport, MA

Dear Board Members:

Northeast Geoscience, Inc. (NGI) is writing to provide information to the Planning Board regarding the proposed Evergreen Commons Open Space Residential Development (OSRD) at 18 Boyd Drive in Newburyport, MA. This information is being provided in response to requests made during the Planning Board Public Hearing on this project held on September 21, 2016 and is intended to supplement information provided in the Water Resources Impact Evaluation Report prepared by NGI dated September 19, 2016.

Turf Care Product Use at the Evergreen Valley Golf Course

NGI has received updated records of turf management product purchases and applications from the Evergreen Valley Golf Course management. These records demonstrate pesticide, herbicide and fungicide applications at the Evergreen Valley Golf Club that are routinely administered by Phyllis Hodge at PH Lawn Care in Essex, MA, a licensed pesticide applicator through the Massachusetts Department of Agricultural Resources (License No. 10258). Records of products purchased by the Evergreen Golf Course from September 2014 to the present are presented on Table 1. As shown on Table 1 a variety of pesticides, herbicides, fungicides and bactericides are routinely applied to the golf course as part of an integrated pest management plan. Additionally, fertilizers and soil wetting agents are applied to maintain turf.

The Massachusetts Department of Agricultural Resources has a statutory responsibility to protect public drinking water supplies from pesticide application. The Department of Agricultural Resources maintains standards including the Groundwater Protection List (Table 2,) which names products with active ingredients that could impact groundwater. Use of these products in Zone II must be approved by the Department of Agriculture on a site-specific basis. None of the products on Table 1 are on the Groundwater Protection List. Further, none of the products used are listed as prohibited herbicides, pesticides or fungicides in the Order of Conditions (051-0085) for the golf course and are consistent with recommendations in the M. Anthony Lally Associates report dated September 17, 1985 regarding turf management practices.

Current Groundwater Quality at the Evergreen Valley Golf Course

The Planning Board requested information on the current quality of groundwater at the Evergreen Valley Golf Course. On September 27, 2016 NGI personnel collected three groundwater samples from one irrigation well (IW-1) and two monitoring wells (MW-6 and MW-7) at the golf course. A map showing the locations of the wells is presented on Figure 1. Wells were purged of a minimum of three volumes of standing water prior to collecting representative groundwater samples. Samples were collected in bottles provided by the laboratory, placed on ice in a cooler and delivered to the laboratory for analysis under a chain of custody. Each sample was analyzed for volatile organic compounds (VOCs), synthetic organic compounds (SOCs), nitrate, nitrite, sodium, chloride, potassium and total phosphorous. The laboratory data sheets are included in Appendix A of this report.

The results of the laboratory analyses are presented on Table 3. The current water quality at the golf course is good. Concentrations of sodium and chloride are slightly elevated most likely as a result of road salt applications on I-95 and Boyd Drive. Nitrate concentrations ranged from 0.42 to 1.8 mg/L. These concentrations are significantly below the drinking water standard for nitrate of 10 mg/L and do not indicate over application of fertilizers on the golf course. Elevated total phosphorous and potassium concentrations are indications of fertilizer applications but do not pose a threat to drinking water.

One Volatile Organic Compound p-Isopropyltoluene was detected in samples from monitoring well MW-7 at a concentration of 1.8 ug/L. Isopropyl toluene is naturally occurring aromatic organic compound used in fuels and fuel additives, cleaning products, and laundry and dish washing products. Currently this compound is unregulated and there is no maximum contaminant level (MCL) established for p-isopropyltoluene, however the State of New York lists 5.0 ug/L as a secondary drinking water standard. The source of this compound is not known. NGI does not consider the presence of this compound at this concentration to be a water quality threat to Well No. 2. No synthetic organic compounds were detected in the samples collected.

Recent Water Quality from Well No. 2

Newburyport Water Works collected water samples from Well No. 2 for synthetic organic compounds (SOC) analysis on February 5, 2015 and December 8, 2015. These are the most recent samples collected from Well No. 2 for SOC analysis. The results of this analysis are included in Appendix A of this report. No SOC compounds were detected in either of the samples collected from Well No. 2 or the monitoring wells on the Evergreen Commons site.

The SOC analysis includes 2,4-D which is one of the oldest and most widely available selective herbicides in the world. It is an active ingredient in over 1,500 herbicide containing products such as Scott's Weed and Feed, Lesco Weed and Feed and Vigro Weed and Feed. The SOC analysis also includes Dicamba, another selective herbicide commonly found in weed and feed products. Based on the widespread use of these lawn care products and the 98 existing lawns in the Zone II Recharge Area of Well No. 2, it is reasonable to assume that 2,4-D and Dicamba

have been and are being applied to lawns in the Zone II Recharge Area. It also is evident that these products are photodegrading, biodegrading or weathering prior to reaching Well No. 2.

Nitrogen Loading Calculations

NGI prepared mass balance nitrogen loading calculations using methods outline in the MADEP Guidelines for Aggregate Nitrogen Loading Plans revised February 2016. Calculations were prepared for the combined Zone II Recharge Area for Wells No. 1 and No. 2. A second set of calculations was prepared for the portion of Zone II that contributes water to Well No. 2 assumed to be portions of the combined Zone II east of Interstate I-95. Calculations were prepared for both existing conditions and proposed conditions where the existing golf course is replaced with a 38 lot OSRD.

Sources of nitrogen in the calculations include fertilizer applied to lawns, cropland and the golf course under both existing and proposed conditions. Existing residential lots in Zone II are approximately 22,000 ft² (1/2 acre) lots and larger and were assumed to have 12,000 ft² lawns. The proposed lots in Evergreen Commons average 13,000 ft² (1/3 acre) lots and were assumed to have 10,000 ft² lawns. It was assumed that the golf course, crop land and lawns were all fertilized at an application rate of 3 pounds nitrogen per year per 1,000 ft² with 25% leaching to groundwater. It was assumed that Well No. 1 was pumping 200 gpm and that Well No. 2 was pumping 225 gpm on a continuous basis. The mass balance calculations mathematically mix available nitrogen into the water pumped from the wells and generate an estimated nitrate concentration in mg/L. Calculations are presented on Table 4.

The calculations for existing conditions generate estimated nitrate concentrations of 1.05 mg/L for the entire Zone II and 1.54 mg/L for the Well No. 2 Zone II. The estimates are close to the average concentration of nitrate in Well No. 2 of 1.6 mg/L.

The calculations for proposed conditions generate estimated nitrate concentrations of 0.79 mg/L for the entire Zone II and 1.04 mg/L for the Well No. 2 Zone II. These calculations indicate that replacing 23.8 acres of managed turf on the golf course with 9 acres of lawn will result in improvements to the quality of the water in Zone II and Well No. 2.

Wellhead Protection Ordinance Considerations

The Evergreen Valley Golf Course was proposed before the City of Newburyport delineated Zone II and adopted a Water Resource Protection District. The Wellhead Protection Ordinance was prepared using the MADEP Model Wellhead Protection Ordinance to ensure compliance with 310 CMR 22.21 – Wellhead Protection Zoning and Non-Zoning Controls.

The golf course was identified by TEEM (1999) as one of four water quality hazards in Zone II. Were the golf course proposed today, a special permit would have to be granted under the Water Resource Protection District Ordinance to allow application of pesticides, herbicides and fertilizer for non-domestic non-agricultural purposes. The proposed OSRD by contrast, is an allowed use within the Water Resources Protection District and does not require a special

permit. In addition, the OSRD is consistent with existing land use in Zone II such as residential development on Boyd Drive and the neighborhood north of Well No. 2.

Conclusions

Current water quality data for Newburyport Well No. 2 do not indicate water quality impacts to the well from existing residential development in Zone II. The mass balance nitrogen loading calculations demonstrate that substituting the OSRD for the golf course will improve the water quality in Well No. 2. For all these reasons, the proposed OSRD is a more desirable land use than the golf course from a wellhead protection perspective.

Please do not hesitate to contact me with any further questions.

Sincerely:

NORTHEAST GEOSCIENCE, INC.



Jay Billings
Hydrogeologist

References

Lally Associates, Anthony M. 1985. Report of Findings Evergreen Estates and Golf Course, Newburyport, Massachusetts. Consulting Environmental Engineers.

Massachusetts Department of Environmental Protection. 2016. Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading revised 2/22/2016.

Talkington-Edson Environmental Management. 1999. Source Water Assessment Program Conceptual Zone II Delineation, Newburyport Water Works Gravel Packed Wells 1 and 2 (PWS 3206000-01G and -02G).

TABLES

Table 1
Evergreen Valley Golf Course Turf Care Products

Date	Units	Product	Unit Cost	Total Cost	Active Ingredient	Product Type
9/3/2014	8	Prophecy 0.72G Fungicide	\$59.00	\$472.00	Propoconazole	Fungicide
9/19/2014	2	TriCure Granular 40 lb bag	\$90.00	\$180.00	Dihydrooxirane epihydrin	Soil Wetting Agent
12/16/2014	5	Fungicide IX Anderson 30	\$95.50	\$477.50	Chloroneb and Thiophanate-methyl	Fungicide
4/3/2015	7	Fungicide IX Anderson 30	\$95.50	\$688.50	Chloroneb and Thiophanate-methyl	Fungicide
4/20/2015	6	AND (17-0-17)50%MU Ggrade	\$51.80	\$310.80	Acelepryn in fertilizer	Fertilizer
5/9/2015	5	AND(28-0-3)164%Dim/0.67%	\$89.00	\$445.00	Acelepryn in fertilizer	Fertilizer
5/13/2015	2	AND(28-0-3)164%Dim/0.67%	\$89.00	\$178.00	Acelepryn in fertilizer	Fertilizer
6/22/2015	4	Prophecy 0.72G Fungicide	\$59.00	\$236.00	Propoconazole	Fungicide
6/22/2015	4	Insecticide III 1.34% Chl	\$55.00	\$220.00	Chloropyrifos	Insecticide
7/15/2015	6	AND(9-4-9)DG Biomend 40 lb	\$41.60	\$249.60	Bone meal based fertilizer	Fertilizer
7/15/2015	6	Disarm G 25 lb Bag	\$54.50	\$327.00	Fluoxastrobin 15.81%	Fungicide
7/16/2015	4	Disarm G 25 lb Bag	\$54.50	\$218.00	Fluoxastrobin 15.81%	Fungicide
8/3/2015	1	EndoROOTS 3-3-4 50 lb bag	\$72.00	\$72.00	Fertilizer with biologicals	Fertilizer
8/3/2015	5	TriCure Granular 40 lb bag	\$95.00	\$475.00	Dihydrooxirane epihydrin	Soil Wetting Agent
8/19/2015	6	Fungicide IX Anderson 30	\$95.50	\$573.00	Chloroneb and Thiophanate-methyl	Fungicide
8/19/2015	1	8.5% Betasan Weed Prevent	\$109.00	\$109.00	Bensulide	Herbicide
8/25/2015	7	Cleary's 3336 DGPro #30	\$60.00	\$420.00	Thiophanate	Fungicide
8/25/2015	7	AND(9-4-9)DG Biomend 40 lb	\$40.00	\$280.00	Bone meal based fertilizer	Fertilizer
8/26/2015	4	Cleary's 3336 DGPro #30	\$60.00	\$240.00	Thiophanate	Fungicide
8/26/2015	2	AND(9-4-9)DG Biomend 40 lb	\$40.00	\$80.00	Bone meal based fertilizer	Fertilizer
9/9/2015	8	Prophecy 0.72G Fungicide	\$59.00	\$472.00	Propoconazole	Fungicide
9/15/2015	4	Prophecy 0.72G Fungicide	\$59.00	\$236.00	Propoconazole	Fungicide
9/15/2015	2	Bifenthrin 0.1G HDG 30 lb	\$24.50	\$49.00	2-Methyl-3-phenylphenyl)methyl (1S,3S)-3-[(Z)-2-chloro-3,3,3-trifluoroprop-1-enyl]-	Insecticide
4/6/2016	2	LESCO Twosome Fungicide	\$126.99	\$253.98	Thiophanate-methyl and iprodione	Fungicide
4/6/2016	2	18 Plus Lesco Fungicide	\$114.00	\$228.00	Iprodione	Fungicide
4/6/2016	4	Country Club MD 16-0-8E	\$40.00	\$160.00	Fertilizer	Fertilizer
4/6/2016	6	Country Club MD 18-3-6	\$50.00	\$300.00	Fertilizer	Fertilizer
4/6/2016	2	LESCO Green Flo 18-3-6	\$36.60	\$73.20	Fertilizer	Fertilizer
4/6/2016	2	Spectator Ultra Fungicide	\$87.29	\$174.58	Propoconazole	Fungicide
10/24/2015	6	Fungicide IX Anderson 52.8	\$126.00	\$756.00	Chloroneb and Thiophanate-methyl	Fungicide
6/3/2016	6	Prophecy 0.72G Fungicide	\$59.00	\$354.00	Propoconazole	Fungicide
6/3/2016	2	EPN N-Fuze (7-0-0) 2.5G	\$45.00	\$90.00	Fertilizer	Fertilizer
7/7/2016	2	Junction Fungicide 6 lb	\$124.05	\$248.10	Ethylenebisdithiocarbamate, zinc and manganese	Fungicide/Bactericide
8/1/2016	7	Cleary's 3336 DGPro #30	\$59.00	\$413.00	Thiophanate	Fungicide
8/1/2016	1	ENP (12-4-6) 2.5 gal	\$81.50	\$81.50	Fertilizer	Fertilizer
8/17/2016	1	Zeta-Plex N-Fuze 2.5 Gal	\$49.75	\$49.75	Liquid ammonium sulfate with amino acids	Fertilizer

Table 2 – Groundwater Protection List

Herbicides

- Acetochlor*
- Acifluoren
- Alachlor
- Aldicarb
- Atrazine
- Bentazon
- Bromacil
- Cyanazine
- Chlorthal-Dimethyl**
- Dimethanamid
- Diuron
- Flufenacet
- Fluthiacet-methyl
- MCPA
- Metolachlor
- Metribuzin
- PCP
- Pronamide
- Propazine
- Simazine
- Sulfentrazone

Insecticides

- Aldicarb
- Carbofuran
- Dinotefuran
- Disulfoton
- Fenamiphos
- Fonofos
- Lindane
- Methoxyfenozide
- PCP
- Propoxur
- Terbufos
- Thiamethoxam

Fungicides

- Chlorothalonil
- Cyflufenamid
- Cyproconazole
- Folpet
- Fluopyram
- Kresoxim-Methyl
- Triticonazole
- Sedaxane

Table 3
Groundwater Quality Data
Evergreen Valley Golf Course - Newburyport, MA

Parameter	IW-1	MW-6	MW-7
Sodium (mg/L)	46.6	21.0	62.5
Potassium (mg/L)	3.91	8.85	24.6
Chloride (mg/L)	129	39.6	160
Nitrate (mg/L)	1.2	1.8	0.42
Nitrite (mg/L)	<0.05	<0.05	<0.05
Total Phosphorous (mg/L)	<0.01	1.48	2.17
Volatile Organic Compounds (ug/L)	<0.5	<0.5	1.8*
Synthetic Organic Compounds (ug/L)	<0.5	<0.5	<0.5

* - Isopropyltoluene

Table 4 - Nitrogen Loading Calculations

Existing Conditions - Entire Zone II

Existing Res. Lots	Average Lawn Size (ft2)	Proposed Res. Lots	Average Lawn Size (ft2)	Total Lawn (ft2)	Total Golf Course (ft2)	Total Crop Land (ft2)	Total Fertilized Land (ft2)	Total Nitrogen Fertilizer (lbs/y)	Total Nitrogen Fertilizer (mg/day)	Actual Well Withdrawals (L/day)	Estimated Nitrate Conc. (mg/L)
98	12,000	0	10,000	1,176,000	1,036,728	397,703	2,610,431	1,958	2,433,065	2,316,420	1.05

Proposed Conditions - Entire Zone II

Existing Res. Lots	Average Lawn Size (ft2)	Proposed Res. Lots	Average Lawn Size (ft2)	Total Lawn (ft2)	Total Golf Course (ft2)	Total Crop Land (ft2)	Total Fertilized Land (ft2)	Total Nitrogen Fertilizer (lbs/y)	Total Nitrogen Fertilizer (mg/day)	Actual Well Withdrawals (L/day)	Estimated Nitrate Conc. (mg/L)
98	12,000	38	10,000	1,556,000	0	397,703	1,953,703	1,465	1,820,958	2,316,420	0.79

Existing Conditions - Zone II Well No. 2

Existing Res. Lots	Average Lawn Size (ft2)	Proposed Res. Lots	Average Lawn Size (ft2)	Total Lawn (ft2)	Total Golf Course (ft2)	Total Crop Land (ft2)	Total Fertilized Land (ft2)	Total Nitrogen Fertilizer (lbs/y)	Total Nitrogen Fertilizer (mg/day)	Actual Well Withdrawals (L/day)	Estimated Nitrate Conc. (mg/L)
82	12,000	0	10,000	984,000	1,036,728	0	2,020,728	1,516	1,883,429	1,226,340	1.54

Proposed Conditions - Zone II Well No. 2

Existing Res. Lots	Average Lawn Size (ft2)	Proposed Res. Lots	Average Lawn Size (ft2)	Total Lawn (ft2)	Total Golf Course (ft2)	Total Crop Land (ft2)	Total Fertilized Land (ft2)	Total Nitrogen Fertilizer (lbs/y)	Total Nitrogen Fertilizer (mg/day)	Actual Well Withdrawals (L/day)	Estimated Nitrate Conc. (mg/L)
82	12,000	38	10,000	1,364,000	0	0	1,364,000	1,023	1,271,323	1,226,340	1.04

Assumptions

Well No. 1 MADEP Approved Withdrawal = 325 gpm

Well No. 1 Actual Withdrawl Rate = 200 gpm

Well No. 2 MADEP Approved Withdrawal Rate = 408 gpm

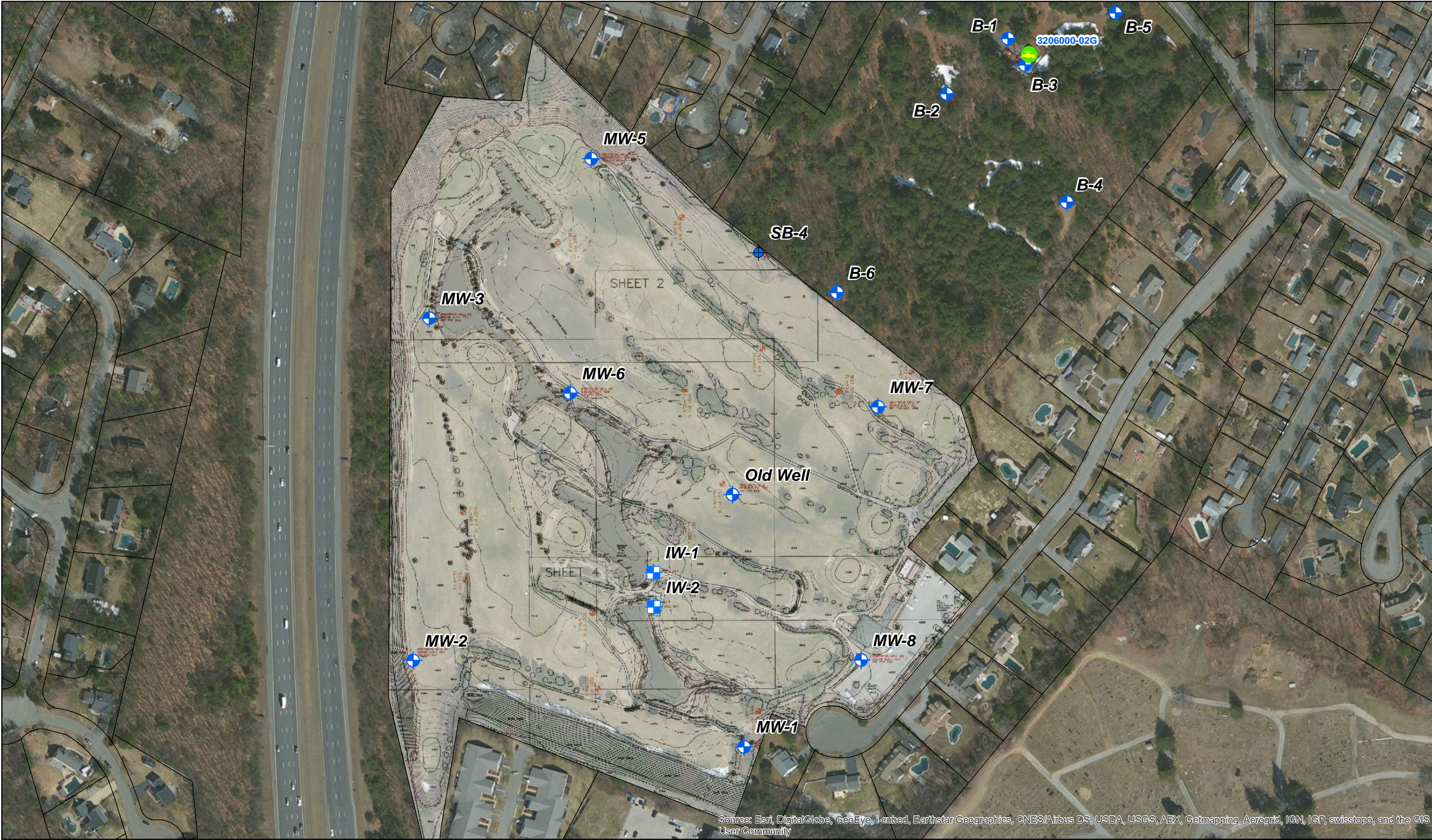
Well No. 2 Actual Withdrawal Rate = 225 gpm


Lawn, golf course and crop land fertilized at 3 lbs/1,000 ft2 with a 25% leaching rate

Zone II for Well No. 2 is area East of I-95


FIGURES








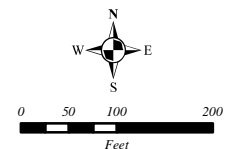
NORTH EAST GEOSCIENCE INC
Water Supply and Environmental Consulting
97 Walnut Street
Clinton, Massachusetts
978.365.9045
www.ngeo.net



- EXISTING PUBLIC WATER SUPPLY
- EXISTING MONITORING WELL
- EXISTING IRRIGATION WELL
- SOIL BORING



ASSESSORS PARCELS



0 50 100 200
Feet

EXISTING CONDITIONS SITE MAP
EVERGREEN COMMONS LLC
18 BOYD DRIVE
NEWBURYPORT, MASSACHUSETTS

GI REF: PropCondSitePlan11x17	
Drafted By: JAF	Date: 10/11/2016
Source: MassGIS, ArcGIS, Design Consult., Inc.	

FIGURE 1

APPENDIX A





ANALYTICAL REPORT

Lab Number:	L1630671
Client:	Northeast Geoscience, Inc. 97 Walnut Street Clinton, MA 01510
ATTN:	Jay Billings
Phone:	(978) 365-9045
Project Name:	160801 EVERGREEN
Project Number:	160801
Report Date:	10/09/16

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: 160801 EVERGREEN
Project Number: 160801

Lab Number: L1630671
Report Date: 10/09/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1630671-01	MW-6	DW	NEWBURYPORT	09/27/16 15:00	09/28/16
L1630671-02	IW-1	DW	NEWBURYPORT	09/27/16 15:40	09/28/16
L1630671-03	MW-7	DW	NEWBURYPORT	09/27/16 16:30	09/28/16
L1630671-04	TRIP BLANK	WATER	NEWBURYPORT	09/27/16 00:00	09/28/16

Project Name: 160801 EVERGREEN
Project Number: 160801

Lab Number: L1630671
Report Date: 10/09/16

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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated 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.

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 table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

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 Client Service Representative 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 Client Services at 800-624-9220 with any questions.

Project Name: 160801 EVERGREEN
Project Number: 160801

Lab Number: L1630671
Report Date: 10/09/16

Case Narrative (continued)

Report Submission

The analyses of Glyphosate, Diquat and SOC's were subcontracted, and the results will be issued under separate cover.

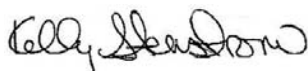
Sample Receipt

A Trip Blank was received in the laboratory, but not listed on the Chain of Custody, and was not analyzed.

L1630671-01: The sample was received without the container for Metals analysis. An aliquot was taken from an unpreserved container and preserved appropriately.

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:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 10/09/16

ORGANICS

VOLATILES

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-01
 Client ID: MW-6
 Sample Location: NEWBURYPORT
 Matrix: Dw
 Analytical Method: 16,524.2
 Analytical Date: 10/03/16 19:36
 Analyst: MM

Date Collected: 09/27/16 15:00
 Date Received: 09/28/16
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	0.50	--	1
Vinyl chloride	ND		ug/l	0.50	--	1
Bromomethane	ND		ug/l	0.50	--	1
Chloroethane	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	0.50	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
Methylene chloride	ND		ug/l	0.50	--	1
Methyl tert butyl ether	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	--	1
1,1-Dichloroethane	ND		ug/l	0.50	--	1
2,2-Dichloropropane	ND		ug/l	0.50	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Chloroform	ND		ug/l	0.50	--	1
Bromochloromethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	0.50	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
Dibromomethane	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.50	--	1
1,3-Dichloropropane	ND		ug/l	0.50	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1

Project Name: 160801 EVERGREEN**Lab Number:** L1630671**Project Number:** 160801**Report Date:** 10/09/16**SAMPLE RESULTS****Lab ID:** L1630671-01**Date Collected:** 09/27/16 15:00**Client ID:** MW-6**Date Received:** 09/28/16**Sample Location:** NEWBURYPORT**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dibromochloromethane	ND		ug/l	0.50	--	1
1,2-Dibromoethane	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	0.50	--	1
o-Xylene	ND		ug/l	0.50	--	1
Styrene	ND		ug/l	0.50	--	1
Isopropylbenzene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	0.50	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
1,2,3-Trichloropropane	ND		ug/l	0.50	--	1
Xylenes, Total ¹	ND		ug/l	0.50	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	0.50	--	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	--	1
o-Chlorotoluene	ND		ug/l	0.50	--	1
p-Chlorotoluene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	0.50	--	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
1,3-Dichlorobenzene	ND		ug/l	0.50	--	1
1,4-Dichlorobenzene	ND		ug/l	0.50	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	0.50	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	--	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	0.50	--	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	112		80-120
4-Bromofluorobenzene	85		80-120

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-02
 Client ID: IW-1
 Sample Location: NEWBURYPORT
 Matrix: Dw
 Analytical Method: 16,524.2
 Analytical Date: 10/03/16 20:40
 Analyst: MM

Date Collected: 09/27/16 15:40
 Date Received: 09/28/16
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	0.50	--	1
Vinyl chloride	ND		ug/l	0.50	--	1
Bromomethane	ND		ug/l	0.50	--	1
Chloroethane	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	0.50	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
Methylene chloride	ND		ug/l	0.50	--	1
Methyl tert butyl ether	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	--	1
1,1-Dichloroethane	ND		ug/l	0.50	--	1
2,2-Dichloropropane	ND		ug/l	0.50	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Chloroform	ND		ug/l	0.50	--	1
Bromochloromethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	0.50	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
Dibromomethane	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.50	--	1
1,3-Dichloropropane	ND		ug/l	0.50	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-02

Date Collected: 09/27/16 15:40

Client ID: IW-1

Date Received: 09/28/16

Sample Location: NEWBURYPORT

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dibromochloromethane	ND		ug/l	0.50	--	1
1,2-Dibromoethane	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	0.50	--	1
o-Xylene	ND		ug/l	0.50	--	1
Styrene	ND		ug/l	0.50	--	1
Isopropylbenzene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	0.50	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
1,2,3-Trichloropropane	ND		ug/l	0.50	--	1
Xylenes, Total ¹	ND		ug/l	0.50	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	0.50	--	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	--	1
o-Chlorotoluene	ND		ug/l	0.50	--	1
p-Chlorotoluene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	0.50	--	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
1,3-Dichlorobenzene	ND		ug/l	0.50	--	1
1,4-Dichlorobenzene	ND		ug/l	0.50	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	0.50	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	--	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	0.50	--	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	107		80-120
4-Bromofluorobenzene	86		80-120

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-03
 Client ID: MW-7
 Sample Location: NEWBURYPORT
 Matrix: Dw
 Analytical Method: 16,524.2
 Analytical Date: 10/03/16 21:45
 Analyst: MM

Date Collected: 09/27/16 16:30
 Date Received: 09/28/16
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	0.50	--	1
Vinyl chloride	ND		ug/l	0.50	--	1
Bromomethane	ND		ug/l	0.50	--	1
Chloroethane	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	0.50	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
Methylene chloride	ND		ug/l	0.50	--	1
Methyl tert butyl ether	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	--	1
1,1-Dichloroethane	ND		ug/l	0.50	--	1
2,2-Dichloropropane	ND		ug/l	0.50	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Chloroform	ND		ug/l	0.50	--	1
Bromochloromethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	0.50	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
Dibromomethane	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.50	--	1
1,3-Dichloropropane	ND		ug/l	0.50	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1

Project Name: 160801 EVERGREEN**Lab Number:** L1630671**Project Number:** 160801**Report Date:** 10/09/16**SAMPLE RESULTS****Lab ID:** L1630671-03**Date Collected:** 09/27/16 16:30**Client ID:** MW-7**Date Received:** 09/28/16**Sample Location:** NEWBURYPORT**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dibromochloromethane	ND		ug/l	0.50	--	1
1,2-Dibromoethane	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	0.50	--	1
o-Xylene	ND		ug/l	0.50	--	1
Styrene	ND		ug/l	0.50	--	1
Isopropylbenzene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	0.50	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
1,2,3-Trichloropropane	ND		ug/l	0.50	--	1
Xylenes, Total ¹	ND		ug/l	0.50	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	0.50	--	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	--	1
o-Chlorotoluene	ND		ug/l	0.50	--	1
p-Chlorotoluene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	0.50	--	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	1.8		ug/l	0.50	--	1
1,3-Dichlorobenzene	ND		ug/l	0.50	--	1
1,4-Dichlorobenzene	ND		ug/l	0.50	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	0.50	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	--	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	0.50	--	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	105		80-120
4-Bromofluorobenzene	85		80-120

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-04
 Client ID: TRIP BLANK
 Sample Location: NEWBURYPORT
 Matrix: Water
 Analytical Method: 16,524.2
 Analytical Date: 10/06/16 17:34
 Analyst: GT

Date Collected: 09/27/16 00:00
 Date Received: 09/28/16
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	0.50	--	1
Vinyl chloride	ND		ug/l	0.50	--	1
Bromomethane	ND		ug/l	0.50	--	1
Chloroethane	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	0.50	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
Methylene chloride	ND		ug/l	0.50	--	1
Methyl tert butyl ether	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	--	1
1,1-Dichloroethane	ND		ug/l	0.50	--	1
2,2-Dichloropropane	ND		ug/l	0.50	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Chloroform	ND		ug/l	0.50	--	1
Bromochloromethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	0.50	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
Dibromomethane	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.50	--	1
1,3-Dichloropropane	ND		ug/l	0.50	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-04
 Client ID: TRIP BLANK
 Sample Location: NEWBURYPORT

Date Collected: 09/27/16 00:00
 Date Received: 09/28/16
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dibromochloromethane	ND		ug/l	0.50	--	1
1,2-Dibromoethane	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	0.50	--	1
o-Xylene	ND		ug/l	0.50	--	1
Styrene	ND		ug/l	0.50	--	1
Isopropylbenzene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	0.50	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
1,2,3-Trichloropropane	ND		ug/l	0.50	--	1
Xylenes, Total ¹	ND		ug/l	0.50	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	0.50	--	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	--	1
o-Chlorotoluene	ND		ug/l	0.50	--	1
p-Chlorotoluene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	0.50	--	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
1,3-Dichlorobenzene	ND		ug/l	0.50	--	1
1,4-Dichlorobenzene	ND		ug/l	0.50	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	0.50	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	--	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	0.50	--	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	104		80-120
4-Bromofluorobenzene	97		80-120

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

Method Blank Analysis Batch Quality Control

Analytical Method: 16,524.2

Analytical Date: 10/06/16 12:07

Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG938561-10					
Dichlorodifluoromethane	ND		ug/l	0.50	--
Chloromethane	ND		ug/l	0.50	--
Vinyl chloride	ND		ug/l	0.50	--
Bromomethane	ND		ug/l	0.50	--
Chloroethane	ND		ug/l	0.50	--
Trichlorofluoromethane	ND		ug/l	0.50	--
1,1-Dichloroethene	ND		ug/l	0.50	--
Methylene chloride	ND		ug/l	0.50	--
Methyl tert butyl ether	ND		ug/l	0.50	--
trans-1,2-Dichloroethene	ND		ug/l	0.50	--
1,1-Dichloroethane	ND		ug/l	0.50	--
2,2-Dichloropropane	ND		ug/l	0.50	--
cis-1,2-Dichloroethene	ND		ug/l	0.50	--
Chloroform	ND		ug/l	0.50	--
Bromochloromethane	ND		ug/l	0.50	--
1,1,1-Trichloroethane	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	0.50	--
Carbon tetrachloride	ND		ug/l	0.50	--
1,2-Dichloroethane	ND		ug/l	0.50	--
Benzene	ND		ug/l	0.50	--
Trichloroethene	ND		ug/l	0.50	--
1,2-Dichloropropane	ND		ug/l	0.50	--
Bromodichloromethane	ND		ug/l	0.50	--
Dibromomethane	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
Toluene	ND		ug/l	0.50	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1,2-Trichloroethane	ND		ug/l	0.50	--
1,3-Dichloropropane	ND		ug/l	0.50	--

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

Method Blank Analysis Batch Quality Control

Analytical Method: 16,524.2

Analytical Date: 10/06/16 12:07

Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG938561-10					
Tetrachloroethene	ND		ug/l	0.50	--
Dibromochloromethane	ND		ug/l	0.50	--
1,2-Dibromoethane	ND		ug/l	0.50	--
Chlorobenzene	ND		ug/l	0.50	--
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--
Ethylbenzene	ND		ug/l	0.50	--
p/m-Xylene	ND		ug/l	0.50	--
o-Xylene	ND		ug/l	0.50	--
Styrene	ND		ug/l	0.50	--
Isopropylbenzene	ND		ug/l	0.50	--
Bromoform	ND		ug/l	0.50	--
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--
1,2,3-Trichloropropane	ND		ug/l	0.50	--
Xylenes, Total ¹	ND		ug/l	0.50	--
n-Propylbenzene	ND		ug/l	0.50	--
Bromobenzene	ND		ug/l	0.50	--
1,3,5-Trimethylbenzene	ND		ug/l	0.50	--
o-Chlorotoluene	ND		ug/l	0.50	--
p-Chlorotoluene	ND		ug/l	0.50	--
tert-Butylbenzene	ND		ug/l	0.50	--
1,2,4-Trimethylbenzene	ND		ug/l	0.50	--
sec-Butylbenzene	ND		ug/l	0.50	--
p-Isopropyltoluene	ND		ug/l	0.50	--
1,3-Dichlorobenzene	ND		ug/l	0.50	--
1,4-Dichlorobenzene	ND		ug/l	0.50	--
n-Butylbenzene	ND		ug/l	0.50	--
1,2-Dichlorobenzene	ND		ug/l	0.50	--
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	--
1,2,4-Trichlorobenzene	ND		ug/l	0.50	--

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

Method Blank Analysis Batch Quality Control

Analytical Method: 16,524.2

Analytical Date: 10/06/16 12:07

Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG938561-10					
Hexachlorobutadiene	ND		ug/l	0.50	--
Naphthalene	ND		ug/l	0.50	--
1,2,3-Trichlorobenzene	ND		ug/l	0.50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	98		80-120
4-Bromofluorobenzene	96		80-120

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

Method Blank Analysis Batch Quality Control

Analytical Method: 16,524.2

Analytical Date: 10/03/16 14:46

Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG938561-4					
Dichlorodifluoromethane	ND		ug/l	0.50	--
Chloromethane	ND		ug/l	0.50	--
Vinyl chloride	ND		ug/l	0.50	--
Bromomethane	ND		ug/l	0.50	--
Chloroethane	ND		ug/l	0.50	--
Trichlorofluoromethane	ND		ug/l	0.50	--
1,1-Dichloroethene	ND		ug/l	0.50	--
Methylene chloride	ND		ug/l	0.50	--
Methyl tert butyl ether	ND		ug/l	0.50	--
trans-1,2-Dichloroethene	ND		ug/l	0.50	--
1,1-Dichloroethane	ND		ug/l	0.50	--
2,2-Dichloropropane	ND		ug/l	0.50	--
cis-1,2-Dichloroethene	ND		ug/l	0.50	--
Chloroform	ND		ug/l	0.50	--
Bromochloromethane	ND		ug/l	0.50	--
1,1,1-Trichloroethane	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	0.50	--
Carbon tetrachloride	ND		ug/l	0.50	--
1,2-Dichloroethane	ND		ug/l	0.50	--
Benzene	ND		ug/l	0.50	--
Trichloroethene	ND		ug/l	0.50	--
1,2-Dichloropropane	ND		ug/l	0.50	--
Bromodichloromethane	ND		ug/l	0.50	--
Dibromomethane	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
Toluene	ND		ug/l	0.50	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1,2-Trichloroethane	ND		ug/l	0.50	--
1,3-Dichloropropane	ND		ug/l	0.50	--

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

Method Blank Analysis Batch Quality Control

Analytical Method: 16,524.2
 Analytical Date: 10/03/16 14:46
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG938561-4					
Tetrachloroethene	ND		ug/l	0.50	--
Dibromochloromethane	ND		ug/l	0.50	--
1,2-Dibromoethane	ND		ug/l	0.50	--
Chlorobenzene	ND		ug/l	0.50	--
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--
Ethylbenzene	ND		ug/l	0.50	--
p/m-Xylene	ND		ug/l	0.50	--
o-Xylene	ND		ug/l	0.50	--
Styrene	ND		ug/l	0.50	--
Isopropylbenzene	ND		ug/l	0.50	--
Bromoform	ND		ug/l	0.50	--
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--
1,2,3-Trichloropropane	ND		ug/l	0.50	--
Xylenes, Total ¹	ND		ug/l	0.50	--
n-Propylbenzene	ND		ug/l	0.50	--
Bromobenzene	ND		ug/l	0.50	--
1,3,5-Trimethylbenzene	ND		ug/l	0.50	--
o-Chlorotoluene	ND		ug/l	0.50	--
p-Chlorotoluene	ND		ug/l	0.50	--
tert-Butylbenzene	ND		ug/l	0.50	--
1,2,4-Trimethylbenzene	ND		ug/l	0.50	--
sec-Butylbenzene	ND		ug/l	0.50	--
p-Isopropyltoluene	ND		ug/l	0.50	--
1,3-Dichlorobenzene	ND		ug/l	0.50	--
1,4-Dichlorobenzene	ND		ug/l	0.50	--
n-Butylbenzene	ND		ug/l	0.50	--
1,2-Dichlorobenzene	ND		ug/l	0.50	--
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	--
1,2,4-Trichlorobenzene	ND		ug/l	0.50	--

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

Method Blank Analysis Batch Quality Control

Analytical Method: 16,524.2

Analytical Date: 10/03/16 14:46

Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG938561-4					
Hexachlorobutadiene	ND		ug/l	0.50	--
Naphthalene	ND		ug/l	0.50	--
1,2,3-Trichlorobenzene	ND		ug/l	0.50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	107		80-120
4-Bromofluorobenzene	82		80-120

Lab Control Sample Analysis Batch Quality Control

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG938561-3								
Dichlorodifluoromethane	80		-		70-130	-		20
Chloromethane	90		-		70-130	-		20
Vinyl chloride	110		-		70-130	-		20
Bromomethane	128		-		70-130	-		20
Chloroethane	108		-		70-130	-		20
Trichlorofluoromethane	78		-		70-130	-		20
1,1-Dichloroethene	88		-		70-130	-		20
Methylene chloride	80		-		70-130	-		20
Methyl tert butyl ether	88		-		70-130	-		20
trans-1,2-Dichloroethene	98		-		70-130	-		20
1,1-Dichloroethane	95		-		70-130	-		20
2,2-Dichloropropane	100		-		70-130	-		20
cis-1,2-Dichloroethene	95		-		70-130	-		20
Chloroform	80		-		70-130	-		20
Bromochloromethane	82		-		70-130	-		20
1,1,1-Trichloroethane	78		-		70-130	-		20
1,1-Dichloropropene	80		-		70-130	-		20
Carbon tetrachloride	98		-		70-130	-		20
1,2-Dichloroethane	88		-		70-130	-		20
Benzene	88		-		70-130	-		20
Trichloroethene	100		-		70-130	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG938561-3								
1,2-Dichloropropane	102		-		70-130	-		20
Bromodichloromethane	75		-		70-130	-		20
Dibromomethane	85		-		70-130	-		20
cis-1,3-Dichloropropene	82		-		70-130	-		20
Toluene	88		-		70-130	-		20
trans-1,3-Dichloropropene	82		-		70-130	-		20
1,1,2-Trichloroethane	98		-		70-130	-		20
1,3-Dichloropropane	90		-		70-130	-		20
Tetrachloroethene	95		-		70-130	-		20
Dibromochloromethane	88		-		70-130	-		20
1,2-Dibromoethane	100		-		70-130	-		20
Chlorobenzene	88		-		70-130	-		20
1,1,1,2-Tetrachloroethane	82		-		70-130	-		20
Ethylbenzene	75		-		70-130	-		20
p/m-Xylene	76		-		70-130	-		20
o-Xylene	75		-		70-130	-		20
Styrene	82		-		70-130	-		20
Isopropylbenzene	78		-		70-130	-		20
Bromoform	75		-		70-130	-		20
1,1,2,2-Tetrachloroethane	90		-		70-130	-		20
1,2,3-Trichloropropane	90		-		70-130	-		20

Lab Control Sample Analysis Batch Quality Control

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG938561-3								
n-Propylbenzene	75		-		70-130	-		20
Bromobenzene	72		-		70-130	-		20
1,3,5-Trimethylbenzene	75		-		70-130	-		20
o-Chlorotoluene	75		-		70-130	-		20
p-Chlorotoluene	75		-		70-130	-		20
tert-Butylbenzene	82		-		70-130	-		20
1,2,4-Trimethylbenzene	75		-		70-130	-		20
sec-Butylbenzene	82		-		70-130	-		20
p-Isopropyltoluene	82		-		70-130	-		20
1,3-Dichlorobenzene	85		-		70-130	-		20
1,4-Dichlorobenzene	80		-		70-130	-		20
n-Butylbenzene	72		-		70-130	-		20
1,2-Dichlorobenzene	80		-		70-130	-		20
1,2-Dibromo-3-chloropropane	85		-		70-130	-		20
1,2,4-Trichlorobenzene	78		-		70-130	-		20
Hexachlorobutadiene	78		-		70-130	-		20
Naphthalene	90		-		70-130	-		20
1,2,3-Trichlorobenzene	80		-		70-130	-		20

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 160801 EVERGREEN**Lab Number:** L1630671**Project Number:** 160801**Report Date:** 10/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG938561-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichlorobenzene-d4	101				80-120
4-Bromofluorobenzene	92				80-120

Lab Control Sample Analysis Batch Quality Control

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG938561-9								
Dichlorodifluoromethane	90		-		70-130	-		20
Chloromethane	95		-		70-130	-		20
Vinyl chloride	100		-		70-130	-		20
Bromomethane	100		-		70-130	-		20
Chloroethane	102		-		70-130	-		20
Trichlorofluoromethane	98		-		70-130	-		20
1,1-Dichloroethene	102		-		70-130	-		20
Methylene chloride	105		-		70-130	-		20
Methyl tert butyl ether	95		-		70-130	-		20
trans-1,2-Dichloroethene	102		-		70-130	-		20
1,1-Dichloroethane	102		-		70-130	-		20
2,2-Dichloropropane	110		-		70-130	-		20
cis-1,2-Dichloroethene	102		-		70-130	-		20
Chloroform	100		-		70-130	-		20
Bromochloromethane	102		-		70-130	-		20
1,1,1-Trichloroethane	102		-		70-130	-		20
1,1-Dichloropropene	98		-		70-130	-		20
Carbon tetrachloride	98		-		70-130	-		20
1,2-Dichloroethane	105		-		70-130	-		20
Benzene	105		-		70-130	-		20
Trichloroethene	102		-		70-130	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG938561-9								
1,2-Dichloropropane	102		-		70-130	-		20
Bromodichloromethane	100		-		70-130	-		20
Dibromomethane	98		-		70-130	-		20
cis-1,3-Dichloropropene	108		-		70-130	-		20
Toluene	105		-		70-130	-		20
trans-1,3-Dichloropropene	120		-		70-130	-		20
1,1,2-Trichloroethane	100		-		70-130	-		20
1,3-Dichloropropane	95		-		70-130	-		20
Tetrachloroethene	102		-		70-130	-		20
Dibromochloromethane	110		-		70-130	-		20
1,2-Dibromoethane	98		-		70-130	-		20
Chlorobenzene	102		-		70-130	-		20
1,1,1,2-Tetrachloroethane	102		-		70-130	-		20
Ethylbenzene	105		-		70-130	-		20
p/m-Xylene	99		-		70-130	-		20
o-Xylene	102		-		70-130	-		20
Styrene	100		-		70-130	-		20
Isopropylbenzene	100		-		70-130	-		20
Bromoform	120		-		70-130	-		20
1,1,2,2-Tetrachloroethane	98		-		70-130	-		20
1,2,3-Trichloropropane	92		-		70-130	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG938561-9								
n-Propylbenzene	98		-		70-130	-		20
Bromobenzene	95		-		70-130	-		20
1,3,5-Trimethylbenzene	98		-		70-130	-		20
o-Chlorotoluene	98		-		70-130	-		20
p-Chlorotoluene	98		-		70-130	-		20
tert-Butylbenzene	95		-		70-130	-		20
1,2,4-Trimethylbenzene	100		-		70-130	-		20
sec-Butylbenzene	95		-		70-130	-		20
p-Isopropyltoluene	98		-		70-130	-		20
1,3-Dichlorobenzene	100		-		70-130	-		20
1,4-Dichlorobenzene	100		-		70-130	-		20
n-Butylbenzene	100		-		70-130	-		20
1,2-Dichlorobenzene	102		-		70-130	-		20
1,2-Dibromo-3-chloropropane	90		-		70-130	-		20
1,2,4-Trichlorobenzene	105		-		70-130	-		20
Hexachlorobutadiene	102		-		70-130	-		20
Naphthalene	105		-		70-130	-		20
1,2,3-Trichlorobenzene	105		-		70-130	-		20

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 160801 EVERGREEN**Lab Number:** L1630671**Project Number:** 160801**Report Date:** 10/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG938561-9

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichlorobenzene-d4	102				80-120
4-Bromofluorobenzene	98				80-120

Matrix Spike Analysis

Batch Quality Control

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

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): 01-04 QC Batch ID: WG938561-6 QC Sample: L1630671-02 Client ID: IW-1												
Dichlorodifluoromethane	ND	4	3.5	88		-	-		70-130	-		20
Chloromethane	ND	4	3.7	92		-	-		70-130	-		20
Vinyl chloride	ND	4	5.0	125		-	-		70-130	-		20
Bromomethane	ND	4	3.2	80		-	-		70-130	-		20
Chloroethane	ND	4	4.6	115		-	-		70-130	-		20
Trichlorofluoromethane	ND	4	3.6	90		-	-		70-130	-		20
1,1-Dichloroethene	ND	4	4.1	103		-	-		70-130	-		20
Methylene chloride	ND	4	3.3	82		-	-		70-130	-		20
Methyl tert butyl ether	ND	4	3.9	98		-	-		70-130	-		20
trans-1,2-Dichloroethene	ND	4	4.3	108		-	-		70-130	-		20
1,1-Dichloroethane	ND	4	4.3	108		-	-		70-130	-		20
2,2-Dichloropropane	ND	4	4.2	105		-	-		70-130	-		20
cis-1,2-Dichloroethene	ND	4	4.2	105		-	-		70-130	-		20
Chloroform	ND	4	3.7	92		-	-		70-130	-		20
Bromochloromethane	ND	4	3.5	88		-	-		70-130	-		20
1,1,1-Trichloroethane	ND	4	3.6	90		-	-		70-130	-		20
1,1-Dichloropropene	ND	4	3.6	90		-	-		70-130	-		20
Carbon tetrachloride	ND	4	4.8	120		-	-		70-130	-		20
1,2-Dichloroethane	ND	4	3.8	95		-	-		70-130	-		20
Benzene	ND	4	4.1	103		-	-		70-130	-		20
Trichloroethene	ND	4	4.5	113		-	-		70-130	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: 160801 EVERGREEN
Project Number: 160801

Lab Number: L1630671
Report Date: 10/09/16

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG938561-6 QC Sample: L1630671-02 Client ID: IW-1												
1,2-Dichloropropane	ND	4	4.7	118		-	-		70-130	-		20
Bromodichloromethane	ND	4	3.7	92		-	-		70-130	-		20
Dibromomethane	ND	4	3.7	92		-	-		70-130	-		20
cis-1,3-Dichloropropene	ND	4	3.5	88		-	-		70-130	-		20
Toluene	ND	4	3.9	98		-	-		70-130	-		20
trans-1,3-Dichloropropene	ND	4	3.5	88		-	-		70-130	-		20
1,1,2-Trichloroethane	ND	4	4.6	115		-	-		70-130	-		20
1,3-Dichloropropane	ND	4	4.0	100		-	-		70-130	-		20
Tetrachloroethene	ND	4	4.3	108		-	-		70-130	-		20
Dibromochloromethane	ND	4	4.0	100		-	-		70-130	-		20
1,2-Dibromoethane	ND	4	4.4	110		-	-		70-130	-		20
Chlorobenzene	ND	4	4.0	100		-	-		70-130	-		20
1,1,1,2-Tetrachloroethane	ND	4	3.9	98		-	-		70-130	-		20
Ethylbenzene	ND	4	3.4	85		-	-		70-130	-		20
p/m-Xylene	ND	8	7.0	88		-	-		70-130	-		20
o-Xylene	ND	4	3.4	85		-	-		70-130	-		20
Styrene	ND	4	4.0	100		-	-		70-130	-		20
Isopropylbenzene	ND	4	3.6	90		-	-		70-130	-		20
Bromoform	ND	4	3.3	82		-	-		70-130	-		20
1,1,2,2-Tetrachloroethane	ND	4	4.5	113		-	-		70-130	-		20
1,2,3-Trichloropropane	ND	4	4.5	113		-	-		70-130	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

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): 01-04 QC Batch ID: WG938561-6 QC Sample: L1630671-02 Client ID: IW-1												
n-Propylbenzene	ND	4	3.6	90		-	-		70-130	-		20
Bromobenzene	ND	4	3.4	85		-	-		70-130	-		20
1,3,5-Trimethylbenzene	ND	4	3.6	90		-	-		70-130	-		20
o-Chlorotoluene	ND	4	3.6	90		-	-		70-130	-		20
p-Chlorotoluene	ND	4	3.7	92		-	-		70-130	-		20
tert-Butylbenzene	ND	4	3.7	92		-	-		70-130	-		20
1,2,4-Trimethylbenzene	ND	4	3.6	90		-	-		70-130	-		20
sec-Butylbenzene	ND	4	3.8	95		-	-		70-130	-		20
p-Isopropyltoluene	ND	4	3.8	95		-	-		70-130	-		20
1,3-Dichlorobenzene	ND	4	3.9	98		-	-		70-130	-		20
1,4-Dichlorobenzene	ND	4	3.4	85		-	-		70-130	-		20
n-Butylbenzene	ND	4	3.3	82		-	-		70-130	-		20
1,2-Dichlorobenzene	ND	4	3.6	90		-	-		70-130	-		20
1,2-Dibromo-3-chloropropane	ND	4	4.6	115		-	-		70-130	-		20
1,2,4-Trichlorobenzene	ND	4	3.1	78		-	-		70-130	-		20
Hexachlorobutadiene	ND	4	3.2	80		-	-		70-130	-		20
Naphthalene	ND	4	4.1	103		-	-		70-130	-		20
1,2,3-Trichlorobenzene	ND	4	3.7	92		-	-		70-130	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG938561-6 QC Sample: L1630671-02 Client ID: IW-1

<i>Surrogate</i>	<i>MS % Recovery</i>	<i>Qualifier</i>	<i>MSD % Recovery</i>	<i>Qualifier</i>	<i>Acceptance Criteria</i>
1,2-Dichlorobenzene-d4	103				80-120
4-Bromofluorobenzene	97				80-120

Lab Duplicate Analysis

Batch Quality Control

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG938561-5 QC Sample: L1630671-01 Client ID: MW-6						
Dichlorodifluoromethane	ND	ND	ug/l	NC		20
Chloromethane	ND	ND	ug/l	NC		20
Vinyl chloride	ND	ND	ug/l	NC		20
Bromomethane	ND	ND	ug/l	NC		20
Chloroethane	ND	ND	ug/l	NC		20
Trichlorofluoromethane	ND	ND	ug/l	NC		20
1,1-Dichloroethene	ND	ND	ug/l	NC		20
Methylene chloride	ND	ND	ug/l	NC		20
Methyl tert butyl ether	ND	ND	ug/l	NC		20
trans-1,2-Dichloroethene	ND	ND	ug/l	NC		20
1,1-Dichloroethane	ND	ND	ug/l	NC		20
2,2-Dichloropropane	ND	ND	ug/l	NC		20
cis-1,2-Dichloroethene	ND	ND	ug/l	NC		20
Chloroform	ND	ND	ug/l	NC		20
Bromochloromethane	ND	ND	ug/l	NC		20
1,1,1-Trichloroethane	ND	ND	ug/l	NC		20
1,1-Dichloropropene	ND	ND	ug/l	NC		20
Carbon tetrachloride	ND	ND	ug/l	NC		20
1,2-Dichloroethane	ND	ND	ug/l	NC		20

Lab Duplicate Analysis Batch Quality Control

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG938561-5 QC Sample: L1630671-01 Client ID: MW-6					
Benzene	ND	ND	ug/l	NC	20
Trichloroethene	ND	ND	ug/l	NC	20
1,2-Dichloropropane	ND	ND	ug/l	NC	20
Bromodichloromethane	ND	ND	ug/l	NC	20
Dibromomethane	ND	ND	ug/l	NC	20
cis-1,3-Dichloropropene	ND	ND	ug/l	NC	20
Toluene	ND	ND	ug/l	NC	20
trans-1,3-Dichloropropene	ND	ND	ug/l	NC	20
1,1,2-Trichloroethane	ND	ND	ug/l	NC	20
1,3-Dichloropropane	ND	ND	ug/l	NC	20
Tetrachloroethene	ND	ND	ug/l	NC	20
Dibromochloromethane	ND	ND	ug/l	NC	20
1,2-Dibromoethane	ND	ND	ug/l	NC	20
Chlorobenzene	ND	ND	ug/l	NC	20
1,1,1,2-Tetrachloroethane	ND	ND	ug/l	NC	20
Ethylbenzene	ND	ND	ug/l	NC	20
p/m-Xylene	ND	ND	ug/l	NC	20
o-Xylene	ND	ND	ug/l	NC	20
Styrene	ND	ND	ug/l	NC	20

Lab Duplicate Analysis Batch Quality Control

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG938561-5 QC Sample: L1630671-01 Client ID: MW-6					
Isopropylbenzene	ND	ND	ug/l	NC	20
Bromoform	ND	ND	ug/l	NC	20
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC	20
1,2,3-Trichloropropane	ND	ND	ug/l	NC	20
n-Propylbenzene	ND	ND	ug/l	NC	20
Xylenes, Total ¹	ND	ND	ug/l	NC	20
Bromobenzene	ND	ND	ug/l	NC	20
1,3,5-Trimethylbenzene	ND	ND	ug/l	NC	20
o-Chlorotoluene	ND	ND	ug/l	NC	20
p-Chlorotoluene	ND	ND	ug/l	NC	20
tert-Butylbenzene	ND	ND	ug/l	NC	20
1,2,4-Trimethylbenzene	ND	ND	ug/l	NC	20
sec-Butylbenzene	ND	ND	ug/l	NC	20
p-Isopropyltoluene	ND	ND	ug/l	NC	20
1,3-Dichlorobenzene	ND	ND	ug/l	NC	20
1,4-Dichlorobenzene	ND	ND	ug/l	NC	20
n-Butylbenzene	ND	ND	ug/l	NC	20
1,2-Dichlorobenzene	ND	ND	ug/l	NC	20
1,2-Dibromo-3-chloropropane	ND	ND	ug/l	NC	20

Lab Duplicate Analysis Batch Quality Control

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG938561-5 QC Sample: L1630671-01 Client ID: MW-6					
1,2,4-Trichlorobenzene	ND	ND	ug/l	NC	20
Hexachlorobutadiene	ND	ND	ug/l	NC	20
Naphthalene	ND	ND	ug/l	NC	20
1,2,3-Trichlorobenzene	ND	ND	ug/l	NC	20

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	112		106		80-120
4-Bromofluorobenzene	85		88		80-120

METALS

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-01

Date Collected: 09/27/16 15:00

Client ID: MW-6

Date Received: 09/28/16

Sample Location: NEWBURYPORT

Field Prep: Not Specified

Matrix: Dw

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Potassium, Total	8.85		mg/l	2.50	--	1	09/30/16 08:00	10/04/16 13:49	EPA 3005A	19,200.7	PS
Sodium, Total	21.0		mg/l	2.00	--	1	09/30/16 08:00	10/04/16 13:49	EPA 3005A	19,200.7	PS



Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-02

Date Collected: 09/27/16 15:40

Client ID: IW-1

Date Received: 09/28/16

Sample Location: NEWBURYPORT

Field Prep: Not Specified

Matrix: Dw

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Potassium, Total	3.91		mg/l	2.50	--	1	09/30/16 08:00	10/04/16 13:54	EPA 3005A	19,200.7	PS
Sodium, Total	46.6		mg/l	2.00	--	1	09/30/16 08:00	10/04/16 13:54	EPA 3005A	19,200.7	PS



Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-03

Date Collected: 09/27/16 16:30

Client ID: MW-7

Date Received: 09/28/16

Sample Location: NEWBURYPORT

Field Prep: Not Specified

Matrix: Dw

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Potassium, Total	24.6		mg/l	2.50	--	1	09/30/16 08:00	10/04/16 13:59	EPA 3005A	19,200.7	PS
Sodium, Total	62.5		mg/l	2.00	--	1	09/30/16 08:00	10/04/16 13:59	EPA 3005A	19,200.7	PS



Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

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): 01-03 Batch: WG937426-1										
Potassium, Total	ND		mg/l	2.50	--	1	09/30/16 08:00	10/04/16 12:36	19,200.7	PS
Sodium, Total	ND		mg/l	2.00	--	1	09/30/16 08:00	10/04/16 12:36	19,200.7	PS

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 160801 EVERGREEN**Project Number:** 160801**Lab Number:** L1630671**Report Date:** 10/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG937426-2								
Potassium, Total	102		-		85-115	-		
Sodium, Total	102		-		85-115	-		

Matrix Spike Analysis

Batch Quality Control

Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

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): 01-03 QC Batch ID: WG937426-4 QC Sample: L1630699-02 Client ID: MS Sample												
Potassium, Total	ND	10	14.6	146	Q	-	-		75-125	-		20
Sodium, Total	10.9	10	24.1	132	Q	-	-		75-125	-		20

INORGANICS & MISCELLANEOUS

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-01
 Client ID: MW-6
 Sample Location: NEWBURYPORT
 Matrix: Dw

Date Collected: 09/27/16 15:00
 Date Received: 09/28/16
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	--	1	-	09/28/16 20:41	44,353.2	MR
Nitrogen, Nitrate	1.8		mg/l	0.10	--	1	-	09/28/16 20:41	44,353.2	MR
Phosphorus, Total	1.48		mg/l	0.100	--	10	09/30/16 13:50	10/03/16 10:34	121,4500P-E	SD
Anions by Ion Chromatography - Westborough Lab										
Chloride	39.6		mg/l	0.500	--	1	-	09/29/16 17:34	44,300.0	AU



Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-02
 Client ID: IW-1
 Sample Location: NEWBURYPORT
 Matrix: Dw

Date Collected: 09/27/16 15:40
 Date Received: 09/28/16
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	--	1	-	09/28/16 20:42	44,353.2	MR
Nitrogen, Nitrate	1.2		mg/l	0.10	--	1	-	09/28/16 20:42	44,353.2	MR
Phosphorus, Total	ND		mg/l	0.010	--	1	09/30/16 13:50	10/03/16 10:34	121,4500P-E	SD
Anions by Ion Chromatography - Westborough Lab										
Chloride	129.		mg/l	12.5	--	25	-	09/29/16 22:22	44,300.0	AU



Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

SAMPLE RESULTS

Lab ID: L1630671-03

Client ID: MW-7

Sample Location: NEWBURYPORT

Matrix: Dw

Date Collected: 09/27/16 16:30

Date Received: 09/28/16

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Nitrite	ND		mg/l	0.050	--	1	-	09/28/16 20:47	44,353.2	MR
Nitrogen, Nitrate	0.42		mg/l	0.10	--	1	-	09/28/16 20:47	44,353.2	MR
Phosphorus, Total	2.17		mg/l	0.100	--	10	09/30/16 13:50	10/03/16 10:35	121,4500P-E	SD
Anions by Ion Chromatography - Westborough Lab										
Chloride	160.		mg/l	12.5	--	25	-	09/29/16 22:34	44,300.0	AU



Project Name: 160801 EVERGREEN

Lab Number: L1630671

Project Number: 160801

Report Date: 10/09/16

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): 01-03 Batch: WG936803-1										
Nitrogen, Nitrate	ND		mg/l	0.10	--	1	-	09/28/16 20:24	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG936805-1										
Nitrogen, Nitrite	ND		mg/l	0.050	--	1	-	09/28/16 20:30	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG937602-1										
Phosphorus, Total	ND		mg/l	0.010	--	1	09/30/16 13:50	10/03/16 10:16	121,4500P-E	SD
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-03 Batch: WG937689-1										
Chloride	ND		mg/l	0.500	--	1	-	09/29/16 17:10	44,300.0	AU

Lab Control Sample Analysis

Batch Quality Control

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG936803-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG936805-2								
Nitrogen, Nitrite	104		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG937602-2								
Phosphorus, Total	103		-		80-120	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 Batch: WG937689-2								
Chloride	101		-		90-110	-		

Matrix Spike Analysis

Batch Quality Control

Project Name: 160801 EVERGREEN
Project Number: 160801

Lab Number: L1630671
Report Date: 10/09/16

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG936803-4 QC Sample: L1630670-04 Client ID: MS Sample												
Nitrogen, Nitrate	0.43	4	4.3	97		-	-		83-113	-		6
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG936805-4 QC Sample: L1630670-04 Client ID: MS Sample												
Nitrogen, Nitrite	0.14	4	4.1	99		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG937602-3 QC Sample: L1630317-02 Client ID: MS Sample												
Phosphorus, Total	0.023	0.5	0.512	98		-	-		75-125	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG937689-3 QC Sample: L1630580-01 Client ID: MS Sample												
Chloride	2.64	4	6.94	108		-	-		40-151	-		18

Lab Duplicate Analysis Batch Quality Control

Project Name: 160801 EVERGREEN
Project Number: 160801

Lab Number: L1630671
Report Date: 10/09/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG936803-3 QC Sample: L1630670-04 Client ID: DUP Sample						
Nitrogen, Nitrate	0.43	0.43	mg/l	0		6
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG936805-3 QC Sample: L1630670-04 Client ID: DUP Sample						
Nitrogen, Nitrite	0.14	0.13	mg/l	7		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG937602-4 QC Sample: L1630317-02 Client ID: DUP Sample						
Phosphorus, Total	0.023	0.022	mg/l	4		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG937689-4 QC Sample: L1630580-01 Client ID: DUP Sample						
Chloride	2.64	2.65	mg/l	0		18

Project Name: 160801 EVERGREEN

Project Number: 160801

Lab Number: L1630671

Report Date: 10/09/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler

A Absent

B Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1630671-01A	Vial Ascorbic Acid/HCl preserved	A	N/A	3.8	Y	Absent	524.2(14)
L1630671-01B	Vial Ascorbic Acid/HCl preserved	A	N/A	3.8	Y	Absent	524.2(14)
L1630671-01D	Plastic 250ml unpreserved	A	7	3.8	Y	Absent	CL-300(28),NO2-353(2),NO3-353(2)
L1630671-01E	Plastic 250ml H2SO4 preserved	A	<2	3.8	Y	Absent	TPHOS-4500(28)
L1630671-01F	Plastic 250ml HNO3 preserved spl	A	<2	3.8	Y	Absent	K-UI(180),NA-UI(180)
L1630671-02A	Vial Ascorbic Acid/HCl preserved	B	N/A	2.5	Y	Absent	524.2(14)
L1630671-02B	Vial Ascorbic Acid/HCl preserved	A	N/A	3.8	Y	Absent	524.2(14)
L1630671-02C	Vial Ascorbic Acid/HCl preserved	B	N/A	2.5	Y	Absent	-
L1630671-02D	Plastic 250ml unpreserved	B	7	2.5	Y	Absent	CL-300(28),NO2-353(2),NO3-353(2)
L1630671-02E	Plastic 250ml H2SO4 preserved	B	<2	2.5	Y	Absent	TPHOS-4500(28)
L1630671-02F	Plastic 250ml HNO3 preserved	B	<2	2.5	Y	Absent	K-UI(180),NA-UI(180)
L1630671-03A	Vial Ascorbic Acid/HCl preserved	A	N/A	3.8	Y	Absent	524.2(14)
L1630671-03B	Vial Ascorbic Acid/HCl preserved	A	N/A	3.8	Y	Absent	524.2(14)
L1630671-03D	Plastic 250ml unpreserved	A	7	3.8	Y	Absent	CL-300(28),NO2-353(2),NO3-353(2)
L1630671-03E	Plastic 250ml H2SO4 preserved	A	<2	3.8	Y	Absent	TPHOS-4500(28)
L1630671-03F	Plastic 250ml HNO3 preserved	A	7	3.8	Y	Absent	K-UI(180),NA-UI(180)
L1630671-04A	Vial Ascorbic Acid/HCl preserved	A	N/A	3.8	Y	Absent	524.2(14)
L1630671-04B	Vial Ascorbic Acid/HCl preserved	A	N/A	3.8	Y	Absent	524.2(14)

*Values in parentheses indicate holding time in days



Project Name: 160801 EVERGREEN
Project Number: 160801

Lab Number: L1630671
Report Date: 10/09/16

GLOSSARY

Acronyms

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).
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.
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.
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.
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.
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.

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

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.

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.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- 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

Report Format: Data Usability Report



Project Name: 160801 EVERGREEN**Lab Number:** L1630671**Project Number:** 160801**Report Date:** 10/09/16**Data Qualifiers**

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

Project Name: 160801 EVERGREEN
Project Number: 160801

Lab Number: L1630671
Report Date: 10/09/16

REFERENCES

- 16 Methods for the Determination of Organic Compounds in Drinking Water - Supplement II. EPA/600/R-92/129, August 1992.
- 19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 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.



Alpha Analytical, Inc.

ID No.:17873

Facility: **Company-wide**

Revision 7

Department: **Quality Assurance**

Published Date: 8/5/2016 11:25:56 AM

Title: **Certificate/Approval Program Summary**

Page 1 of 1

Certification Information

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

Westborough Facility**EPA 624:** m/p-xylene, o-xylene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**EPA 300:** DW: Bromide**EPA 6860:** NPW and SCM: Perchlorate**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation**EPA 9012B:** NPW: Total Cyanide**EPA 9050A:** NPW: Specific Conductance**SM3500:** NPW: Ferrous Iron**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO₂, NO₃.**SM5310C:** DW: Dissolved Organic Carbon**Mansfield Facility****SM 2540D:** TSS**EPA 3005A** NPW**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.

Biological Tissue Matrix: **EPA 3050B**

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

Westborough Facility:**Drinking Water****EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B****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, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **EPA 351.1, 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 624:** Volatile Halocarbons & Aromatics,**EPA 608:** 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:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.****Mansfield Facility:****Drinking Water****EPA 200.7:** Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1 Hg.****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, Pb, Mn, Ni, Se, Ag, 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

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

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

Project Information

Project Name: 160801 Evergreen

Project Location: Newburyport

Project #: 160801

Project Manager: Jay Billings

ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Date Rec'd in Lab:

9/28/16

ALPHA Job #:

L1630671

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

Client Information

Client: Northeast Geoscience

 Address: 97 Walnut Street
Clinton, MA 01510

Phone: 978-365-9045

Email: jbillings@ngo.net

Additional Project Information:

ALPHA Lab ID
(Lab Use Only)

Sample ID

Collection

Date

Time

Sample
MatrixSampler
Initials

ANALYSIS

VOC: ☐ 8260 ☐ 824 ☐ 5242SVOC: ☐ ABN ☐ PAHMETALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13EPH: ☐ Ranges & Targets ☐ Ranges OnlyVPH: ☐ Ranges & Targets ☐ Ranges Only☐ PCB ☐ PESTTPH: ☐ Quant Only ☐ Fingerprint

Glyphosate Diquat

MADEP SOCs

Nitrate, Nitrite, Phosphate

Sodium Chloride Potassium

VOCs by 5242

SAMPLE INFO

Filtration

☐ Field ☐ Lab to do

Preservation

☐ Lab to do

Sample Comments

TOTAL # BOTTLES

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= HNO₃
 D= H₂SO₄
 E= NaOH
 F= MeOH
 G= NaHSO₄
 H= Na₂S₂O₃
 I= Ascorbic Acid
 J= NH₄Cl
 K= Zn Acetate
 O= Other

Container Type

Preservative

Relinquished By:

Date/Time

9-28-16

7:47

Received By:

Date/Time

9/28/16 07:47

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

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

GRANITE STATE ANALYTICAL SERVICES, LLC

22 Manchester Road, Unit 2, Derry, NH 03038

Phone (800) 699-9920





(603) 432-3044

Fax (603) 434-4837

<http://www.granitestateanalytical.com/>

CERTIFICATE OF ANALYSIS FOR DRINKING WATER

DATE PRINTED: 10/10/2016
 CLIENT NAME: Alpha Analytical
 CLIENT ADDRESS: 8 Walkup Dr.
 Westborough, MA 01581

Legend
 Passes 
 Fails EPA Primary 
 Fails EPA Secondary 
 Fails EPA Proposed Limit 

SAMPLE ID#: 1609-02996-001
 SAMPLED BY: Alpha Analytical

DATE AND TIME COLLECTED: 09/27/2016 3:00 PM

DATE AND TIME RECEIVED: 09/29/2016 11:10 AM

ANALYSIS PACKAGE: SOC GSA MA

SAMPLE ADDRESS: MW-6

RECEIPT TEMPERATURE: ON ICE 4.5 CELSIUS

CLIENT JOB # L1630673

LOCATION:

Test Description	Results	Test Units	Pass /Fail	DQ Flag	RL	EPA Limit	Method	Analyst	Date-Time Analyzed
1,2-Dibromo-3-chloropropane (DBCP)*	<0.02	ug/L			0.02	0.2 ug/L	EPA 504.1	BM-NH	10/04/16 7:02 PM
Date Extracted	-					No Limit	EPA 504.1	ND-NH	10/04/16 9:50 AM
Ethylene Dibromide (EDB)*	<0.02	ug/L			0.02	0.05 ug/L	EPA 504.1	BM-NH	10/04/16 7:02 PM
Aroclor 1016	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 8:09 PM
Aroclor 1221	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 8:09 PM
Aroclor 1232	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 8:09 PM
Aroclor 1242	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 8:09 PM
Aroclor 1248	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 8:09 PM
Aroclor 1254	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 8:09 PM
Aroclor 1260	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 8:09 PM
Chlordane*	<0.2	ug/L			0.2	2 ug/L	EPA 505	BM-NH	10/05/16 8:09 PM
Date Extracted	-					No Limit	EPA 505	ND-NH	10/04/16 9:50 AM
Toxaphene*	<1.0	ug/L			1.0	3 ug/L	EPA 505	BM-NH	10/05/16 8:09 PM
2,4,5-TP (Silvex)*	<0.25	ug/L			0.25	50 ug/L	EPA 515.3	BM-NH	10/05/16 12:06 AM
2,4-D*	<1	ug/L			1	70 ug/L	EPA 515.3	BM-NH	10/05/16 12:06 AM
Dalapon*	<1	ug/L			1	200 ug/L	EPA 515.3	BM-NH	10/05/16 12:06 AM
Date Extracted	-					No Limit	EPA 515.3	KV-NH	10/04/16 9:50 AM
Dicamba*	<0.18	ug/L			0.18	No Limit	EPA 515.3	BM-NH	10/05/16 12:06 AM
Dinoseb*	<0.5	ug/L			0.5	7 ug/L	EPA 515.3	BM-NH	10/05/16 12:06 AM
Pentachlorophenol*	<0.1	ug/L			0.1	1 ug/L	EPA 515.3	BM-NH	10/05/16 12:06 AM
Picloram*	<1.3	ug/L			1.3	500 ug/L	EPA 515.3	BM-NH	10/05/16 12:06 AM
2,4-Dichlorophenylacetic acid	105	%				No Limit	EPA 515.3 - SS	BM-NH	10/05/16 12:06 AM
Alachlor*	<0.1	ug/L			0.1	2 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Aldrin*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:02 PM
Atrazine*	<0.1	ug/L			0.1	3 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Benzo(a)pyrene*	<0.1	ug/L			0.1	0.2 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Butachlor*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:02 PM
Date Extracted	-					No Limit	EPA 525.2	KV-NH	10/05/16 10:05 AM
Di(2-ethylhexyl)adipate*	<0.6	ug/L			0.6	400 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Di(2-ethylhexyl)phthalate*	<3	ug/L			3	6 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Dieldrin*	<0.04	ug/L			0.04	No Limit	EPA 525.2	DD-NH	10/06/16 7:02 PM

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22 Manchester Road, Unit 2, Derry, NH 03038

Phone (800) 699-9920





(603) 432-3044

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CERTIFICATE OF ANALYSIS FOR DRINKING WATER

DATE PRINTED: 10/10/2016
CLIENT NAME: Alpha Analytical
CLIENT ADDRESS: 8 Walkup Dr.
Westborough, MA 01581

Legend
Passes 
Fails EPA Primary 
Fails EPA Secondary 
Fails EPA Proposed Limit 

SAMPLE ID#: 1609-02996-001
SAMPLED BY: Alpha Analytical

DATE AND TIME COLLECTED: 09/27/2016 3:00 PM

DATE AND TIME RECEIVED: 09/29/2016 11:10 AM












ANALYSIS PACKAGE: SOC GSA MA

SAMPLE ADDRESS: MW-6
MA

RECEIPT TEMPERATURE: ON ICE 4.5 CELSIUS

CLIENT JOB # L1630673

LOCATION:

Test Description	Results	Test Units	Pass /Fail	DQ Flag	RL	EPA Limit	Method	Analyst	Date-Time Analyzed
Endrin*	<0.1	ug/L			0.1	2 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Heptachlor Epoxide*	<0.06	ug/L			0.06	0.2 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Heptachlor*	<0.04	ug/L			0.04	0.4 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Hexachlorobenzene*	<0.1	ug/L			0.1	1 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Hexachlorocyclopentadiene*	<0.1	ug/L			0.1	50 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Lindane*	<0.07	ug/L			0.07	0.2 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Methoxychlor*	<0.1	ug/L			0.1	40 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
Metolachlor*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:02 PM
Metribuzin*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:02 PM
Propachlor*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:02 PM
Simazine*	<0.1	ug/L			0.1	4 ug/L	EPA 525.2	DD-NH	10/06/16 7:02 PM
1,3-Dimethyl-2-nitrobenzene	102	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:02 PM
Perylene-d12	95	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:02 PM
Pyrene-d10	102	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:02 PM
Triphenylphosphate	110	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:02 PM
3-Hydroxycarbofuran*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:02 PM
Aldicarb Sulfone*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:02 PM
Aldicarb Sulfoxide*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:02 PM
Aldicarb*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:02 PM
Carbaryl*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:02 PM
Carbofuran*	<0.9	ug/L			0.9	40 ug/L	EPA 531.1	BM-NH	10/04/16 4:02 PM
Methiocarb*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:02 PM
Methomyl*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:02 PM
Oxamyl (Vydate)*	<1	ug/L			1	200 ug/L	EPA 531.1	BM-NH	10/04/16 4:02 PM
Propoxur (Baygon)*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:02 PM
Glyphosate*	<6	ug/L			6	700 ug/L	EPA 547	BM-NH	10/08/16 1:32 AM

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Westborough, MA 01581

Legend
Passes 
Fails EPA Primary 
Fails EPA Secondary 
Fails EPA Proposed Limit 

SAMPLE ID#: 1609-02996-001

DATE AND TIME COLLECTED: 09/27/2016 3:00 PM

SAMPLED BY: Alpha Analytical

DATE AND TIME RECEIVED: 09/29/2016 11:10 AM

ANALYSIS PACKAGE: SOC GSA MA

SAMPLE ADDRESS: MW-6

RECEIPT TEMPERATURE: ON ICE 4.5 CELSIUS

CLIENT JOB # L1630673

LOCATION: MA

Test Description

Test Description	Results	Test Units	Pass /Fail	DQ Flag	RL	EPA Limit	Method	Analyst	Date-Time Analyzed
------------------	---------	------------	------------	---------	----	-----------	--------	---------	--------------------

The results presented in this report relate to the samples listed above in the condition in which they were received.
RL: "Reporting limit" means the lowest level of an analyte that can be accurately recovered from the matrix of interest.

Data Qualifier (DQ) Flags: None

* MA Certified Analysis



Donald J. D'Anjou, Ph. D.
Laboratory Director

This analysis meets Commonwealth of Massachusetts requirements except as noted.

State Certifications: | NH 1015 | MA M-NH003 | ME NH00003 | RI 101513 | VT VT-101507 |

This certificate shall not be reproduced, except in full, without the written approval of Granite State Analytical Services, LLC

GRANITE STATE ANALYTICAL SERVICES, LLC

22 Manchester Road, Unit 2, Derry, NH 03038

Phone (800) 699-9920





(603) 432-3044

Fax (603) 434-4837

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CERTIFICATE OF ANALYSIS FOR DRINKING WATER

DATE PRINTED: 10/10/2016
CLIENT NAME: Alpha Analytical
CLIENT ADDRESS: 8 Walkup Dr.
Westborough, MA 01581

Legend
Passes 
Fails EPA Primary 
Fails EPA Secondary 
Fails EPA Proposed Limit 

SAMPLE ID#: 1609-02996-002

DATE AND TIME COLLECTED: 09/27/2016 3:40 PM

SAMPLED BY: Alpha Analytical

DATE AND TIME RECEIVED: 09/29/2016 11:10 AM

ANALYSIS PACKAGE: SOC GSA MA



SAMPLE ADDRESS: IW-1

RECEIPT TEMPERATURE: ON ICE 4.5 CELSIUS

CLIENT JOB # L1630673

LOCATION:

MA

Test Description	Results	Test Units	Pass /Fail	DQ Flag	RL	EPA Limit	Method	Analyst	Date-Time Analyzed
1,2-Dibromo-3-chloropropane (DBCP)*	<0.02	ug/L			0.02	0.2 ug/L	EPA 504.1	BM-NH	10/04/16 8:52 PM
Date Extracted	-					No Limit	EPA 504.1	ND-NH	10/04/16 9:50 AM
Ethylene Dibromide (EDB)*	<0.02	ug/L			0.02	0.05 ug/L	EPA 504.1	BM-NH	10/04/16 8:52 PM
Aroclor 1016	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:04 PM
Aroclor 1221	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:04 PM
Aroclor 1232	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:04 PM
Aroclor 1242	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:04 PM
Aroclor 1248	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:04 PM
Aroclor 1254	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:04 PM
Aroclor 1260	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:04 PM
Chlordane*	<0.2	ug/L			0.2	2 ug/L	EPA 505	BM-NH	10/05/16 11:04 PM
Date Extracted	-					No Limit	EPA 505	ND-NH	10/04/16 9:50 AM
Toxaphene*	<1.0	ug/L			1.0	3 ug/L	EPA 505	BM-NH	10/05/16 11:04 PM
2,4,5-TP (Silvex)*	<0.25	ug/L			0.25	50 ug/L	EPA 515.3	BM-NH	10/05/16 12:34 AM
2,4-D*	<1	ug/L			1	70 ug/L	EPA 515.3	BM-NH	10/05/16 12:34 AM
Dalapon*	<1	ug/L			1	200 ug/L	EPA 515.3	BM-NH	10/05/16 12:34 AM
Date Extracted	-					No Limit	EPA 515.3	KV-NH	10/04/16 9:50 AM
Dicamba*	<0.18	ug/L			0.18	No Limit	EPA 515.3	BM-NH	10/05/16 12:34 AM
Dinoseb*	<0.5	ug/L			0.5	7 ug/L	EPA 515.3	BM-NH	10/05/16 12:34 AM
Pentachlorophenol*	<0.1	ug/L			0.1	1 ug/L	EPA 515.3	BM-NH	10/05/16 12:34 AM
Picloram*	<1.3	ug/L			1.3	500 ug/L	EPA 515.3	BM-NH	10/05/16 12:34 AM
2,4-Dichlorophenylacetic acid	111	%				No Limit	EPA 515.3 - SS	BM-NH	10/05/16 12:34 AM
Alachlor*	<0.1	ug/L			0.1	2 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Aldrin*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:29 PM
Atrazine*	<0.1	ug/L			0.1	3 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Benzo(a)pyrene*	<0.1	ug/L			0.1	0.2 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Butachlor*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:29 PM
Date Extracted	-					No Limit	EPA 525.2	KV-NH	10/05/16 10:05 AM
Di(2-ethylhexyl)adipate*	<0.6	ug/L			0.6	400 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Di(2-ethylhexyl)phthalate*	<3	ug/L			3	6 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Dieldrin*	<0.04	ug/L			0.04	No Limit	EPA 525.2	DD-NH	10/06/16 7:29 PM

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Phone (800) 699-9920





(603) 432-3044

Fax (603) 434-4837

<http://www.granitestateanalytical.com/>

CERTIFICATE OF ANALYSIS FOR DRINKING WATER

DATE PRINTED: 10/10/2016
CLIENT NAME: Alpha Analytical
CLIENT ADDRESS: 8 Walkup Dr.
Westborough, MA 01581

Legend
Passes 
Fails EPA Primary 
Fails EPA Secondary 
Fails EPA Proposed Limit 

SAMPLE ID#: 1609-02996-002

DATE AND TIME COLLECTED: 09/27/2016 3:40 PM

SAMPLED BY: Alpha Analytical

DATE AND TIME RECEIVED: 09/29/2016 11:10 AM











ANALYSIS PACKAGE: SOC GSA MA

SAMPLE ADDRESS: IW-1

RECEIPT TEMPERATURE: ON ICE 4.5 CELSIUS

CLIENT JOB # L1630673

LOCATION:

Test Description	Results	Test Units	Pass /Fail	DQ Flag	RL	EPA Limit	Method	Analyst	Date-Time Analyzed
Endrin*	<0.1	ug/L			0.1	2 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Heptachlor Epoxide*	<0.06	ug/L			0.06	0.2 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Heptachlor*	<0.04	ug/L			0.04	0.4 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Hexachlorobenzene*	<0.1	ug/L			0.1	1 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Hexachlorocyclopentadiene*	<0.1	ug/L			0.1	50 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Lindane*	<0.07	ug/L			0.07	0.2 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Methoxychlor*	<0.1	ug/L			0.1	40 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
Metolachlor*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:29 PM
Metribuzin*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:29 PM
Propachlor*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:29 PM
Simazine*	<0.1	ug/L			0.1	4 ug/L	EPA 525.2	DD-NH	10/06/16 7:29 PM
1,3-Dimethyl-2-nitrobenzene	102	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:29 PM
Perylene-d12	91	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:29 PM
Pyrene-d10	100	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:29 PM
Triphenylphosphate	106	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:29 PM
3-Hydroxycarbofuran*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:49 PM
Aldicarb Sulfone*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:49 PM
Aldicarb Sulfoxide*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:49 PM
Aldicarb*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:49 PM
Carbaryl*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:49 PM
Carbofuran*	<0.9	ug/L			0.9	40 ug/L	EPA 531.1	BM-NH	10/04/16 4:49 PM
Methiocarb*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:49 PM
Methomyl*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:49 PM
Oxamyl (Vydate)*	<1	ug/L			1	200 ug/L	EPA 531.1	BM-NH	10/04/16 4:49 PM
Propoxur (Baygon)*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 4:49 PM
Glyphosate*	<6	ug/L			6	700 ug/L	EPA 547	BM-NH	10/08/16 2:16 AM

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Legend
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Fails EPA Primary 
Fails EPA Secondary 
Fails EPA Proposed Limit 

SAMPLE ID#: 1609-02996-002

DATE AND TIME COLLECTED: 09/27/2016 3:40 PM

SAMPLED BY: Alpha Analytical

DATE AND TIME RECEIVED: 09/29/2016 11:10 AM

SAMPLE ADDRESS: IW-1

ANALYSIS PACKAGE: SOC GSA MA

RECEIPT TEMPERATURE: ON ICE 4.5 CELSIUS

CLIENT JOB # L1630673

LOCATION: MA

Test Description

Test Description	Results	Test Units	Pass /Fail	DQ Flag	RL	EPA Limit	Method	Analyst	Date-Time Analyzed
------------------	---------	------------	------------	---------	----	-----------	--------	---------	--------------------

The results presented in this report relate to the samples listed above in the condition in which they were received.
RL: "Reporting limit" means the lowest level of an analyte that can be accurately recovered from the matrix of interest.

Data Qualifier (DQ) Flags: None

* MA Certified Analysis



Donald J. D'Anjou, Ph. D.
Laboratory Director

This analysis meets Commonwealth of Massachusetts requirements except as noted.

State Certifications: | NH 1015 | MA M-NH003 | ME NH00003 | RI 101513 | VT VT-101507 |

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SAMPLE ID#: 1609-02996-003
 SAMPLED BY: Alpha Analytical

DATE AND TIME COLLECTED: 09/27/2016 4:30 PM

DATE AND TIME RECEIVED: 09/29/2016 11:10 AM

ANALYSIS PACKAGE: SOC GSA MA

SAMPLE ADDRESS: MW-7

RECEIPT TEMPERATURE: ON ICE 4.5 CELSIUS

CLIENT JOB # L1630673

LOCATION:

Test Description	Results	Test Units	Pass /Fail	DQ Flag	RL	EPA Limit	Method	Analyst	Date-Time Analyzed
1,2-Dibromo-3-chloropropane (DBCP)*	<0.02	ug/L			0.02	0.2 ug/L	EPA 504.1	BM-NH	10/04/16 9:19 PM
Date Extracted	-					No Limit	EPA 504.1	ND-NH	10/04/16 9:50 AM
Ethylene Dibromide (EDB)*	<0.02	ug/L			0.02	0.05 ug/L	EPA 504.1	BM-NH	10/04/16 9:19 PM
Aroclor 1016	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:39 PM
Aroclor 1221	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:39 PM
Aroclor 1232	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:39 PM
Aroclor 1242	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:39 PM
Aroclor 1248	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:39 PM
Aroclor 1254	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:39 PM
Aroclor 1260	<0.2	ug/L			0.2	No Limit	EPA 505	BM-NH	10/05/16 11:39 PM
Chlordane*	<0.2	ug/L			0.2	2 ug/L	EPA 505	BM-NH	10/05/16 11:39 PM
Date Extracted	-					No Limit	EPA 505	ND-NH	10/04/16 9:50 AM
Toxaphene*	<1.0	ug/L			1.0	3 ug/L	EPA 505	BM-NH	10/05/16 11:39 PM
2,4,5-TP (Silvex)*	<0.25	ug/L			0.25	50 ug/L	EPA 515.3	BM-NH	10/05/16 1:02 AM
2,4-D*	<1	ug/L			1	70 ug/L	EPA 515.3	BM-NH	10/05/16 1:02 AM
Dalapon*	<1	ug/L			1	200 ug/L	EPA 515.3	BM-NH	10/05/16 1:02 AM
Date Extracted	-					No Limit	EPA 515.3	KV-NH	10/04/16 9:50 AM
Dicamba*	<0.18	ug/L			0.18	No Limit	EPA 515.3	BM-NH	10/05/16 1:02 AM
Dinoseb*	<0.5	ug/L			0.5	7 ug/L	EPA 515.3	BM-NH	10/05/16 1:02 AM
Pentachlorophenol*	<0.1	ug/L			0.1	1 ug/L	EPA 515.3	BM-NH	10/05/16 1:02 AM
Picloram*	<1.3	ug/L			1.3	500 ug/L	EPA 515.3	BM-NH	10/05/16 1:02 AM
2,4-Dichlorophenylacetic acid	119	%				No Limit	EPA 515.3 - SS	BM-NH	10/05/16 1:02 AM
Alachlor*	<0.1	ug/L			0.1	2 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Aldrin*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:57 PM
Atrazine*	<0.1	ug/L			0.1	3 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Benzo(a)pyrene*	<0.1	ug/L			0.1	0.2 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Butachlor*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:57 PM
Date Extracted	-					No Limit	EPA 525.2	KV-NH	10/05/16 10:05 AM
Di(2-ethylhexyl)adipate*	<0.6	ug/L			0.6	400 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Di(2-ethylhexyl)phthalate*	<3	ug/L			3	6 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Dieldrin*	<0.04	ug/L			0.04	No Limit	EPA 525.2	DD-NH	10/06/16 7:57 PM

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SAMPLE ID#: 1609-02996-003

DATE AND TIME COLLECTED: 09/27/2016 4:30 PM

SAMPLED BY: Alpha Analytical

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




ANALYSIS PACKAGE: SOC GSA MA

SAMPLE ADDRESS: MW-7

RECEIPT TEMPERATURE: ON ICE 4.5 CELSIUS

CLIENT JOB # L1630673

LOCATION:

Test Description	Results	Test Units	Pass /Fail	DQ Flag	RL	EPA Limit	Method	Analyst	Date-Time Analyzed
Endrin*	<0.1	ug/L			0.1	2 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Heptachlor Epoxide*	<0.06	ug/L			0.06	0.2 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Heptachlor*	<0.04	ug/L			0.04	0.4 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Hexachlorobenzene*	<0.1	ug/L			0.1	1 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Hexachlorocyclopentadiene*	<0.1	ug/L			0.1	50 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Lindane*	<0.07	ug/L			0.07	0.2 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Methoxychlor*	<0.1	ug/L			0.1	40 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
Metolachlor*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:57 PM
Metribuzin*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:57 PM
Propachlor*	<0.1	ug/L			0.1	No Limit	EPA 525.2	DD-NH	10/06/16 7:57 PM
Simazine*	<0.1	ug/L			0.1	4 ug/L	EPA 525.2	DD-NH	10/06/16 7:57 PM
1,3-Dimethyl-2-nitrobenzene	107	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:57 PM
Perylene-d12	98	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:57 PM
Pyrene-d10	99	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:57 PM
Triphenylphosphate	121	%				No Limit	EPA 525.2 - SS	DD-NH	10/06/16 7:57 PM
3-Hydroxycarbofuran*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 5:35 PM
Aldicarb Sulfone*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 5:35 PM
Aldicarb Sulfoxide*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 5:35 PM
Aldicarb*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 5:35 PM
Carbaryl*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 5:35 PM
Carbofuran*	<0.9	ug/L			0.9	40 ug/L	EPA 531.1	BM-NH	10/04/16 5:35 PM
Methiocarb*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 5:35 PM
Methomyl*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 5:35 PM
Oxamyl (Vydate)*	<1	ug/L			1	200 ug/L	EPA 531.1	BM-NH	10/04/16 5:35 PM
Propoxur (Baygon)*	<1	ug/L			1	No Limit	EPA 531.1	BM-NH	10/04/16 5:35 PM
Glyphosate*	<6	ug/L			6	700 ug/L	EPA 547	BM-NH	10/08/16 3:00 AM

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SAMPLE ID#: 1609-02996-003

DATE AND TIME COLLECTED: 09/27/2016 4:30 PM

SAMPLED BY: Alpha Analytical

DATE AND TIME RECEIVED: 09/29/2016 11:10 AM

ANALYSIS PACKAGE: SOC GSA MA

SAMPLE ADDRESS: MW-7

RECEIPT TEMPERATURE: ON ICE 4.5 CELSIUS

CLIENT JOB # L1630673

LOCATION: MA

LOCATION:

Test Description	Results	Test Units	Pass /Fail	DQ Flag	RL	EPA Limit	Method	Analyst	Date-Time Analyzed
------------------	---------	------------	------------	---------	----	-----------	--------	---------	--------------------

The results presented in this report relate to the samples listed above in the condition in which they were received.

RL: "Reporting limit" means the lowest level of an analyte that can be accurately recovered from the matrix of interest.

Data Qualifier (DQ) Flags: None

* MA Certified Analysis



Donald J. D'Anjou, Ph. D.
Laboratory Director

This analysis meets Commonwealth of Massachusetts requirements except as noted.

State Certifications: | NH 1015 | MA M-NH003 | ME NH00003 | RI 101513 | VT VT-101507 |

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Nitrate Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **3206000** City / Town: **NEWBURYPORT**
PWS Name: **Newburyport Water Works** PWS Class: COM ☐ NTNC ☐ TNC ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information	Sample Acidified?	Date Collected	Collected By	
A 10001	Wtp-Finish	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	Yes <input type="checkbox"/>	3/5/2014	P.C.
B 10278	#2 Well	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	Yes <input type="checkbox"/>	3/5/2014	P.C.
C		<input type="checkbox"/> (M)ultiple <input type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input type="checkbox"/> (F)inished	Yes <input type="checkbox"/>		
D		<input type="checkbox"/> (M)ultiple <input type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input type="checkbox"/> (F)inished	Yes <input type="checkbox"/>		

	Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:	
			(1) Reason for Resubmission	(2) Collection Date of Original Sample
A	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
B	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
C	<input type="checkbox"/> RS <input type="checkbox"/> SS	<input type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
D	<input type="checkbox"/> RS <input type="checkbox"/> SS	<input type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	

SAMPLE NOTES – (Such as, if a Manifold/Multiple sample, list the sources that were on-line during sample collection).

A
B
C
D

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: **M-RI010** Primary Lab Name: **New England Testing Lab** Subcontracted? (Y/N) **N**
Analysis Lab MA Cert. #: Analysis Lab Name:

	NITRATE Result (mg/L)	MCL (mg/L)	MDL (mg/L)	Lab Method	Date Analyzed	Lab Sample ID#
A	0.93	10	0.03	4500-NO3-E	3/5/2014	A0305-13c
B	1.19	10	0.03	4500-NO3-E	3/5/2014	A0305-13d
C		10				
D		10				

Finished water results equal to or exceeding ½ of the MCL (5 mg/L) triggers quarterly monitoring.
Finished water results exceeding the MCL of 10 mg/L requires confirmation sampling within 24 hours.
Notify MassDEP of any MCL exceedances.

LAB SAMPLE NOTES
A
B
C
D

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

Date: **4/8/2014**

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted <input type="checkbox"/> Disapproved		



Nitrite Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **3206000** City / Town: **NEWBURYPORT**
PWS Name: **Newburyport Water Works** PWS Class: **COM** ☒ **NTNC** ☐ **TNC** ☐

DEP LOCATION (LOC) ID#		DEP Location Name	Sample Information		Date Collected	Collected By
A	10001	Wtp-Finish	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	3/5/2014	P.C.
B	10278	#2 Well	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	3/5/2014	P.C.
C			<input type="checkbox"/> (M)ultiple <input type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input type="checkbox"/> (F)inished		
D			<input type="checkbox"/> (M)ultiple <input type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input type="checkbox"/> (F)inished		

	Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:	
			(1) Reason for Resubmission	(2) Collection Date of Original Sample
A	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
B	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
C	<input type="checkbox"/> RS <input type="checkbox"/> SS	<input type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
D	<input type="checkbox"/> RS <input type="checkbox"/> SS	<input type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	

SAMPLE NOTES – (Such as, if a Manifold/Multiple sample, list the sources that were on-line during sample collection).

A	
B	
C	
D	

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: **M-RI010** Primary Lab Name: **New England Testing Lab** Subcontracted? (Y/N) **N**
Analysis Lab MA Cert. #: Analysis Lab Name:

	NITRITE Result (mg/L)	MCL (mg/L)	MDL (mg/L)	Lab Method	Date Analyzed	Lab Sample ID#
A	ND	1	0.007	4500-NO2-B	3/5/2014	A0305-13c
B	ND	1	0.007	4500-NO2-B	3/5/2014	A0305-13d
C		1				
D		1				

Finished water results equal to or exceeding 1/2 of the MCL (0.5 mg/L) triggers quarterly monitoring.
Finished water results exceeding the MCL of 1 mg/L requires confirmation sampling within 24 hours.
Notify MassDEP of any MCL exceedances.

LAB SAMPLE NOTES	
A	
B	
C	
D	

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

Date: **4/8/2014**

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date)	Review Comments	WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved _____		<input type="checkbox"/>



Radionuclide Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **3206000** City / Town: **NEWBURYPORT**
PWS Name: **Newburyport Water Works** PWS Class: **COM** ☒ **NTNC** ☐ **TNC** ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information		Date Collected	Collected By
10278	#2 Well	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	3/5/2014	P.C.
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:			
		(1) Reason for Resubmission		(2) Collection Date of Original Sample	
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction			
SAMPLE NOTES -- (Such as, if a Manifold/Multiple sample, list any sources that were on-line line during sample collection).					

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: **M-RI010** Primary Lab Name: **New England Testing Lab** Subcontracted? (Y/N) **Y**

Was this sample composited by the Lab?	COMPOSITE SAMPLE NOTES
<input type="checkbox"/>	List the composited source by DEP Source Code (XXXXXXX-XXX) and dates collected, up to four consecutive quarterly samples per single entry point.
LAB SAMPLE NOTES	

Contaminant	RESULT	Std Dev (+/-)	MCL	MDL	Lab Method	Date Analyzed	Lab Sample ID#	Analysis Lab MA Cert#	Analysis Lab Name
GROSS ALPHA (pCi/L)	3.2	0.8		2.5	7110 B	3/26/2014	A0305-13d	M-IN035	UL
URANIUM - activity (pCi/L)									

Report Uranium result and MDL in (pCi/L) as analyzed, otherwise use formula to calculate [Uranium $\mu\text{g/L} \times 0.67 = \text{Uranium pCi/L}$]. Check this box if result is calculated ☐

ADJUSTED GROSS ALPHA (pCi/L)		----	15	The MCL for Adjusted Gross Alpha (Gross Alpha minus Uranium) is 15 pCi/L. A gross alpha measurement may be substituted for the uranium analysis, if the gross alpha result is equal to or less than 15 pCi/L. If gross alpha exceeds 15 pCi/L, uranium must also be measured.					
------------------------------	--	------	----	---	--	--	--	--	--

URANIUM - mass ($\mu\text{g/L}$)			30						
------------------------------------	--	--	----	--	--	--	--	--	--

Report Uranium result and MDL in ($\mu\text{g/L}$) as analyzed, otherwise use formula to calculate [Uranium $\text{pCi/L} / 0.67 = \text{Uranium } \mu\text{g/L}$]. Check this box if result is calculated ☐

RADIUM-226 (pCi/L)	0.60	0.47		0.65	7500-Ra B	3/27/2014	A0305-13d	M-IN035	UL
RADIUM-228 (pCi/L)	0.33	0.36		0.59	7500-Ra D	3/28/2014	A0305-13d	M-IN035	UL
COMBINED RADIUM (pCi/L)	ND	----	5	The MCL for Combined Radium (Radium-226 plus Radium-228) is 5 pCi/L. A gross alpha measurement may be substituted for the radium-226 analysis, if the gross alpha result is equal to or less than 5 pCi/L. If gross alpha exceeds 5 pCi/L, radium-226 must also be measured.					

GROSS BETA (pCi/L)			*						
--------------------	--	--	---	--	--	--	--	--	--

*The MCL for gross beta is 4 mrem/year. If gross beta exceeds 50 pCi/L, analysis of the sample for Photon Activity shall be performed to identify the major radioactive constituents. Gross Beta testing is optional, unless specifically required by DEP.

RADON (pCi/L)			**						
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**Radon testing is optional, unless specifically required by DEP. The MA guideline for Radon is 10,000 pCi/L. The EPA has proposed a radon MCL of 300 - 4000 pCi/L.

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature: Date: 4/8/2014

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved _____		



Volatile Organic Contaminant Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **3206000** City / Town: **NEWBURYPORT**
PWS Name: **Newburyport Water Works** PWS Class: **COM** ☒ **NTNC** ☐ **TNC** ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information		Sample Acidified?	Date Collected	Collected By
10278	#2 Well	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	Yes <input checked="" type="checkbox"/>	3/5/2014	P.C.
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:				
		(1) Reason for Resubmission		(2) Collection Date of Original Sample		
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction				
SAMPLE NOTES -- Such as, if a Manifold/Multiple sample, list the source(s) that were on-line during sample collection.						

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: **M-RI010** Primary Lab Name: **New England Testing Lab** Subcontracted? (Y/N) **N**
Analysis Lab MA Cert. #: Analysis Lab Name:

Lab Method	Date Extracted (551.1 only)	Date Analyzed	Lab Sample ID#	LAB SAMPLE NOTES - Include information as to whether sample was diluted or additional contaminants detected.
524.2		3/7/2014	A0305-13d	
Was this Sample composited by the Lab?	COMPOSITE SAMPLE NOTES - Please list the composited sources by DEP Source Code (XXXXXXX-XXX), up to five individual sources.			
Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>				

CAS#	REGULATED VOC CONTAMINANT	Results µg/L	MCL µg/L	MDL µg/L
71-43-2	BENZENE	N.D.	5	0.5
56-23-5	CARBON TETRACHLORIDE	N.D.	5	0.5
75-35-4	1,1-DICHLOROETHYLENE	N.D.	7	0.5
107-06-02	1,2-DICHLOROETHANE	N.D.	5	0.5
106-46-7	PARA-DICHLOROBENZENE	N.D.	5	0.5
79-01-6	TRICHLOROETHYLENE (TCE)	N.D.	5	0.5
71-55-6	1,1,1-TRICHLOROETHANE	N.D.	200	0.5
75-01-4	VINYL CHLORIDE	N.D.	2	0.5
108-90-7	MONOCHLOROBENZENE	N.D.	100	0.5
95-50-1	O-DICHLOROBENZENE	N.D.	600	0.5
156-60-5	TRANS-1,2-DICHLOROETHYLENE	N.D.	100	0.5
156-59-2	CIS-1,2-DICHLOROETHYLENE	N.D.	70	0.5
78-87-5	1,2-DICHLOROPROPANE	N.D.	5	0.5
100-41-4	ETHYLBENZENE	N.D.	700	0.5
100-42-5	STYRENE	N.D.	100	0.5
127-18-4	TETRACHLOROETHYLENE (PCE)	N.D.	5	0.5
108-88-3	TOLUENE	N.D.	1000	0.5
1330-20-7	XYLENES (TOTAL)	N.D.	10000	0.5
75-09-2	DICHLOROMETHANE	N.D.	5	0.5
120-82-1	1,2,4-TRICHLOROBENZENE	N.D.	70	0.5
79-00-5	1,1,2-TRICHLOROETHANE	N.D.	5	0.5

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Page 2 of 3

PWS ID#: 3206000

Lab Sample ID#:	A0305-13d
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CAS#	UNREGULATED VOC CONTAMINANTS	Results µg/L	MDL µg/L
67-66-3	CHLOROFORM*	N.D.	0.5
75-27-4	BROMODICHLOROMETHANE	N.D.	0.5
124-48-1	CHLORODIBROMOMETHANE	N.D.	0.5
75-25-2	BROMOFORM	N.D.	0.5
541-73-1	M-DICHLOROBENZENE	N.D.	0.5
74-95-3	DIBROMOMETHANE	N.D.	0.5
563-58-6	1,1-DICHLOROPROPENE	N.D.	0.5
75-34-3	1,1-DICHLOROETHANE*	N.D.	0.5
79-34-5	1,1,2,2-TETRACHLOROETHANE	N.D.	0.5
142-28-9	1,3-DICHLOROPROPANE	N.D.	0.5
74-87-3	CHLOROMETHANE	N.D.	0.5
74-83-9	BROMOMETHANE*	N.D.	0.5
96-18-4	1,2,3-TRICHLOROPROPANE	N.D.	0.5
630-20-6	1,1,1,2-TETRACHLOROETHANE	N.D.	0.5
75-00-3	CHLOROETHANE	N.D.	0.5
594-20-7	2,2-DICHLOROPROPANE	N.D.	0.5
95-49-8	O-CHLOROTOLUENE	N.D.	0.5
106-43-4	P-CHLOROTOLUENE	N.D.	0.5
108-86-1	BROMOBENZENE	N.D.	0.5
542-75-6	1,3-DICHLOROPROPENE*	N.D.	0.5
95-63-6	1,2,4-TRIMETHYLBENZENE	N.D.	0.5
87-61-6	1,2,3-TRICHLOROBENZENE	N.D.	0.5
103-65-1	N-PROPYLBENZENE	N.D.	0.5
104-51-8	N-BUTYLBENZENE	N.D.	0.5
91-20-3	NAPTHALENE*	N.D.	0.5
87-68-3	HEXACHLOROBUTADIENE	N.D.	0.5
108-67-8	1,3,5-TRIMETHYLBENZENE	N.D.	0.5
99-87-6	P-ISOPROPYLTOLUENE	N.D.	0.5
98-82-8	ISOPROPYLBENZENE	N.D.	0.5
98-06-6	TERT-BUTYLBENZENE	N.D.	0.5
135-98-8	SEC-BUTYLBENZENE	N.D.	0.5
75-69-4	FLUOROTRICHLOROMETHANE	N.D.	0.5
75-71-8	DICHLORODIFLUOROMETHANE*	N.D.	0.5
74-97-5	BROMOCHLOROMETHANE	N.D.	0.5
1634-04-4	METHYL TERTIARY BUTYL ETHER (MTBE)*†	N.D.	0.5

* Required

* DEP ORSG limit established.

Surrogate Name	% Recovery (70 – 130%)
1,2-Dichlorobenzene-d4	89
4-Bromofluorobenzene	98

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature: 

Date: 4/8/2014

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.



Perchlorate Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **3206000** City / Town: **NEWBURYPORT**

PWS Name: **Newburyport Water Department** PWS Class: ☒ COM ☒ NTNC ☐ TNC ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information	Date Collected	Collected By
10278	#2 Well	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	8/5/2014 P.C.
Routine or Special Sample <input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	Original, Resubmitted or Confirmation Report <input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	If Resubmitted Report, list below:		
		(1) Reason for Resubmission	(2) Collection Date of Original Sample	
<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction				
SAMPLE NOTES – (Such as, if a Manifold/Multiple sample, list any sources that were on-line during collection).				

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: **M-RI010** Primary Lab Name: **New England Testing Lab** Subcontracted? (Y/N) **Y**

Analysis Lab MA Cert. #: **M-IN035** Analysis Lab Name: **Underwriters Laboratory**

CONTAMINANT	Result	UOM	MCL	MDL	MRL	Lab Method	Date Analyzed	Lab Sample ID#
PERCHLORATE	0.39	µg/L	2.0	0.012	0.05	331.0	08/16/2014	A0805-49
CONDUCTIVITY		umhos/cm	---					

Perchlorate analysis requires the use of a Massachusetts DEP approved laboratory.

Perchlorate concentrations between the Minimum Detection Limit (MDL) and the Minimum Reporting Level (MRL) must be reported as estimated (J) values (i.e. perchlorate is positively present but tentatively quantified).

All field samples with measured native perchlorate concentrations between 0.8 µg/L and 2.0 µg/L must be retested with and without a perchlorate spike approximately equal to the native perchlorate concentration.

LAB SAMPLE NOTES

Reanalysis and Spike Recovery (required for results between 0.8 µg/L and 2.0 µg/L or samples subject to pretreatment in method EPA 314.0)

Compound	Result (µg/L)	MDL (µg/L)	MRL (µg/L)	Spike Concentration (µg/L)	Spike Recovery (%)	Lab Method	Date Analyzed
Perchlorate (reanalysis)							
Perchlorate (spike)							

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

Date: 9/4/2014

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved _____		



Secondary Contaminant Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: 3206000

City / Town: NEWBURYPORT

PWS Name: Newburyport Water Department

PWS Class: COM ☒ NTNC ☐ TNC ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information	Date Collected	Collected By
A 10001	Wtp-Finished (01s, 02s, 03s, 01g)	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	8/5/2014 07:30
B 10278	#2 Well	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	8/5/2014 08:00
	Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:	
			(1) Reason for Resubmission	(2) Collection Date of Original Sample
A	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
B	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
SAMPLE NOTES - (Such as, if a Manifold/Multiple sample, list any sources that were on-line during sample collection).				
A				
B				

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #:

M-RI010

Primary Lab Name:

New England Testing Lab

Subcontracted? (Y/N)

N

Analysis Lab MA Cert. #:

Analysis Lab Name:

Compound	Results		SMCL	MDL (mg/L)	Lab Method	Date Analyzed	Lab Sample ID#
	A	B					
IRON (mg/L)			0.3				
MANGANESE (mg/L)	0.015	0.024	0.05*	0.005	SM 3120B	8/12/2014	A0805-49
ALKALINITY (mg/L as CaCO3)			None				
CALCIUM (mg/L)			None				
MAGNESIUM (mg/L)			None				
HARDNESS (mg/L as CaCO3)			None				
POTASSIUM (mg/L)			None				
TURBIDITY (NTU)			None				
ALUMINUM (mg/L)			0.2				
CHLORIDE (mg/L)			250				
COLOR (C.U.)			15				
COPPER (mg/L)			1				
ODOR (T.O.N)			3				
pH			6.5-8.5				
SILVER (mg/L)			0.10				
SULFATE (mg/L)			250				
TDS (mg/L)			500				
ZINC (mg/L)			5				
* EPA has established a lifetime Health Advisory (HA) for manganese at 0.3 mg/L and an acute HA at 1.0 mg/L.							
LAB SAMPLE NOTES							
A							
B							

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

Date: 9/4/2014

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved _____		

Perchlorate Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **3206000** City / Town: **NEWBURYPORT**
 PWS Name: **Newburyport Water Department** PWS Class: ☒ COM ☒ NTNC ☐ TNC ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information	Date Collected	Collected By
	#2 Well	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle <input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	9/2/2015	T.S.
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:		
		(1) Reason for Resubmission	(2) Collection Date of Original Sample	
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction		
SAMPLE NOTES – (Such as, if a Manifold/Multiple sample, list any sources that were on-line during collection).				

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: **M-RI010** Primary Lab Name: **New England Testing Lab** Subcontracted? (Y/N) **Y**
 Analysis Lab MA Cert. #: **M-IN035** Analysis Lab Name: **Eurofins Eaton Analytical**

CONTAMINANT	Result	UOM	MCL	MDL	MRL	Lab Method	Date Analyzed	Lab Sample ID#
PERCHLORATE	0.38	µg/L	2.0	0.012	0.05	331.0	09/18/2015	B0902-27C
CONDUCTIVITY		umhos/cm	—					

Perchlorate analysis requires the use of a Massachusetts DEP approved laboratory.

Perchlorate concentrations between the Minimum Detection Limit (MDL) and the Minimum Reporting Level (MRL) must be reported as estimated (J) values (i.e. perchlorate is positively present but tentatively quantified).

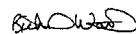
All field samples with measured native perchlorate concentrations between 0.8 µg/L and 2.0 µg/L must be retested with and without a perchlorate spike approximately equal to the native perchlorate concentration.

LAB SAMPLE NOTES

Reanalysis and Spike Recovery (required for results between 0.8 µg/L and 2.0 µg/L or samples subject to pretreatment in method EPA 314.0)

Compound	Result (µg/L)	MDL (µg/L)	MRL (µg/L)	Spike Concentration (µg/L)	Spike Recovery (%)	Lab Method	Date Analyzed
Perchlorate (reanalysis)							
Perchlorate (spike)							

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature: 

Date: **9/22/2015**

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved _____		



Synthetic Organic Contaminant Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **3206000** City / Town: **NEWBURYPORT**

PWS Name: **Newburyport Water Department** PWS Class: COM ☒ NTNC ☐ TNC ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information	Date Collected	Collected By
10278	#2 Well	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input checked="" type="checkbox"/> (R)aw <input type="checkbox"/> (F)inished	12/8/2015 T.S.
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:		
		(1) Reason for Resubmission	(2) Collection Date of Original Sample	
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction		
SAMPLE NOTES - (Such as, if a Manifold/Multiple sample, list any sources that were on-line during sample collection).				

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: **M-RI010** Primary Lab Name: **New England Testing Lab** Subcontracted? (Y/N) **Y/N**

Analytical Methods (List All)	Date Extracted	Date Analyzed	Analysis Lab MA Cert#	Analysis Lab Name	Lab Sample ID#
504.1	12/9/2015	12/9/2015	M-RI010	New England Testing Lab	B1208-15D
505	12/9/2015	12/9/2015	M-RI010	New England Testing Lab	B1208-15D
515.3	12/11/2015	12/12/2015	M-RI010	New England Testing Lab	B1208-15D
525.2	12/10/2015	12/10/2015	M-RI010	New England Testing Lab	B1208-15D
531.2		12/16/2015	M-CT008	Microbac Laboratories	E512939

Was this Sample composited by the Lab?	COMPOSITE SAMPLE NOTES - Please list the composited sources by DEP Source Code (XXXXXXX-XXX), up to five individual sources.
<input type="checkbox"/>	
LAB SAMPLE NOTES - Information on matrix spike/method blank sample information is on file at our office.	

CAS #	SOC Regulated Contaminants	Result µg/L	MCL µg/L	MDL µg/L	Analytical Method
1563-66-2	CARBOFURAN	<0.90	40	0.9	531.2
23135-22-0	OXAMYL (VYDATE)	<2.0	200	2.0	531.2
94-75-7	2,4-D	<0.1	70	0.1	515.3
93-72-1	2,4,5-TP (SILVEX)	<0.2	50	0.2	515.3
75-99-0	DALAPON	<1.0	200	1.0	515.3
88-85-7	DINOSEB	<0.2	7	0.2	515.3
1918-02-1	PICLORAM	<0.1	500	0.1	515.3
87-86-5	PENTACHLOROPHENOL	<0.04	1	0.04	515.3
15972-60-8	ALACHLOR	<0.2	2	0.2	525.2
1912-24-9	ATRAZINE	<0.1	3	0.1	525.2
72-20-80	ENDRIN	<0.05	2	0.05	525.2
76-44-8	HEPTACHLOR	<0.04	0.4	0.04	525.2
1024-57-3	HEPTACHLOR EPOXIDE	<0.04	0.2	0.04	525.2
58-89-9	LINDANE	<0.04	0.2	0.04	525.2
72-43-5	METHOXYCHLOR	<0.1	40	0.1	525.2
118-74-1	HEXACHLORO BENZENE	<0.1	1	0.1	525.2
77-47-4	HEXACHLOROCYCLOPENTADIENE	<0.1	50	0.1	525.2
122-34-9	SIMAZINE	<0.2	4	0.2	525.2
50-32-8	BENZO(A)PYRENE	<0.05	0.2	0.05	525.2
103-23-1	DI(2-ETHYLHEXYL)ADIPATE	<0.6	400	0.6	525.2
117-81-7	DI(2-ETHYLHEXYL)PHthalate	<1.3	6	1.3	525.2



Synthetic Organic Contaminant Report

CAS #	SOC Regulated Contaminants	Result µg/L	MCL µg/L	MDL µg/L	Analytical Method
57-74-9	CHLORDANE	<0.2	2	0.2	505
8001-35-2	TOXAPHENE	<1.0	3	1.0	505
12674-11-2	PCB AROCLOR 1016	<0.23	---	0.23	505
11104-28-2	PCB AROCLOR 1221	<0.14	---	0.14	505
11141-16-5	PCB AROCLOR 1232	<0.09	---	0.09	505
53469-21-9	PCB AROCLOR 1242	<0.08	---	0.08	505
12672-29-6	PCB AROCLOR 1248	<0.16	---	0.16	505
11097-69-1	PCB AROCLOR 1254	<0.10	---	0.10	505
11096-82-5	PCB AROCLOR 1260	<0.13	---	0.13	505
1336-36-3	PCBS (DECACHLOROBIPHENYL)		0.5		
Monitoring requirements for DBCP and EDB have been waived statewide for SURFACE WATER SOURCES ONLY. All groundwater sources must monitor for these two contaminants.					
96-12-8	DIBROMOCHLOROPROPANE (DBCP)	<0.02	0.2	0.02	504.1
106-93-4	ETHYLENEDIBROMIDE (EDB)	<0.01	0.02	0.01	504.1
Monitoring requirements for the following four contaminants have been waived statewide for both groundwater and surface water sources, however monitoring and reporting for Diquat is required for surface waters that have applied Diquat.					
85-00-7	DIQUAT		20		
145-73-3	ENDOTHALL		100		
1071-53-6	GLYPHOSATE		700		
1746-01-6	2,3,7,8-TCDD (DIOXIN)		3.0x10 ⁻⁵		

CAS#	SOC Unregulated Contaminants	Result µg/L	ORSG µg/L	MDL µg/L	Analytical Method
116-06-3	ALDICARB	<0.50	3*	0.50	531.2
1646-88-4	ALDICARB SULFONE	<0.80	2*	0.80	531.2
1646-87-3	ALDICARB SULFOXIDE	<0.50	4*	0.50	531.2
63-25-2	CARBARYL	<0.50	---	0.50	531.2
16655-82-6	3-HYDROXYCARBOFURAN	<0.50	---	0.50	531.2
16752-77-5	METHOMYL	<0.50	---	0.50	531.2
1918-00-9	DICAMBA	<0.2	---	0.2	515.3
309-00-2	ALDRIN	<0.1	---	0.1	525.2
23184-66-9	BUTACHLOR	<0.1	---	0.1	525.2
60-57-1	DIELDRIN	<0.04	---	0.04	525.2
51218-45-2	METOLACHLOR	<0.1	---	0.1	525.2
21087-64-9	METRIBUZIN	<0.1	100*	0.1	525.2
1918-16-7	PROPACHLOR	<0.1	---	0.1	525.2

* No MCL, however the DEP Office of Research and Standards has established a guideline (ORSG) limit for this contaminant.

Method	Surrogate Name	% Recovery (70 - 130%)
515.3	2,4 DCAA	92
525.2	1,3 DM-2-NB	100
525.2	Triphenylphos	107
525.2	perylene-D12	98
531.2	4-Bromo-3,5-dim	105

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature: 

Date: 12/18/2015

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved		



Secondary Contaminant Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: 3206000

City / Town: NEWBURYPORT

PWS Name: Newburyport Water Department

PWS Class: COM ☒ NTNC ☐ TNC ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information	Date Collected	Collected By
A 10278	Well #2 Finish	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	5/10/2016 T.S.
B 10001	Wtp Finish	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	5/10/2016 T.S.
	Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:	
			(1) Reason for Resubmission	(2) Collection Date of Original Sample
A	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
B	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
SAMPLE NOTES - (Such as, if a Manifold/Multiple sample, list any sources that were on-line during sample collection).				
A				
B				

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #:

M-RI010

Primary Lab Name:

New England Testing Lab

Subcontracted? (Y/N)

N

Analysis Lab MA Cert. #:

Analysis Lab Name:

Compound	Results		SMCL	MDL (mg/L)	Lab Method	Date Analyzed	Lab Sample ID#
	A	B					
IRON (mg/L)	0.05	ND	0.3	0.05	SM 3120B	5/11/2016	C0510-11
MANGANESE (mg/L)	0.032	0.006	0.05*	0.005	SM 3120B	5/11/2016	C0510-11
ALKALINITY (mg/L as CaCO3)	63	32	None	2	SM 2320B	5/11/2016	C0510-11
CALCIUM (mg/L)	37.2	18.6	None	0.05	SM 3120B	5/11/2016	C0510-11
MAGNESIUM (mg/L)	8.40	3.96	None	0.05	SM 3120B	5/11/2016	C0510-11
HARDNESS (mg/L as CaCO3)	127	62.8	None	0.33	SM 2340C	5/11/2016	C0510-11
POTASSIUM (mg/L)	4.06	2.07	None	0.5	SM 3120B	5/11/2016	C0510-11
TURBIDITY (NTU)	0.2	0.1	None	0.1	SM 2130B	5/10/2016	C0510-11
ALUMINUM (mg/L)	ND	ND	0.2	0.05	SM 3120B	5/11/2016	C0510-11
CHLORIDE (mg/L)	79	96	250	1	SM 4500CI-B	5/7/2016	C0510-11
COLOR (C.U.)	<5	<5	15	NA	SM 2120B	5/10/2016	C0510-11
COPPER (mg/L)	ND	0.03	1	0.02	SM 3120B	5/11/2016	C0510-11
ODOR (T.O.N)	<1	2	3	NA	SM 2150B	5/10/2016	C0510-11
pH	7.33	6.75	6.5-8.5	NA	SM 4500H+B	5/10/2016	C0510-11
SILVER (mg/L)	ND	ND	0.10	0.0005	SM 3113B	5/13/2016	C0510-11
SULFATE (mg/L)	27	28	250	2	SM 4500SO4-D	5/11/2016	C0510-11
TDS (mg/L)	340	300	500	10	SM 2540C	5/12/2016	C0510-11
ZINC (mg/L)	ND	ND	5	0.02	SM 3120B	5/11/2016	C0510-11
* EPA has established a lifetime Health Advisory (HA) for manganese at 0.3 mg/L and an acute HA at 1.0 mg/L.							
LAB SAMPLE NOTES							
A							
B							

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

Date: 5/17/2016

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved _____		



Inorganic Contaminant Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **3206000** City / Town: **NEWBURYPORT**
PWS Name: **Newburyport Water Department** PWS Class: ☒ COM ☒ NTNC ☐ TNC ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information <small>*Please note all samples are considered representative of finished water if there is no treatment applied</small>	Date Collected	Collected By
10278	#2 Well	<input type="checkbox"/> (M)ultiple <input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (S)ingle <input checked="" type="checkbox"/> (F)inished	1/14/2016	C.H.
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:		
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	(1) Reason for Resubmission	(2) Collection Date of Original Sample	
<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction				
SAMPLE NOTES - (Such as, if a Manifold/Multiple sample, list the sources that were on-line during sample collection).				

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: **M-RI010** Primary Lab Name: **New England Testing Lab** Subcontracted? (Y/N) ☐ Y ☒ N

Contaminant	Result (mg/L)	MCL (mg/L)	MDL (mg/L)	Lab Method	Date Analyzed	Analysis Lab MA Cert #	Analysis Lab Name	Lab Sample ID#
ANTIMONY	ND	0.006	0.003	EPA 200.9	2/2/2016	M-RI010	New England Testing Lab	C0114-15B
ARSENIC	ND	0.010	0.001	SM 3113B	1/19/2016	M-CT007	Phoenix Laboratories	C0114-15B
BARIUM	0.029	2	0.005	SM 3120B	1/26/2016	M-RI010	New England Testing Lab	C0114-15B
BERYLLIUM	ND	0.004	0.002	SM 3120B	1/26/2016	M-RI010	New England Testing Lab	C0114-15B
CADMIUM	ND	0.005	0.0005	SM 3113B	1/20/2016	M-RI010	New England Testing Lab	C0114-15B
CHROMIUM	ND	0.1	0.005	SM 3120B	1/26/2016	M-RI010	New England Testing Lab	C0114-15B
CYANIDE	ND	0.2	0.01	SM 4500CN-E	1/19/2016	M-RI010	New England Testing Lab	C0114-15B
FLUORIDE ¹	0.8	4.0	0.3	SM 4500F-C	1/15/2016	M-RI010	New England Testing Lab	C0114-15B
MERCURY ²	ND	0.002	0.0002	SM 3112B	1/18/2016	M-RI010	New England Testing Lab	C0114-15B
NICKEL	ND	0.1*	0.005	SM 3120B	1/26/2016	M-RI010	New England Testing Lab	C0114-15B
SELENIUM	ND	0.05	0.01	SM 3113B	1/18/2016	M-RI010	New England Testing Lab	C0114-15B
SODIUM	27.4	20*	0.5	EPA 200.7	1/26/2016	M-RI010	New England Testing Lab	C0114-15B
THALLIUM	ND	0.002	0.001	EPA 200.9	1/18/2016	M-RI010	New England Testing Lab	C0114-15B

¹Fluoride also has a secondary MCL of 2.0 mg/L. Community water systems which exceed this limit must provide public notice pursuant to 310 CMR 22.16.²Please note that if method 245.1 is used for mercury, only method revision 3.0 will be accepted by MA DEP.

*No current MCL, however DEP Office of Research and Standards has established a guideline (ORSG) limit for this contaminant.

Was this Sample composited by the Lab?	COMPOSITE SAMPLE NOTES List the composited sources by DEP Source Code (XXXXXXX-XXX), up to five individual sources per sample.
Yes <input type="checkbox"/>	
LAB SAMPLE NOTES	

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

Date: **2/9/2016**

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved		



Nitrate Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: 3206000

City / Town: NEWBURYPORT

PWS Name: Newburyport Water Department

PWS Class: COM ☒ NTNC ☐ TNC ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information	Sample Acidified?	Date Collected	Collected By	
A 10001	Finish	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	Yes <input type="checkbox"/>	1/14/2016	C.H.
B 10278	#2 Well	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	Yes <input type="checkbox"/>	1/14/2016	C.H.
C		<input type="checkbox"/> (M)ultiple <input type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input type="checkbox"/> (F)inished	Yes <input type="checkbox"/>		
D		<input type="checkbox"/> (M)ultiple <input type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input type="checkbox"/> (F)inished	Yes <input type="checkbox"/>		

	Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:	
			(1) Reason for Resubmission	(2) Collection Date of Original Sample
A	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
B	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
C	<input type="checkbox"/> RS <input type="checkbox"/> SS	<input type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	
D	<input type="checkbox"/> RS <input type="checkbox"/> SS	<input type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction	

SAMPLE NOTES – (Such as, if a Manifold/Multiple sample, list the sources that were on-line during sample collection).

A
B
C
D

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: M-RI010

Primary Lab Name: New England Testing Lab

Subcontracted? (Y/N)

N

Analysis Lab MA Cert. #:

Analysis Lab Name:

	NITRATE Result (mg/L)	MCL (mg/L)	MDL (mg/L)	Lab Method	Date Analyzed	Lab Sample ID#
A	0.27	10	0.03	4500-NO3-E	1/15/2016	C0114-15A
B	1.74	10	0.03	4500-NO3-E	1/15/2016	C0114-15B
C		10				
D		10				

Finished water results equal to or exceeding 1/2 of the MCL (5 mg/L) triggers quarterly monitoring.
Finished water results exceeding the MCL of 10 mg/L requires confirmation sampling within 24 hours.
Notify MassDEP of any MCL exceedances.

LAB SAMPLE NOTES	
A	
B	
C	
D	

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

Date: 2/9/2016

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted <input type="checkbox"/> Disapproved		



Volatile Organic Contaminant Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **3206000** City / Town: **NEWBURYPORT**
PWS Name: **Newburyport Water Department** PWS Class: **COM** ☒ **NTNC** ☐ **TNC** ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information	Sample Acidified?	Date Collected	Collected By
10278	#2 Well	<input type="checkbox"/> (M)ultiple <input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (S)ingle <input checked="" type="checkbox"/> (F)inished	Yes <input checked="" type="checkbox"/>	1/14/2016	C.H.
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:			
		(1) Reason for Resubmission	(2) Collection Date of Original Sample		
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction			
SAMPLE NOTES – Such as, if a Manifold/Multiple sample, list the source(s) that were on-line during sample collection.					

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: **M-RI010** Primary Lab Name: **New England Testing Lab** Subcontracted? (Y/N) **N**
Analysis Lab MA Cert. #: Analysis Lab Name:

Lab Method	Date Extracted (661.1 only)	Date Analyzed	Lab Sample ID#	LAB SAMPLE NOTES - Include information as to whether sample was diluted or additional contaminants detected.
524.2		1/18/2016	C0114-15B	
Was this Sample composited by the Lab?	COMPOSITE SAMPLE NOTES - Please list the composited sources by DEP Source Code (XXXXXXX-XXX), up to five individual sources.			
Yes: <input type="checkbox"/> No: <input type="checkbox"/>				

CAS#	REGULATED VOC CONTAMINANT	Results µg/L	MCL µg/L	MDL µg/L
71-43-2	BENZENE	N.D.	5	0.5
56-23-5	CARBON TETRACHLORIDE	N.D.	5	0.5
75-35-4	1,1-DICHLOROETHYLENE	N.D.	7	0.5
107-06-02	1,2-DICHLOROETHANE	N.D.	5	0.5
106-46-7	PARA-DICHLOROBENZENE	N.D.	5	0.5
79-01-6	TRICHLOROETHYLENE (TCE)	N.D.	5	0.5
71-55-6	1,1,1-TRICHLOROETHANE	N.D.	200	0.5
75-01-4	VINYL CHLORIDE	N.D.	2	0.5
108-90-7	MONOCHLOROBENZENE	N.D.	100	0.5
95-50-1	O-DICHLOROBENZENE	N.D.	600	0.5
156-60-5	TRANS-1,2-DICHLOROETHYLENE	N.D.	100	0.5
156-59-2	CIS-1,2-DICHLOROETHYLENE	N.D.	70	0.5
78-87-5	1,2-DICHLOROPROPANE	N.D.	5	0.5
100-41-4	ETHYLBENZENE	N.D.	700	0.5
100-42-5	STYRENE	N.D.	100	0.5
127-18-4	TETRACHLOROETHYLENE (PCE)	N.D.	5	0.5
108-88-3	TOLUENE	N.D.	1000	0.5
1330-20-7	XYLENES (TOTAL)	N.D.	10000	0.5
75-09-2	DICHLOROMETHANE	N.D.	5	0.5
120-82-1	1,2,4-TRICHLOROBENZENE	N.D.	70	0.5
79-00-5	1,1,2-TRICHLOROETHANE	N.D.	5	0.5

Volatile Organic Contaminant Report

Page 2 of 2

PWS ID#: 320600

Lab Sample ID#: C0114-15B

CAS#	UNREGULATED VOC CONTAMINANTS	Results µg/L	MDL µg/L
67-66-3	CHLOROFORM*	N.D.	0.5
75-27-4	BROMODICHLOROMETHANE	N.D.	0.5
124-48-1	CHLORODIBROMOMETHANE	N.D.	0.5
75-25-2	BROMOFORM	N.D.	0.5
541-73-1	M-DICHLOROBENZENE	N.D.	0.5
74-95-3	DIBROMOMETHANE	N.D.	0.5
563-58-6	1,1-DICHLOROPROPENE	N.D.	0.5
75-34-3	1,1-DICHLOROETHANE*	N.D.	0.5
79-34-5	1,1,2,2-TETRACHLOROETHANE	N.D.	0.5
142-28-9	1,3-DICHLOROPROPANE	N.D.	0.5
74-87-3	CHLOROMETHANE	N.D.	0.5
74-83-9	BROMOMETHANE*	N.D.	0.5
96-18-4	1,2,3-TRICHLOROPROPANE	N.D.	0.5
630-20-6	1,1,1,2-TETRACHLOROETHANE	N.D.	0.5
75-00-3	CHLOROETHANE	N.D.	0.5
594-20-7	2,2-DICHLOROPROPANE	N.D.	0.5
95-49-8	O-CHLOROTOLUENE	N.D.	0.5
106-43-4	P-CHLOROTOLUENE	N.D.	0.5
108-86-1	BROMOBENZENE	N.D.	0.5
542-75-6	1,3-DICHLOROPROPENE*	N.D.	0.5
95-63-6	1,2,4-TRIMETHYLBENZENE	N.D.	0.5
87-61-6	1,2,3-TRICHLOROBENZENE	N.D.	0.5
103-65-1	N-PROPYLBENZENE	N.D.	0.5
104-51-8	N-BUTYLBENZENE	N.D.	0.5
91-20-3	NAPTHALENE*	N.D.	0.5
87-68-3	HEXACHLOROBUTADIENE	N.D.	0.5
108-67-8	1,3,5-TRIMETHYLBENZENE	N.D.	0.5
99-87-6	P-ISOPROPYLTOLUENE	N.D.	0.5
98-82-8	ISOPROPYLBENZENE	N.D.	0.5
98-06-6	TERT-BUTYLBENZENE	N.D.	0.5
135-98-8	SEC-BUTYLBENZENE	N.D.	0.5
75-69-4	FLUOROTRICHLOROMETHANE	N.D.	0.5
75-71-8	DICHLORODIFLUOROMETHANE*	N.D.	0.5
74-97-5	BROMOCHLOROMETHANE	N.D.	0.5
1634-04-4	METHYL TERTIARY BUTYL ETHER (MTBE)*	N.D.	0.5

[#] Required

* DEP ORSG limit established.

Surrogate Name	% Recovery (70 – 130%)
1,2-Dichlorobenzene-d4	104
4-Bromofluorobenzene	108

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

Date: 2/9/2016

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date) <input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved _____	Review Comments	<input type="checkbox"/> WQTS Data Entered
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Synthetic Organic Contaminant Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **3206000** City / Town: **NEWBURYPORT**
PWS Name: **Newburyport Water Department** PWS Class: **COM** ☒ **NTNC** ☐ **TNC** ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information	Date Collected	Collected By	
10278	Well #2	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	2/5/2015	M.S.
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:			
		(1) Reason for Resubmission	(2) Collection Date of Original Sample		
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction			
SAMPLE NOTES - (Such as, if a Manifold/Multiple sample, list any sources that were on-line during sample collection).					

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: **M-RI010** Primary Lab Name: **New England Testing Lab** Subcontracted? (Y/N) **Y**

Analytical Methods (List All)	Date Extracted	Date Analyzed	Analysis Lab MA Cert#	Analysis Lab Name	Lab Sample ID#
504.1	2/13/2015	2/13/2015	M-RI010	New England Testing Lab	B0205-33D
505	2/13/2015	2/13/2015	M-RI010	New England Testing Lab	B0205-33D
515.3	2/13/2015	2/14/2015	M-RI010	New England Testing Lab	B0205-33D
525.2	2/17/2015	2/17/2015	M-RI010	New England Testing Lab	B0205-33D
531.2		2/13/2015	M-CT008	Premier Laboratory	E502469

Was this Sample composited by the Lab?	COMPOSITE SAMPLE NOTES - Please list the composited sources by DEP Source Code (XXXXXXX-XXX), up to five individual sources.
<input type="checkbox"/>	
LAB SAMPLE NOTES - Information on matrix spike/method blank sample information is on file at our office.	

CAS #	SOC Regulated Contaminants	Result µg/L	MCL µg/L	MDL µg/L	Analytical Method
1563-66-2	CARBOFURAN	<0.90	40	0.9	531.2
23135-22-0	OXAMYL (VYDATE)	<2.0	200	2.0	531.2
94-75-7	2,4-D	<0.1	70	0.1	515.3
93-72-1	2,4,5-TP (SILVEX)	<0.2	50	0.2	515.3
75-99-0	DALAPON	<1.0	200	1.0	515.3
88-85-7	DINOSEB	<0.2	7	0.2	515.3
1918-02-1	PICLORAM	<0.1	500	0.1	515.3
87-86-5	PENTACHLOROPHENOL	<0.04	1	0.04	515.3
15972-60-8	ALACHLOR	<0.2	2	0.2	525.2
1912-24-9	ATRAZINE	<0.1	3	0.1	525.2
72-20-80	ENDRIN	<0.05	2	0.05	525.2
76-44-8	HEPTACHLOR	<0.04	0.4	0.04	525.2
1024-57-3	HEPTACHLOR EPOXIDE	<0.04	0.2	0.04	525.2
58-89-9	LINDANE	<0.04	0.2	0.04	525.2
72-43-5	METHOXYCHLOR	<0.1	40	0.1	525.2
118-74-1	HEXACHLOROBENZENE	<0.1	1	0.1	525.2
77-47-4	HEXACHLOROCYCLOPENTADIENE	<0.1	50	0.1	525.2
122-34-9	SIMAZINE	<0.2	4	0.2	525.2
50-32-8	BENZO(A)PYRENE	<0.05	0.2	0.05	525.2
103-23-1	DI(2-ETHYLHEXYL)ADIPATE	<0.6	400	0.6	525.2
117-81-7	DI(2-ETHYLHEXYL)PHTHALATE	<1.3	6	1.3	525.2

Well #2



Massachusetts Department of Environmental Protection - Drinking Water Program

SOC

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Synthetic Organic Contaminant Report

CAS #	SOC Regulated Contaminants	Result µg/L	MCL µg/L	MDL µg/L	Analytical Method
57-74-9	CHLORDANE	<0.2	2	0.2	505
8001-35-2	TOXAPHENE	<1.0	3	1.0	505
12674-11-2	PCB AROCLOR 1016	<0.23	---	0.23	505
11104-28-2	PCB AROCLOR 1221	<0.14	---	0.14	505
11141-16-5	PCB AROCLOR 1232	<0.09	---	0.09	505
53469-21-9	PCB AROCLOR 1242	<0.08	---	0.08	505
12672-29-6	PCB AROCLOR 1248	<0.16	---	0.16	505
11097-69-1	PCB AROCLOR 1254	<0.10	---	0.10	505
11096-82-5	PCB AROCLOR 1260	<0.13	---	0.13	505
1336-36-3	PCBS (DECACHLOROBIPHENYL)		0.5		
Monitoring requirements for DBCP and EDB have been waived statewide for SURFACE WATER SOURCES ONLY. All groundwater sources must monitor for these two contaminants.					
96-12-8	DIBROMOCHLOROPROPANE (DBCP)	<0.02	0.2	0.02	504.1
106-93-4	ETHYLENEDIBROMIDE (EDB)	<0.01	0.02	0.01	504.1
Monitoring requirements for the following four contaminants have been waived statewide for both groundwater and surface water sources, however monitoring and reporting for Diquat is required for surface waters that have applied Diquat.					
85-00-7	DIQUAT		20		
145-73-3	ENDOTHALL		100		
1071-53-6	GLYPHOSATE		700		
1746-01-6	2,3,7,8-TCDD (DIOXIN)		3.0x10 ⁻⁵		

CAS#	SOC Unregulated Contaminants	Result µg/L	ORSG µg/L	MDL µg/L	Analytical Method
116-06-3	ALDICARB	<0.50	3*	0.50	531.2
1646-88-4	ALDICARB SULFONE	<0.80	2*	0.80	531.2
1646-87-3	ALDICARB SULFOXIDE	<0.50	4*	0.50	531.2
63-25-2	CARBARYL	<0.50	---	0.50	531.2
16655-82-6	3-HYDROXYCARBOFURAN	<0.50	---	0.50	531.2
16752-77-5	METHOMYL	<0.2	---	0.2	515.3
1918-00-9	DICAMBA	<0.1	---	0.1	525.2
309-00-2	ALDRIN	<0.1	---	0.1	525.2
23184-66-9	BUTACHLOR	<0.04	---	0.04	525.2
60-57-1	DIELDRIN	<0.1	---	0.1	525.2
51218-45-2	METOLACHLOR	<0.1	100*	0.1	525.2
21087-64-9	METRIBUZIN	<0.1	---	0.1	525.2
1918-16-7	PROPACHLOR				

* No MCL, however the DEP Office of Research and Standards has established a guideline (ORSG) limit for this contaminant.

Method	Surrogate Name	% Recovery (70 - 130%)
515.3	2,4 DCAA	101
525.2	1,3 DM-2-NB	91
525.2	Triphenylphos	95
525.2	perylene-D12	102
531.2	4B-3,5Dim	99

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

Date: 2/18/2015

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DEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved _____		



Synthetic Organic Contaminant Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **3206000** City / Town: **NEWBURYPORT**
PWS Name: **Newburyport Water Department** PWS Class: COM ☒ NTNC ☐ TNC ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information	Date Collected	Collected By
10001	Wtp Finished	<input checked="" type="checkbox"/> (M)ultiple <input type="checkbox"/> (S)ingle	2/5/2015	M.S.
		<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished		
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:		
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SAMPLE NOTES - (Such as, if a Manifold/Multiple sample, list any sources that were on-line during sample collection).				

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531.2		2/13/2015	M-CT008	Premier Laboratory	E502469

Was this Sample composited by the Lab?	COMPOSITE SAMPLE NOTES - Please list the composited sources by DEP Source Code (XXXXXXX-XXX), up to five individual sources.
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Synthetic Organic Contaminant Report

WTP Finished

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Method	Surrogate Name	% Recovery (70 - 130%)
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525.2	1,3 DM-2-NB	94
525.2	Triphenylphos	95
525.2	perylene-D12	103
531.2	4B-3,5Dim	99

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature: Richard W. [Signature]

Date: 2/18/2015

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

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<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved _____		