UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

AUG 13 2015

Angela Boyd, Project Manager
Environmental Strategies and Management, Inc.
273 West Main Street
Norton, MA 02766

Re: Authorization to discharge under the Remediation General Permit (RGP) – for the Whitten Street Park Groundwater Treatment Facility site located in Allenstown, New Hampshire; Authorization # NHG910070

Dear Ms. Boyd:

Based on the review of a Notice of Intent (NOI) you submitted on behalf of the owner of the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Operator, to discharge in accordance with the provisions of the RGP at that site. Your authorization number is listed above.

The checklist enclosed with this RGP authorization indicates the pollutants which you are required to monitor. Also indicated on the checklist are the effluent limits, test methods and minimum levels (MLs) for each pollutant. Please note that the checklist does not represent the complete requirements of the RGP. Operators must comply with all of the applicable requirements of this permit, including influent and effluent monitoring, narrative water quality standards, record keeping, and reporting requirements, found in Parts I and II, and Appendices I – VIII of the RGP. See EPA's website for the complete RGP and other information at: http://www.epa.gov/region1/npdes/mass.html#dgp.

Please note the enclosed checklist includes parameters that were detected in your sampling and that may have exceeded Appendix III limits. Please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on a dilution factor range (DFR). Since the discharge will be made to the confluence of the Suncook and Merrimack Rivers with a calculated dilution of factor of 4771, iron and arsenic will be subject to the ceiling value limits of 5000 ug/l and 540 ug/l, respectively. (See the RGP Appendix IV for New Hampshire facilities).

Therefore, the following limits will apply to the effluent from this treatment system: **Total Suspended Solids (TSS) - 30 mg/l, Benzene- 5 ug/l, Total BTEX - 100 ug/l, naphthalene - 20 ug/l, total arsenic - 540 ug/l, total iron - 5,000 ug/l, and a pH range of 6.5 - 8.0 standard units (s.u.). There is also a monitoring requirement for toluene, ethylbenzene, xylenes, and total chloride.**

This EPA general permit and authorization to discharge will expire on September 9, 2015. You have not provided a terminate date for this project. Please be aware that you are required to reapply for coverage after the EPA expired permit has been reissued, if your project is extended beyond the permit expiration date. The reissuance date as well as the reapplication submittal date will be posted on the EPA web site at that time. Also, regardless of your project termination date you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within thirty (30) days of the termination of the discharge.

Thank you in advance for your cooperation in this matter. Please contact George Papadopoulos at (617) 918-1579 or Papadopoulos.George@epa.gov, if you have any questions.

Sincerely,

Thelma Murphy, Chief
Storm Water and Construction Permits Section

Enclosure

cc: Jeffrey G. Andrews, NHDES
Juan Somoano, Occidental Petroleum

2010 Remediation General Permit - Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**NHG910070**
Authorization Issued:	**August 13, 2015**
Facility/Site Name:	Whitten Street Park Groundwater Treatment Facility – Allenstown, NH
Facility/Site Address:	9 Ferry Street, Allenstown, NH 03275
	Email address of owner: juan_somoano@oxy.com
Legal Name of Operator:	Environmental Strategies and Management, Inc.
Operator contact name, title, and Address:	Angela Boyd, Project Manager
	Email: aboyd@esm-inc.com
Estimated date of The Project Completion:	Not known
Category and Sub-Category:	Petroleum Related Site Remediation Category– Gasoline Only Sites Subcategory
RGP Termination Date:	September 2015
Receiving Water:	Confluence of the Suncook and Merrimack Rivers

Monitoring and Limits apply to those parameters with a checkmark. All samples are to be collected as grab samples.

	Parameter	**Effluent Limit/Method#/ML** (Effluent Limits are expressed as Daily Maximum Limits, unless denoted by a **, in which case they are Monthly Average Limits)
√	**1. Total Suspended Solids (TSS)**	30 milligrams/liter (mg/L) **, Me#160.2/ML5ug/L
	2. Total Residual Chlorine (TRC) [1]	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L/ Me# 1664A/ML 5.0mg/L
	4. Cyanide (CN) [2, 3]	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/L **/ Me#335.4/ML 10ug/L
√	**5. Benzene (B)**	5ug/L / Me#8260C/ML 2 ug/L
√	**6. Toluene (T)**	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
√	**7. Ethylbenzene (E)**	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
√	**8. (m,p,o) Xylenes (X)**	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
√	**9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) [4]**	100 ug/L/ Me#8260C/ ML 2ug/L
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether	70.0 ug/l/Me#8260C/ML 10ug/L

	Parameter	Effluent Limit/Method#/ML (Effluent Limits are expressed as Daily Maximum Limits, unless denoted by a **, in which case they are Monthly Average Limits)
	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
√	**14. Naphthalene** [5]	20 ug/L /Me#8260C/ML 2ug/L
	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/L /Me#8260C/ ML 5ug/L
	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/L /Me#8260C/ ML 5ug/L
	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML 5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
	24. Tetrachloroethene(PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L,Me#604 &625/ML 10ug/L
	33. Total Phthalates (Phthalate esters) [6]	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L& Me#625/ML 5ug/L
	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML 5ug/L
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L
	a. Benzo(a) Anthracene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	b. Benzo(a) Pyrene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	c. Benzo(b)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L

	Parameter	Effluent Limit/Method#/ML (Effluent Limits are expressed as Daily Maximum Limits, unless denoted by a **, in which case they are Monthly Average Limits)
	d. Benzo(k)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	e. Chrysene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	f. Dibenzo(a,h)anthracene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	g. Indeno(1,2,3-cd) Pyrene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML5ug/L
	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
	h. Acenaphthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	i. Acenaphthylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	j. Anthracene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	l. Fluoranthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	m. Fluorene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	n. Naphthalene [5]	20 ug/l / Me#8270/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	o. Phenanthrene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	p. Pyrene	X/Me#8270D/ML5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	37. Total Polychlorinated Biphenyls (PCBs) [8, 9]	0.000064 ug/L/Me# 608/ ML 0.5 ug/L
√	**38. Chloride**	**Monitor only/Me# 300.0/ ML 100 ug/L**

	Metal Parameters	Total Recoverable Metal Limit H [10] = 50 mg/l CaCO3, Units = ug/l Freshwater Limits	Minimum level=ML[11]
	39. Antimony	5.6	10
√	**40. Arsenic** **	**540**	20
	41. Cadmium **	0.2	10
	42. Chromium III (trivalent) **	17.1	15
	43. Chromium VI (hexavalent) **	11.4	10
	44. Copper **	5.2	15
	45. Lead **	1.3	20
	46. Mercury **	0.9	0.2
	47. Nickel **	29	20
	48. Selenium **	5	20
	49. Silver	1.2	10
	50. Zinc **	66.6	15
√	**51. Iron**	**5000**	**20**

	Other Parameters	Limit
√	**52. Instantaneous Flow**	**Site specific in CFS**
√	**53. Total Flow**	**Site specific in CFS**
	54. pH Range for Class A & Class B Waters in MA	6.5-8.3; 1/Month/Grab[12]
	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.5; 1/Month/Grab[12]
√	**56. pH Range for Class B Waters in NH**	**6.5-8; 1/Month/Grab[12]**
	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab[13]
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab[13]
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab[13]
	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab[13]
	61. Maximum Change in Temperature in MA – Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab[13]
	62. Maximum Change in Temperature in MA – Any Class SA water body - Coastal	1.5°F; 1/Month/Grab[13]
	63. Maximum Change in Temperature in MA – Any Class SB water body - July to September	1.5°F; 1/Month/Grab[13]
	64. Maximum Change in Temperature in MA –Any Class SB water body - October to June	4°F; 1/Month/Grab[13]

Footnotes:

[1] Although the maximum values for TRC are 11 ug/l and 7.5 ug/l for freshwater, and saltwater respectively, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., Method 330.5, 20 ug/l).

[2] Limits for cyanide are based on EPA's water quality criteria expressed as micrograms per liter. There is currently no EPA approved test method for free cyanide. Therefore, total cyanide must be reported.
[3] Although the maximum values for cyanide are 5.2 ug/l and 1.0 ug/l for freshwater and saltwater, respectively, the compliance limits are equal to the minimum level (ML) of the Method 335.4 as listed in Appendix VI (i.e., 10 ug/l).

[4] BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.

[5] Naphthalene can be reported as both a purgeable (VOC) and extractable (SVOC) organic compound. If both VOC and SVOC are analyzed, the highest value must be used unless the QC criteria for one of the analyses is not met. In such cases, the value from the analysis meeting the QC criteria must be used.

[6] The sum of individual phthalate compounds(not including the #34, Bis (2-Ethylhexyl) Phthalate . The compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.
Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measurement of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

[7] Although the maximum value for the individual PAH compounds is 0.0038 ug/l, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.

[8] In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as total PCBs is the sum of all homologue, all isomer, all congener, or all "Oroclor analyses."Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measure of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

[9]Although the maximum value for total PCBs is 0.000064 ug/l, the compliance limit is equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., 0.5 ug/l for Method 608 or 0.00005 ug/l when Method 1668a is approved).

[10] Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.

[11] Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).
[12] pH sampling for compliance with permit limits may be performed using field methods as provided for in EPA test Method 150.1.
[13] Temperature sampling per Method 170.1

Environmental
Strategies
& Management

273 West Main Street, Norton, MA 02766 ◆ Tel: (508) 226-1800 ◆ Fax: (508) 226-1811

July 16, 2015

United States Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Subject: **Notice of Intent for Remediation General Permit**
Whitten Street Park Groundwater Treatment Facility
Allenstown, NH

To whom it may concern:

Environmental Strategies & Management, Inc. (ES&M) has prepared the attached Notice of Intent package for a remediation general permit. The project is being conducted by Glenn Springs Holdings, Inc. A new Boys and Girls Club building is being constructed by the Town of Allenstown in Whitten Street Park, which is included in a groundwater management zone related to a historic release of gasoline. The foundation of the new building will be constructed below the water table, and will include a drainage system. Water drained from the building will require treatment prior to discharge to the Town's Stormwater system.

The water will be run through bag filters and carbon tanks, as shown on the attached piping and instrumentation diagram. After treatment, the water will be discharged to the town's storm drains, and ultimately to the confluence of the Suncook and Merrimac Rivers. A monitoring well (ESM-20) was installed near the location of the proposed drainage system, and groundwater samples were collected for laboratory analysis. The results were used to complete Section 3 of the NOI, and the full laboratory analytical report is attached.

The expected 7Q10 flow for the mixing zone of the Suncook and Merrimac Rivers was calculated by NHDES. NHDES also confirmed the accuracy of the dilution factor used for metals, which was calculated in accordance with the Permit Instructions.

Threatened and endangered species will not be impacted by this project. A review was conducted using methodology described on the United States Fish and Wildlife Service New England Field Office webpage. The four species listed in Appendix VIII of the Remediation General Permit are not present in Merrimac County. The United States Fish and Wildlife Service lists the small whorled pogonia, the Karner Blue Butterfly, and the northern long-eared bat as "know or believed" present in Merrimac County. Of these three species, only the small whorled pogonia is listed as having a general habitat in Allenstown. Since the pogonia is not an aquatic species, it will not be affected by this discharge. A no-species present letter and a fact sheet describing the Small whorled pogonia is included as documentation.

Since the project is located with a Historic District, ES&M consulted with the New Hampshire Department of Historical Resources. The conclusion of the review was that no historic properties would be affected. The review form is attached as documentation.

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.

Angela Boyd

Angela Boyd
Environmental Scientist

Enc.: Notice of Intent
Locus Map
Figures 1 & 2
Letter from US Fish and Wildlife Service
Small Whorled Pogonia Fact Sheet
Letter from New Hampshire Department of Historical Resources
Laboratory Analytical Reports

B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General facility/site information. Please provide the following information about the site:

a) Name of **facility/site**: Whitten Street Park Groundwater Treatment Facility		**Facility/site** mailing address:		
Location of **facility/site**: longitude: 71° 27' 22.86" W latitude: 43° 07' 37.50" N	Facility SIC code(s): 7999	Street: 9 Ferry Street		
b) Name of **facility/site owner:**		Town: Allenstown		
Email address of facility/site owner: Juan_Somoano@oxy.com		State: NH	Zip: 03275	County: Merrimac
Telephone no. of facility/site **owner**: 972 687-7510				
Fax no. of facility/site **owner**: 972 687-7524		**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ◉ 4. Other ○ if so, describe:		
Address of **owner** (if different from site):				
Street: 5005 LBJ Freeway, Suite 1350				
Town: Dallas	State: TX	Zip: 75244	County: Dallas	
c) Legal name of **operator**: Environmental Strategies & Management	**Operator** telephone no: (508) 226-1800			
	Operator fax no.: (508) 226-1811	**Operator** email: aboyd@esm-inc.com		
Operator contact name and title: Angela Boyd, Project Manager				
Address of **operator** (if different from owner):	Street: 273 West Main Street			
Town: Norton	State: MA	Zip: 02766	County: Bristol	

d) Check Y for "yes" or N for "no" for the following:
1. Has a prior NPDES permit exclusion been granted for the discharge? Y ○ N ◉, if Y, number:
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge?
Y ○ N ◉, if Y, date and tracking #:
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Y ◉ N ○
4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y ○ N ◉

e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y ◉ N ○
If Y, please list:
1. site identification # assigned by the state of NH or MA: 198400003
2. permit or license # assigned: GWP-198400003-A-003
3. state agency contact information: name, location, and telephone number:
Andrew Fulton, New Hampshire Dept. of Environmental Services, PO Box 95, 29 Hazen Drive, Concord, NH 03302-0095 (603) 271-3899

f) Is the site/facility covered by any other EPA permit, including:
1. Multi-Sector General Permit? Y ○ N ◉,
if Y, number:
2. Final Dewatering General Permit? Y ○ N ◉,
if Y, number:
3. EPA Construction General Permit? Y ○ N ◉,
if Y, number:
4. Individual NPDES permit? Y ○ N ◉,
if Y, number:
5. any other water quality related individual or general permit? Y ○ N ◉, if Y, number:

g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y ○ N ◉

h) Based on the facility/site information and any historical sampling data, identify the sub-category into which the potential discharge falls.

Activity Category	**Activity Sub-Category**
I - Petroleum Related Site Remediation	A. Gasoline Only Sites ☒ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) ☐ C. Petroleum Sites with Additional Contamination ☐
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites ☐ B. VOC Sites with Additional Contamination ☐ C. Primarily Heavy Metal Sites ☐
III - Contaminated Construction Dewatering	A. General Urban Fill Sites ☐ B. Known Contaminated Sites ☐

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites ☐ B. Well Development/Rehabilitation at Contaminated/Formerly Contaminated Sites ☐ C. Hydrostatic Testing of Pipelines and Tanks ☐ D. Long-Term Remediation of Contaminated Sumps and Dikes ☐ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ☐

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as necessary) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:

A new Boys and Girls club building is being constructed in Whitten Street Park. The first floor will be below the water table. Since groundwater has been impacted by a historic release of gasoline, treatment of drained water will be required prior to discharge to the town's stormwater conveyances.

b) Provide the following information about each discharge:

1) Number of discharge points: 1

2) What is the **maximum** and **average flow rate** of discharge (in cubic feet per second, ft^3/s)?
Max. flow 0.11 Is maximum flow a **design value**? Y ○ N ◉
Average flow (include units) 0.0055 cfs Is average flow a design value or estimate? est

3) Latitude and longitude of each discharge within 100 feet:
pt.1: lat 43° 7'38.96"N long 71°27'50.54"W; pt.2: lat. ____ long. ____;
pt.3: lat ____ long ____; pt.4: lat. ____ long. ____;
pt.5: lat ____ long ____; pt.6: lat. ____ long. ____;
pt.7: lat ____ long ____; pt.8: lat. ____ long. ____; etc.

4) If hydrostatic testing, total volume of the discharge (gals): ____

5) Is the discharge intermittent ○ or seasonal ○?
Is discharge ongoing? Y ◉ N ○

c) Expected dates of discharge (mm/dd/yy): start Sep 10, 2015 end ____

d) Please attach a line drawing or flow schematic showing water flow through the facility including:
1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s). See two attached drawings

3. Contaminant information.

a) Based on the sub-category selected (see Appendix III), indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids (TSS)		☐	☒	1	grab	SM 2540D	4000	117,000		0	
2. Total Residual Chlorine (TRC)		☒	☐								
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	1	grab	1664A	49000	0		0	
4. Cyanide (CN)	57125	☒	☐								
5. Benzene (B)	71432	☐	☒	1	grab	8260C	40	2000		0	
6. Toluene (T)	108883	☐	☒	1	grab	8260C	40	140		0	
7. Ethylbenzene (E)	100414	☐	☒	1	grab	8260C	40	360		0	
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☐	☒	1	grab	8260C	80	350		0	
9. Total BTEX [2]	n/a	☐	☒	1	grab	8260C	200	2850		0	
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☒	☐	1	grab	8260C	40	0		0	
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐	1	grab	8260C	40	0		0	
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	1	grab	8260C	400	0		0	

***** Numbering system is provided to allow cross-referencing to Effluent Limits and Monitoring Requirements by Sub-Category included in Appendix III, as well as the Test Methods and Minimum Levels associated with each parameter provided in Appendix VI.

[2] BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

[3] EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
13. tert-Amyl Methyl Ether (TAME)	9940508	☒	☐	1	grab	8260C	40	0		0	
14. Naphthalene	91203	☐	☒	1	grab	8260C	40	97		0	
15. Carbon Tetrachloride	56235	☒	☐								
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐								
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐								
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐								
18a. Total dichlorobenzene		☒	☐								
19. 1,1 Dichloroethane (DCA)	75343	☒	☐								
20. 1,2 Dichloroethane (DCA)	107062	☒	☐								
21. 1,1 Dichloroethene (DCE)	75354	☒	☐								
22. cis-1,2 Dichloroethene (DCE)	156592	☒	☐								
23. Methylene Chloride	75092	☒	☐								
24. Tetrachloroethene (PCE)	127184	☒	☐								
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐								
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐								
27. Trichloroethene (TCE)	79016	☒	☐								

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
28. Vinyl Chloride (Chloroethene)	75014	☒	☐								
29. Acetone	67641	☒	☐								
30. 1,4 Dioxane	123911	☒	☐								
31. Total Phenols	108952	☒	☐								
32. Pentachlorophenol (PCP)	87865	☒	☐								
33. Total Phthalates (Phthalate esters) [4]		☒	☐								
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐								
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐								
a. Benzo(a) Anthracene	56553	☒	☐								
b. Benzo(a) Pyrene	50328	☒	☐								
c. Benzo(b)Fluoranthene	205992	☒	☐								
d. Benzo(k)Fluoranthene	207089	☒	☐								
e. Chrysene	21801	☒	☐								
f. Dibenzo(a,h)anthracene	53703	☒	☐								
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐								
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐								

[4] The sum of individual phthalate compounds.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
h. Acenaphthene	83329	☒	☐								
i. Acenaphthylene	208968	☒	☐								
j. Anthracene	120127	☒	☐								
k. Benzo(ghi) Perylene	191242	☒	☐								
l. Fluoranthene	206440	☒	☐								
m. Fluorene	86737	☒	☐								
n. Naphthalene	91203	☒	☐								
o. Phenanthrene	85018	☒	☐								
p. Pyrene	129000	☒	☐								
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐								
38. Chloride	16887006	☒	☐								
39. Antimony	7440360	☒	☐								
40. Arsenic	7440382	☒	☐								
41. Cadmium	7440439	☒	☐								
42. Chromium III (trivalent)	16065831	☒	☐								
43. Chromium VI (hexavalent)	18540299	☒	☐								
44. Copper	7440508	☒	☐								
45. Lead	7439921	☒	☐	1	grab	6010C	10	0		0	
46. Mercury	7439976	☒	☐								
47. Nickel	7440020	☒	☐								
48. Selenium	7782492	☒	☐								
49. Silver	7440224	☒	☐								
50. Zinc	7440666	☒	☐								
51. Iron	7439896	☐	☒	1	grab	6010C	50	19500		0	
Other (describe):		☐	☐								

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
		☐	☐								
		☐	☐								

b) For discharges where **metals** are believed present, please fill out the following (attach results of any calculations):

Step 1: Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y ◉ N ○	If yes, which metals? iron
Step 2: For any metals which exceed the **Appendix III** limits, calculate the **dilution factor (DF)** using the formula in Part I.A.3.c (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metal: iron DF: 4771 Metal: DF: Metal: DF: Metal: DF: Etc.	Look up the limit calculated at the corresponding dilution factor in **Appendix IV.** Do any of the metals in the **influent** have the potential to exceed the corresponding **effluent** limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y ○ N ◉ If Y, list which metals:

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:

A wet well will be connected to the building's drainage system, and two submersible pumps will be deployed. Water will be pumped into an iron-settling tank, and then into one of three parallel treatment trains. The system will be equipped with telemetry, so that the operator can remotely switch between trains. Each treatment train will include one bag filter unit and two 500 pound carbon filtration units.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank ☐	Air stripper ☐	Oil/water separator ☐	Equalization tanks ☒	Bag filter ☒	GAC filter ☒
	Chlorination ☐	De-chlorination ☐	Other (please describe):			

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate**(s) (gallons per minute) of the treatment system:
Average flow rate of discharge 5 gpm Maximum flow rate of treatment system 50 gpm
Design flow rate of treatment system _____ gpm

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct to receiving water ☐	Within facility (sewer) ☐	Storm drain ☒	Wetlands ☐	Other (describe):

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:
discharge from treatment system will enter Allenstown storm drain system. The storm drain empties into the confluence of the Suncook and Merrimac Rivers

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:
1. For multiple discharges, number the discharges sequentially.
2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water
The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water B

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 591 cfs
Please attach any calculation sheets used to support stream flow and dilution calculations.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Y ◉ N ○ If yes, for which pollutant(s)?
mercury, aquatic life
Is there a final TMDL? Y ◉ N ○ If yes, for which pollutant(s)? mercury (all fresh water in NH)

6. ESA and NHPA Eligibility.

Please provide the following information according to requirements of Permit Parts I.A.4 and I.A.5 Appendices II and VII.

a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?

A ○ B ○ C ○ D ◉ E ○ F ○

b) If you selected Criterion D or F, has consultation with the federal services been completed? Y ◉ N ○ Underway ○

c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received? Y ◉ N ○

d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.

e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit?

1 ○ 2 ◉ 3 ○

f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

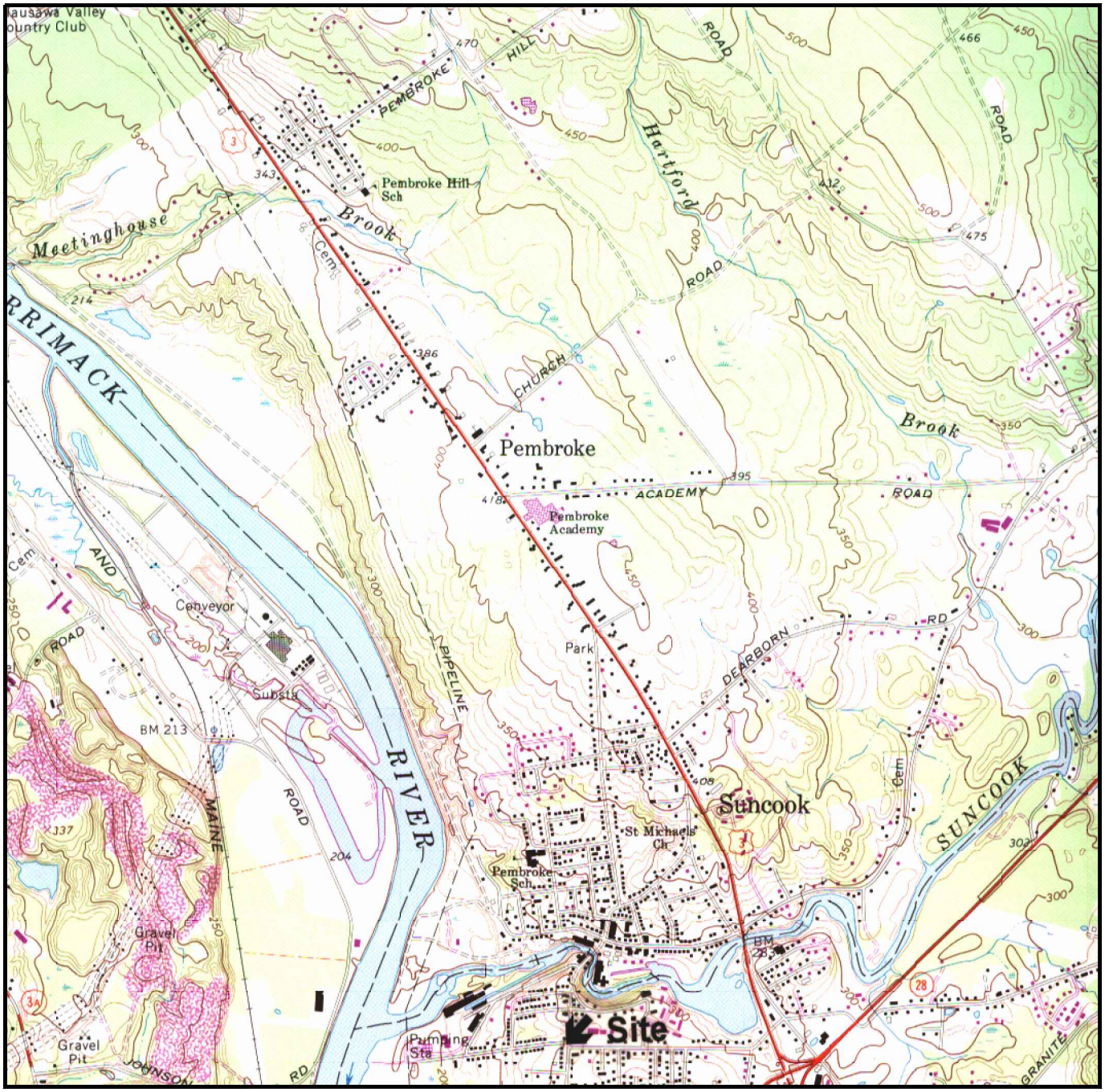
7. Supplemental information.

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name:	Whitten Street Park Groundwater Treatment System
Operator signature:	Angela Boyd
Printed Name &Title:	Angela Boyd, Project Manager
Date:	July 16, 2015



SOURCE: U.S.G.S. 7.5 x 15 MINUTE TOPOGRAPHIC QUADRANGLE
SUNCOOK, NEW HAMPSHIRE
SITE COORDINATES:
LAT: 43° 07' 32"N
LON: 71° 27' 27"W

SCALE: 1 : 24,000

Environmental Strategies & Management
273 West Main Street
Norton, MA 02766
(508) 226-1800
(508) 226-1811 fax
info@esm-inc.com

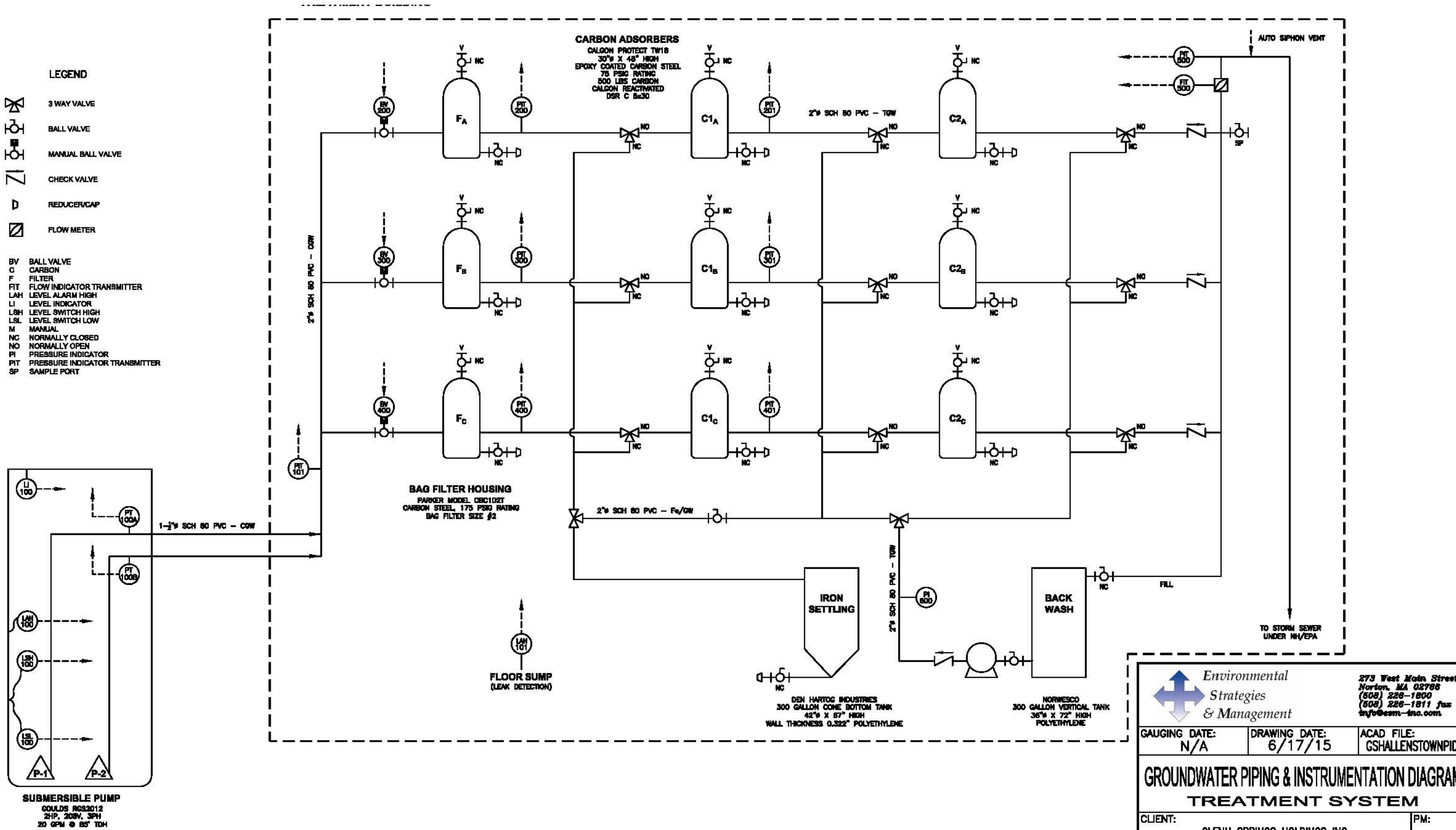
GAUGING DATE:	DRAWING DATE:	ACAD FILE:
N/A	12/16/13	LOCUS/AR-F1

LOCUS MAP

Site Status Summary Report

CLIENT:	PM:
GLENN SPRINGS HOLDINGS INC	AB
LOCATION: NHDES SITE #198400003 MAIN & FERRY STREETS ALLENSTOWN, NH	PG: DH

SITE ID:	DWG:	PROJECT NO.:	FIGURE:
198400003	AB	2013-012	1


TREATMENT BUILDING
LEGEND
3 WAY VALVE
BALL VALVE
MANUAL BALL VALVE
CHECK VALVE
REDUCER/CAP
FLOW METER
BV BALL VALVE
C CARBON
F FILTER
FIT FLOW INDICATOR TRANSMITTER
LAH LEVEL ALARM HIGH
LI LEVEL INDICATOR
LSH LEVEL SWITCH HIGH
LSL LEVEL SWITCH LOW
M MANUAL
NC NORMALLY CLOSED
NO NORMALLY OPEN
PI PRESSURE INDICATOR
PIT PRESSURE INDICATOR TRANSMITTER
SP SAMPLE PORT
CARBON ADSORBERS
CALGON PROTECT TW18
30"ø X 45" HIGH
EPOXY COATED CARBON STEEL
75 PSIG RATING
500 LBS CARBON
CALGON REACTIVATED
DSR C 8x30
AUTO SIPHON VENT
2"ø SCH 80 PVC – TGW
2"ø SCH 80 PVC – CGW
BAG FILTER HOUSING
PARKER MODEL CBC102T
CARBON STEEL, 175 PSIG RATING
BAG FILTER SIZE #2
1–1/2"ø SCH 80 PVC – CGW
2"ø SCH 80 PVC – Fe/GW
IRON SETTLING
BACK WASH
FILL
TO STORM SEWER UNDER NH/EPA
FLOOR SUMP
(LEAK DETECTION)
DEN HARTOG INDUSTRIES
300 GALLON CONE BOTTOM TANK
42"ø X 67" HIGH
WALL THICKNESS 0.322" POLYETHYLENE
NORWESCO
300 GALLON VERTICAL TANK
36"ø X 72" HIGH
POLYETHYLENE
SUBMERSIBLE PUMP
GOULDS RGS2012
2HP, 208V, 3PH
20 GPM @ 85' TDH
P-1
P-2

NOT DRAWN TO SCALE

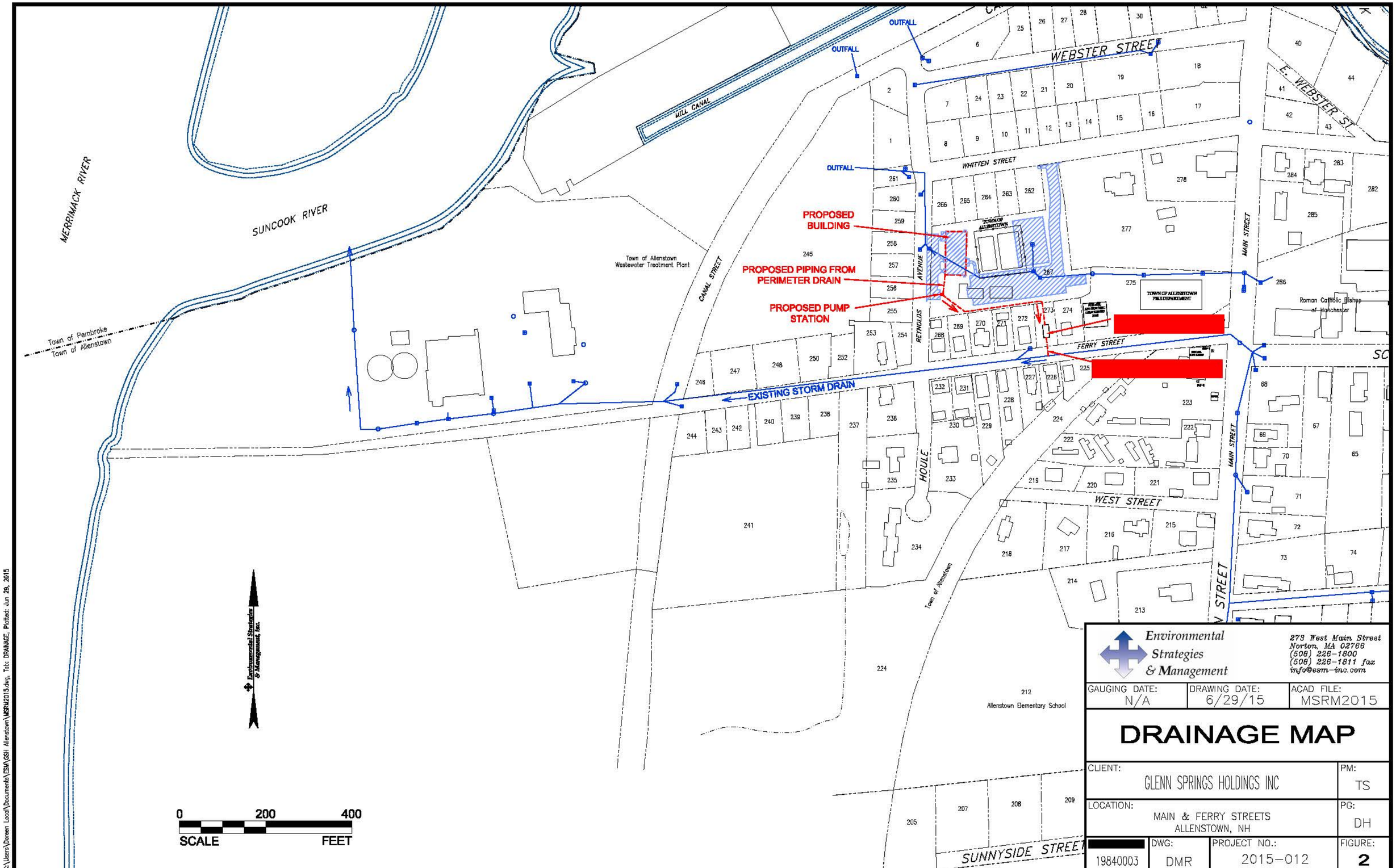
Environmental Strategies & Management
273 West Main Street
Norton, MA 02766
(508) 226-1800
(508) 226-1811 fax
info@esm-inc.com

GAUGING DATE:	DRAWING DATE:	ACAD FILE:
N/A	6/17/15	GSHALLENSTOWNPID

GROUNDWATER PIPING & INSTRUMENTATION DIAGRAM
TREATMENT SYSTEM

CLIENT:	PM:
GLENN SPRINGS HOLDINGS INC	TES
LOCATION: MAIN & FERRY STREETS, ALLENSTOWN, NH	PG: DH

[redacted]	DWG:	PROJECT NO.:	FIGURE:
19840003	DMR	2015–012	1



Environmental Strategies & Management
273 West Main Street
Norton, MA 02766
(508) 226-1800
(508) 226-1811 fax
info@esm-inc.com

GAUGING DATE:	DRAWING DATE:	ACAD FILE:
N/A	6/29/15	MSRM2015

DRAINAGE MAP

CLIENT:	PM:
GLENN SPRINGS HOLDINGS INC	TS
LOCATION: MAIN & FERRY STREETS ALLENSTOWN, NH	PG: DH

[redacted]	DWG:	PROJECT NO.:	FIGURE:
19840003	DMR	2015-012	2

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
http://www.fws.gov/newengland

January 7, 2015

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm (accessed January 2015)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Maria Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

Small Whorled Pogonia

Isotria medeoloides

States where the small whorled pogonia, an orchid, is found.

Photos by USFWS; Sarena Selbo (right) and Susi vonOettingen (left)

The small whorled pogonia is a threatened species. Threatened species are animals and plants that are likely to become endangered in the foreseeable future. Endangered species are animals and plants that are in danger of becoming extinct. Identifying, protecting, and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program.

What is the small whorled pogonia?

Appearance - The small whorled pogonia is a member of the orchid family. It usually has a single grayish-green stem that grows about 10 inches tall when in flower and about 14 inches when bearing fruit. The plant is named for the whorl of five or six leaves near the top of the stem and beneath the flower. The leaves are grayish-green, somewhat oblong and 1 to 3.5 inches long. The single or paired greenish-yellow flowers are about 0.5 to 1 inch long and appear in May or June. The fruit, an upright ellipsoid capsule, appears later in the year.

Range - Although widely distributed, the small whorled pogonia is rare. It is found in 17 eastern states and Ontario, Canada. Populations are typically small with less than 20 plants. It has been extirpated from Missouri, New York, Vermont, and Maryland.

Habitat - This orchid grows in older hardwood stands of beech, birch, maple, oak, and hickory that have an open understory. Sometimes it grows in stands of softwoods such as hemlock. It prefers acidic soils with a thick layer of dead leaves, often on slopes near small streams.

What is the small whorled pogonia? (continued)

Reproduction - This pogonia flowers from mid-May to mid-June, with the flowers lasting only a few days to a week. It may not flower every year but when it does flower, one or two flowers are produced per plant. If pollinated, a capsule forms that contains several thousand minute seeds. The pogonia appears to self-pollinate by mechanical processes. The flower lacks both nectar guides and fragrance and insect pollination has not been observed.

Why is the small whorled pogonia threatened?

Habitat Loss and Degradation - The primary threat to the small whorled pogonia is the past and continuing loss of populations when their habitat is developed for urban expansion. Some forestry practices eliminate habitat. Also, habitat may be degraded or individual plants lost because of recreational activities and trampling.

Collection - As with all rare orchids, the small whorled pogonia is vulnerable to collecting for commercial or personal use.

What Is being done to prevent extinction of the small whorled pogonia?

Listing - The small whorled pogonia was added to the U.S. List of Endangered and Threatened Wildlife and Plants in 1982 as an endangered species. In 1994 it was reclassified to threatened.

Recovery Plan - The U.S. Fish and Wildlife Service prepared a recovery plan and revised that plan in 1992. The Recovery Plan describes and prioritizes actions needed to help recover the species.

Research - Many small whorled pogonia populations are being monitored to determine long-term population trends. Habitat management techniques, such as reducing shade through selected tree removal are being investigated.

Habitat Protection - A variety of government and private conservation agencies are working to preserve the small whorled pogonia and its habitat. Voluntary protection agreements have also been made with some private landowners.

What can I do to help prevent extinction of species?

Learn - Learn more about the small whorled pogonia and other endangered and threatened species. Understand how the destruction of habitat leads to loss of endangered and threatened species and our nation's plant and animal diversity.

Volunteer - Volunteer at your local zoo, wildlife refuge or nature center. Work with their staff or other community members to maintain and restore local habitat.

Protect – Protect native plants by cleaning your shoes after hiking to avoid spreading invasive plants seeds and staying on trails if you are hiking in an area with rare plants in the the understory.

Grow Natives - Grow native plants in your lawn and garden but obtain the plants from local nurseries, do not dig up native plants from natural areas. Avoid using invasive, non-native plants in landscaping, such as purple loosestrife, bush honeysuckles and burning bush.

U.S. Fish & Wildlife Service
1 Federal Drive
Fort Snelling, Minnesota 55111
612/713-5350
http://www.fws.gov/midwest/endangered

January 2008

Please mail the completed form and required material to:

New Hampshire Division of Historical Resources
State Historic Preservation Office
Attention: Review & Compliance
19 Pillsbury Street, Concord, NH 03301-3570

RECEIVED
JUN 29 2015

DHR Use Only	
R&C #	6858
Log In Date	6/29/15
Response Date	7/8/15
Sent Date	7/9/15

Request for Project Review by the New Hampshire Division of Historical Resources

☒ This is a new submittal
☐ This is additional information relating to DHR Review & Compliance (R&C) #:

GENERAL PROJECT INFORMATION

Project Title Whitten Street Park Groundwater Treatment Facility

Project Location 9 Ferry Street

City/Town Allenstown Tax Map 112 Lot # 273

NH State Plane - Feet Geographic Coordinates: Easting 1040396 Northing 228612
(See RPR Instructions and R&C FAQs for guidance.)

Lead Federal Agency and Contact *(if applicable)* USEPA
(Agency providing funds, licenses, or permits)
Permit Type and Permit or Job Reference # RGP

State Agency and Contact *(if applicable)* NHDES - Andy Fulton

Permit Type and Permit or Job Reference # GWP-198400003-A-003

APPLICANT INFORMATION

Applicant Name Glenn Springs Holdings, Inc.

Mailing Address 5005 LBJ Freeway, Suite 1350 Phone Number 972 687-7510

City Dallas State TX Zip 75244 Email Juan_Somoano@oxy.com

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Angela Boyd/ES&M

Mailing Address 273 West Main Street Phone Number 508 226-1800

City Norton State MA Zip 02766 Email aboyd@esm-inc.com

This form is updated periodically. Please download the current form at www.nh.gov/nhdhr/review. *Please refer to the Request for Project Review Instructions for direction on completing this form.* Submit one copy of this project review form for each project for which review is requested. Include a self-addressed stamped envelope to expedite review response. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: www.nh.gov/nhdhr/review or contact the R&C Specialist at christina.st.louis@dcr.nh.gov or 603.271.3558.

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

Project Boundaries and Description

- ☒ Attach the relevant portion of a 7.5' USGS Map (photocopied or computer-generated) ***indicating the defined project boundary.*** *(See RPR Instructions and R&C FAQs for guidance.)*
- ☒ Attach a detailed narrative description of the proposed project.
- ☒ Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
- ☒ Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) *(Informative photo captions are requested.)*
- ☒ A DHR file review must be conducted to identify properties within or adjacent to the project area. Provide file review results in **Table 1**. *(Blank table forms are available on the DHR website.)* File review conducted on 6 / 24 / 15 .

Architecture

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area? ☒ Yes ☐ No
If no, skip to Archaeology section. If yes, submit all of the following information:

Approximate age(s): 10

- ☒ Photographs of ***each*** resource or streetscape located within the project area, with captions, along with a mapped photo key. (Digital photographs are accepted. All photographs must be clear, crisp and focused.)
- ☒ If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provide additional photographs showing detailed project work locations. (i.e. Detail photo of windows if window replacement is proposed.)

Archaeology

Does the proposed undertaking involve ground-disturbing activity? ☒ Yes ☐ No
If yes, submit all of the following information:

- ☒ Description of current and previous land use and disturbances.
- ☒ Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.)

Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.

DHR Comment/Finding Recommendation *This Space for Division of Historical Resources Use Only*

☐ Insufficient information to initiate review. ☐ Additional information is needed in order to complete review.

☐ No Potential to cause Effects ☑ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect

Comments: _____

If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.

Authorized Signature: E R Murphy Date: 7/8/15

ES&M QAQC Review Log

Lab	Project Number	Sample Date	Matrix	CAM Form Included?	Lab Presumptive Certainty?	QC Performance Standards Met?	Reporting Limits Achieved?	All Analytes Reported?	Data Usability Status
Test America	480-78248	4/8/2015	GW	No	NA	NA	NA	NA	Usable

Sample ID	Date	Lab ID	Matrix	Analysis
ESM-20 Eff	4/8/2015	480-78248-1	GW	metals
ESM-20 Mid	4/8/2015	480-78248-2	GW	metals
ESM-20 Inf	4/8/2015	480-78248-3	GW	metals, 8260C

New Hampshire Site - CAM does not apply

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 237148 recovered outside acceptance criteria, low biased, for 2-Butanone, Ethyl ether and Tetrahydrofuran. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated sample was non-detect for this analyte, the data have been reported.ESM-20 INF (480-78248-3)

All QAQC data, including surrogate, method blank, and laboratory control sample (LCS) results were reviewed. This report was deemed usable by Angela Boyd on 5/19/15.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-78248-1
Client Project/Site: ENV757, Former Bob's Citgo
Revision: 1

For:
Conestoga-Rovers & Associates, Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

Attn: Mr. Paul McMahon

Melissa Deyo

Authorized for release by:
5/15/2015 4:35:40 PM

Melissa Deyo, Project Manager I
(716)504-9874
melissa.deyo@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-78248-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-78248-1

Revision I
This report was revised in order to add Lead to the following samples: ESM-20 EFF (480-78248-1) and ESM-20 INF (480-78248-3).

Receipt
The samples were received on 4/11/2015 1:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0º C.

GC/MS VOA
Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: ESM-20 INF (480-78248-3). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 237148 recovered outside acceptance criteria, low biased, for 2-Butanone, Ethyl ether and Tetrahydrofuran. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated sample was non-detect for this analyte, the data have been reported.ESM-20 INF (480-78248-3)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-78248-1

Client Sample ID: ESM-20 EFF — Lab Sample ID: 480-78248-1

No Detections.

Client Sample ID: ESM-20 MID — Lab Sample ID: 480-78248-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	19.5		0.050		mg/L	1		6010C	Total/NA
Iron, Dissolved	18.7		0.050		mg/L	1		6010C	Dissolved

Client Sample ID: ESM-20 INF — Lab Sample ID: 480-78248-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trimethylbenzene	43		40		ug/L	40		8260C	Total/NA
Benzene	2000		40		ug/L	40		8260C	Total/NA
Ethylbenzene	360		40		ug/L	40		8260C	Total/NA
Naphthalene	97		40		ug/L	40		8260C	Total/NA
n-Propylbenzene	78		40		ug/L	40		8260C	Total/NA
Toluene	140		40		ug/L	40		8260C	Total/NA
Xylene (total)	350		80		ug/L	40		8260C	Total/NA
Iron	19.5		0.050		mg/L	1		6010C	Total/NA
Iron, Dissolved	19.3		0.050		mg/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: ESM-20 EFF

Lab Sample ID: 480-78248-1

Date Collected: 04/08/15 11:30
Matrix: Water
Date Received: 04/11/15 01:20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		04/14/15 12:00	04/14/15 21:31	1
Lead	ND		0.010		mg/L		04/14/15 12:00	04/14/15 21:31	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	ND		0.050		mg/L		04/13/15 08:20	04/14/15 19:40	1

Client Sample ID: ESM-20 MID

Lab Sample ID: 480-78248-2

Date Collected: 04/08/15 11:35
Matrix: Water
Date Received: 04/11/15 01:20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**19.5**		0.050		mg/L		04/14/15 12:00	04/14/15 21:33	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**18.7**		0.050		mg/L		04/13/15 08:20	04/14/15 19:51	1

Client Sample ID: ESM-20 INF

Lab Sample ID: 480-78248-3

Date Collected: 04/08/15 11:40
Matrix: Water
Date Received: 04/11/15 01:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		40		ug/L			04/19/15 20:20	40
1,1,1-Trichloroethane	ND		40		ug/L			04/19/15 20:20	40
1,1,2,2-Tetrachloroethane	ND		40		ug/L			04/19/15 20:20	40
1,1,2-Trichloroethane	ND		40		ug/L			04/19/15 20:20	40
1,1-Dichloroethane	ND		40		ug/L			04/19/15 20:20	40
1,1-Dichloroethylene	ND		40		ug/L			04/19/15 20:20	40
1,1-Dichloropropene	ND		40		ug/L			04/19/15 20:20	40
1,2,3-Trichlorobenzene	ND		40		ug/L			04/19/15 20:20	40
1,2,3-Trichloropropane	ND		40		ug/L			04/19/15 20:20	40
1,2,4-Trichlorobenzene	ND		40		ug/L			04/19/15 20:20	40
1,2,4-Trimethylbenzene	ND		40		ug/L			04/19/15 20:20	40
1,2-Dichlorobenzene	ND		40		ug/L			04/19/15 20:20	40
1,2-Dichloroethane	ND		40		ug/L			04/19/15 20:20	40
1,2-Dichloropropane	ND		40		ug/L			04/19/15 20:20	40
1,3,5-Trichlorobenzene	ND		40		ug/L			04/19/15 20:20	40
1,3,5-Trimethylbenzene	**43**		40		ug/L			04/19/15 20:20	40
1,3-Dichlorobenzene	ND		40		ug/L			04/19/15 20:20	40
1,4-Dichlorobenzene	ND		40		ug/L			04/19/15 20:20	40
2,2-Dichloropropane	ND		40		ug/L			04/19/15 20:20	40
2-Butanone	ND		400		ug/L			04/19/15 20:20	40
2-Chlorotoluene	ND		40		ug/L			04/19/15 20:20	40
2-Hexanone	ND		200		ug/L			04/19/15 20:20	40
4-Chlorotoluene	ND		40		ug/L			04/19/15 20:20	40
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			04/19/15 20:20	40
Acetone	ND		400		ug/L			04/19/15 20:20	40

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-78248-1

Client Sample ID: ESM-20 INF
Date Collected: 04/08/15 11:40
Date Received: 04/11/15 01:20

Lab Sample ID: 480-78248-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2000**		40		ug/L			04/19/15 20:20	40
Bromobenzene	ND		40		ug/L			04/19/15 20:20	40
Bromochloromethane	ND		40		ug/L			04/19/15 20:20	40
Bromoform	ND		40		ug/L			04/19/15 20:20	40
Bromomethane	ND		40		ug/L			04/19/15 20:20	40
Carbon disulfide	ND		40		ug/L			04/19/15 20:20	40
Carbon tetrachloride	ND		40		ug/L			04/19/15 20:20	40
Chlorobenzene	ND		40		ug/L			04/19/15 20:20	40
Chloroethane	ND		40		ug/L			04/19/15 20:20	40
Chloroform	ND		40		ug/L			04/19/15 20:20	40
Chloromethane	ND		40		ug/L			04/19/15 20:20	40
cis-1,2-Dichloroethene	ND		40		ug/L			04/19/15 20:20	40
cis-1,3-Dichloropropene	ND		40		ug/L			04/19/15 20:20	40
Dibromochloromethane	ND		40		ug/L			04/19/15 20:20	40
Dibromomethane	ND		40		ug/L			04/19/15 20:20	40
Dichlorodifluoromethane	ND		40		ug/L			04/19/15 20:20	40
Diethyl ether	ND		40		ug/L			04/19/15 20:20	40
Diisopropyl ether	ND		40		ug/L			04/19/15 20:20	40
Ethyl tert-butyl ether	ND		40		ug/L			04/19/15 20:20	40
Ethylbenzene	**360**		40		ug/L			04/19/15 20:20	40
Ethylene Dibromide	ND		40		ug/L			04/19/15 20:20	40
Isopropylbenzene	ND		40		ug/L			04/19/15 20:20	40
Methyl tert-butyl ether	ND		40		ug/L			04/19/15 20:20	40
Methylene Chloride	ND		40		ug/L			04/19/15 20:20	40
Naphthalene	**97**		40		ug/L			04/19/15 20:20	40
n-Butylbenzene	ND		40		ug/L			04/19/15 20:20	40
n-Propylbenzene	**78**		40		ug/L			04/19/15 20:20	40
p-Isopropyltoluene	ND		40		ug/L			04/19/15 20:20	40
sec-Butylbenzene	ND		40		ug/L			04/19/15 20:20	40
Styrene	ND		40		ug/L			04/19/15 20:20	40
tert-Butyl alcohol	ND		400		ug/L			04/19/15 20:20	40
tert-Butylbenzene	ND		40		ug/L			04/19/15 20:20	40
tertiary-Amyl methyl ether	ND		40		ug/L			04/19/15 20:20	40
Tetrachloroethylene	ND		40		ug/L			04/19/15 20:20	40
Tetrahydrofuran	ND		200		ug/L			04/19/15 20:20	40
Toluene	**140**		40		ug/L			04/19/15 20:20	40
trans-1,2-Dichloroethene	ND		40		ug/L			04/19/15 20:20	40
trans-1,3-Dichloropropene	ND		40		ug/L			04/19/15 20:20	40
Trichloroethylene	ND		40		ug/L			04/19/15 20:20	40
Trichlorofluoromethane	ND		40		ug/L			04/19/15 20:20	40
Vinyl chloride	ND		40		ug/L			04/19/15 20:20	40
Xylene (total)	**350**		80		ug/L			04/19/15 20:20	40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*66 - 137*		*04/19/15 20:20*	*40*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*04/19/15 20:20*	*40*
Dibromofluoromethane (Surr)	*99*		*60 - 140*		*04/19/15 20:20*	*40*
Toluene-d8 (Surr)	*93*		*71 - 126*		*04/19/15 20:20*	*40*

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-78248-1

Client Sample ID: ESM-20 INF
Date Collected: 04/08/15 11:40
Date Received: 04/11/15 01:20

Lab Sample ID: 480-78248-3
Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	19.5		0.050		mg/L		04/14/15 12:00	04/14/15 21:36	1
Lead	ND		0.010		mg/L		04/14/15 12:00	04/14/15 21:36	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	19.3		0.050		mg/L		04/13/15 08:20	04/14/15 19:54	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-78248-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(60-140)	(71-126)
480-78248-3	ESM-20 INF	93	96	99	93
LCS 480-237148/5	Lab Control Sample	94	92	95	91
MB 480-237148/7	Method Blank	88	92	93	87

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-237148/7
Matrix: Water
Analysis Batch: 237148

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/19/15 13:59	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/19/15 13:59	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/19/15 13:59	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/19/15 13:59	1
1,1-Dichloroethane	ND		1.0		ug/L			04/19/15 13:59	1
1,1-Dichloroethylene	ND		1.0		ug/L			04/19/15 13:59	1
1,1-Dichloropropene	ND		1.0		ug/L			04/19/15 13:59	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/19/15 13:59	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/19/15 13:59	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/19/15 13:59	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/19/15 13:59	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/19/15 13:59	1
1,2-Dichloroethane	ND		1.0		ug/L			04/19/15 13:59	1
1,2-Dichloropropane	ND		1.0		ug/L			04/19/15 13:59	1
1,3,5-Trichlorobenzene	ND		1.0		ug/L			04/19/15 13:59	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/19/15 13:59	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/19/15 13:59	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/19/15 13:59	1
2,2-Dichloropropane	ND		1.0		ug/L			04/19/15 13:59	1
2-Butanone	ND		10		ug/L			04/19/15 13:59	1
2-Chlorotoluene	ND		1.0		ug/L			04/19/15 13:59	1
2-Hexanone	ND		5.0		ug/L			04/19/15 13:59	1
4-Chlorotoluene	ND		1.0		ug/L			04/19/15 13:59	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			04/19/15 13:59	1
Acetone	ND		10		ug/L			04/19/15 13:59	1
Benzene	ND		1.0		ug/L			04/19/15 13:59	1
Bromobenzene	ND		1.0		ug/L			04/19/15 13:59	1
Bromochloromethane	ND		1.0		ug/L			04/19/15 13:59	1
Bromoform	ND		1.0		ug/L			04/19/15 13:59	1
Bromomethane	ND		1.0		ug/L			04/19/15 13:59	1
Carbon disulfide	ND		1.0		ug/L			04/19/15 13:59	1
Carbon tetrachloride	ND		1.0		ug/L			04/19/15 13:59	1
Chlorobenzene	ND		1.0		ug/L			04/19/15 13:59	1
Chloroethane	ND		1.0		ug/L			04/19/15 13:59	1
Chloroform	ND		1.0		ug/L			04/19/15 13:59	1
Chloromethane	ND		1.0		ug/L			04/19/15 13:59	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/19/15 13:59	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/19/15 13:59	1
Dibromochloromethane	ND		1.0		ug/L			04/19/15 13:59	1
Dibromomethane	ND		1.0		ug/L			04/19/15 13:59	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/19/15 13:59	1
Diethyl ether	ND		1.0		ug/L			04/19/15 13:59	1
Diisopropyl ether	ND		1.0		ug/L			04/19/15 13:59	1
Ethyl tert-butyl ether	ND		1.0		ug/L			04/19/15 13:59	1
Ethylbenzene	ND		1.0		ug/L			04/19/15 13:59	1
Ethylene Dibromide	ND		1.0		ug/L			04/19/15 13:59	1
Isopropylbenzene	ND		1.0		ug/L			04/19/15 13:59	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/19/15 13:59	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-237148/7
Matrix: Water
Analysis Batch: 237148

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		1.0		ug/L			04/19/15 13:59	1
Naphthalene	ND		1.0		ug/L			04/19/15 13:59	1
n-Butylbenzene	ND		1.0		ug/L			04/19/15 13:59	1
n-Propylbenzene	ND		1.0		ug/L			04/19/15 13:59	1
p-Isopropyltoluene	ND		1.0		ug/L			04/19/15 13:59	1
sec-Butylbenzene	ND		1.0		ug/L			04/19/15 13:59	1
Styrene	ND		1.0		ug/L			04/19/15 13:59	1
tert-Butyl alcohol	ND		10		ug/L			04/19/15 13:59	1
tert-Butylbenzene	ND		1.0		ug/L			04/19/15 13:59	1
tertiary-Amyl methyl ether	ND		1.0		ug/L			04/19/15 13:59	1
Tetrachloroethylene	ND		1.0		ug/L			04/19/15 13:59	1
Tetrahydrofuran	ND		5.0		ug/L			04/19/15 13:59	1
Toluene	ND		1.0		ug/L			04/19/15 13:59	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/19/15 13:59	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/19/15 13:59	1
Trichloroethylene	ND		1.0		ug/L			04/19/15 13:59	1
Trichlorofluoromethane	ND		1.0		ug/L			04/19/15 13:59	1
Vinyl chloride	ND		1.0		ug/L			04/19/15 13:59	1
Xylene (total)	ND		2.0		ug/L			04/19/15 13:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*66 - 137*		*04/19/15 13:59*	*1*
4-Bromofluorobenzene (Surr)	*92*		*73 - 120*		*04/19/15 13:59*	*1*
Dibromofluoromethane (Surr)	*93*		*60 - 140*		*04/19/15 13:59*	*1*
Toluene-d8 (Surr)	*87*		*71 - 126*		*04/19/15 13:59*	*1*

Lab Sample ID: LCS 480-237148/5
Matrix: Water
Analysis Batch: 237148

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	22.8		ug/L		91	76 - 122
1,1,1-Trichloroethane	25.0	22.6		ug/L		90	73 - 126
1,1,2,2-Tetrachloroethane	25.0	20.2		ug/L		81	70 - 126
1,1,2-Trichloroethane	25.0	21.0		ug/L		84	76 - 122
1,1-Dichloroethane	25.0	22.5		ug/L		90	71 - 129
1,1-Dichloroethylene	25.0	21.7		ug/L		87	58 - 121
1,1-Dichloropropene	25.0	21.9		ug/L		88	72 - 122
1,2,3-Trichlorobenzene	25.0	22.8		ug/L		91	63 - 138
1,2,3-Trichloropropane	25.0	21.9		ug/L		88	68 - 131
1,2,4-Trichlorobenzene	25.0	22.8		ug/L		91	70 - 122
1,2,4-Trimethylbenzene	25.0	21.5		ug/L		86	76 - 121
1,2-Dichlorobenzene	25.0	21.8		ug/L		87	80 - 124
1,2-Dichloroethane	25.0	21.1		ug/L		85	75 - 127
1,2-Dichloropropane	25.0	22.7		ug/L		91	76 - 120
1,3,5-Trichlorobenzene	25.0	23.6		ug/L		94	67 - 141
1,3,5-Trimethylbenzene	25.0	21.6		ug/L		86	77 - 121
1,3-Dichlorobenzene	25.0	22.2		ug/L		89	77 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-237148/5
Matrix: Water
Analysis Batch: 237148

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	25.0	21.4		ug/L		86	75 - 120
2,2-Dichloropropane	25.0	23.0		ug/L		92	63 - 136
2-Butanone	125	79.7		ug/L		64	57 - 140
2-Chlorotoluene	25.0	22.0		ug/L		88	76 - 121
2-Hexanone	125	91.6		ug/L		73	65 - 127
4-Chlorotoluene	25.0	23.2		ug/L		93	77 - 121
4-Methyl-2-pentanone (MIBK)	125	94.4		ug/L		76	71 - 125
Acetone	125	75.6		ug/L		60	56 - 142
Benzene	25.0	21.8		ug/L		87	71 - 124
Bromobenzene	25.0	22.5		ug/L		90	78 - 120
Bromochloromethane	25.0	23.0		ug/L		92	72 - 130
Bromoform	25.0	23.5		ug/L		94	52 - 132
Bromomethane	25.0	25.1		ug/L		100	55 - 144
Carbon disulfide	25.0	22.1		ug/L		89	59 - 134
Carbon tetrachloride	25.0	23.0		ug/L		92	72 - 134
Chlorobenzene	25.0	22.0		ug/L		88	72 - 120
Chloroethane	25.0	20.7		ug/L		83	69 - 136
Chloroform	25.0	21.9		ug/L		88	73 - 127
Chloromethane	25.0	22.1		ug/L		89	68 - 124
cis-1,2-Dichloroethene	25.0	22.9		ug/L		92	74 - 124
cis-1,3-Dichloropropene	25.0	23.8		ug/L		95	74 - 124
Dibromochloromethane	25.0	23.3		ug/L		93	75 - 125
Dibromomethane	25.0	22.7		ug/L		91	76 - 127
Dichlorodifluoromethane	25.0	23.9		ug/L		96	59 - 135
Diethyl ether	25.0	20.6		ug/L		82	76 - 123
Diisopropyl ether	25.0	22.1		ug/L		88	75 - 125
Ethyl tert-butyl ether	25.0	22.3		ug/L		89	75 - 125
Ethylbenzene	25.0	21.3		ug/L		85	77 - 123
Ethylene Dibromide	25.0	22.2		ug/L		89	77 - 120
Isopropylbenzene	25.0	21.4		ug/L		85	77 - 122
Methyl tert-butyl ether	25.0	22.6		ug/L		90	64 - 127
Methylene Chloride	25.0	21.9		ug/L		88	57 - 132
Naphthalene	25.0	21.5		ug/L		86	66 - 125
n-Butylbenzene	25.0	21.2		ug/L		85	71 - 128
n-Propylbenzene	25.0	21.1		ug/L		84	75 - 127
p-Isopropyltoluene	25.0	21.8		ug/L		87	73 - 120
sec-Butylbenzene	25.0	20.8		ug/L		83	74 - 127
Styrene	25.0	21.9		ug/L		88	70 - 130
tert-Butyl alcohol	250	212		ug/L		85	75 - 125
tert-Butylbenzene	25.0	21.3		ug/L		85	75 - 123
tertiary-Amyl methyl ether	25.0	22.0		ug/L		88	75 - 125
Tetrachloroethylene	25.0	22.8		ug/L		91	74 - 122
Tetrahydrofuran	50.0	50.4		ug/L		101	62 - 132
Toluene	25.0	20.8		ug/L		83	80 - 122
trans-1,2-Dichloroethene	25.0	22.5		ug/L		90	73 - 127
trans-1,3-Dichloropropene	25.0	22.7		ug/L		91	72 - 123
Trichloroethylene	25.0	22.3		ug/L		89	74 - 123
Trichlorofluoromethane	25.0	21.4		ug/L		86	62 - 152

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-237148/5
Matrix: Water
Analysis Batch: 237148

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	25.0	21.2		ug/L		85	65 - 133
Xylene (total)	50.0	43.7		ug/L		87	76 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*66 - 137*
4-Bromofluorobenzene (Surr)	*92*		*73 - 120*
Dibromofluoromethane (Surr)	*95*		*60 - 140*
Toluene-d8 (Surr)	*91*		*71 - 126*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-235630/1-A
Matrix: Water
Analysis Batch: 236218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 235630

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	ND		0.050		mg/L		04/13/15 08:20	04/14/15 18:30	1

Lab Sample ID: LCS 480-235630/2-A
Matrix: Water
Analysis Batch: 236218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 235630

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron, Dissolved	10.0	9.96		mg/L		100	80 - 120

Lab Sample ID: MB 480-235912/1-A
Matrix: Water
Analysis Batch: 236220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 235912

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		04/14/15 12:00	04/14/15 20:24	1
Lead	ND		0.010		mg/L		04/14/15 12:00	04/14/15 20:24	1

Lab Sample ID: LCS 480-235912/2-A
Matrix: Water
Analysis Batch: 236220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 235912

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.72		mg/L		97	80 - 120
Lead	0.200	0.200		mg/L		100	80 - 120

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-78248-1

GC/MS VOA

Analysis Batch: 237148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-78248-3	ESM-20 INF	Total/NA	Water	8260C	
LCS 480-237148/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-237148/7	Method Blank	Total/NA	Water	8260C	

Metals

Prep Batch: 235630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-78248-1	ESM-20 EFF	Dissolved	Water	3005A	
480-78248-2	ESM-20 MID	Dissolved	Water	3005A	
480-78248-3	ESM-20 INF	Dissolved	Water	3005A	
LCS 480-235630/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-235630/1-A	Method Blank	Total/NA	Water	3005A	

Prep Batch: 235912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-78248-1	ESM-20 EFF	Total/NA	Water	3005A	
480-78248-2	ESM-20 MID	Total/NA	Water	3005A	
480-78248-3	ESM-20 INF	Total/NA	Water	3005A	
LCS 480-235912/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-235912/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 236218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-78248-1	ESM-20 EFF	Dissolved	Water	6010C	235630
480-78248-2	ESM-20 MID	Dissolved	Water	6010C	235630
480-78248-3	ESM-20 INF	Dissolved	Water	6010C	235630
LCS 480-235630/2-A	Lab Control Sample	Total/NA	Water	6010C	235630
MB 480-235630/1-A	Method Blank	Total/NA	Water	6010C	235630

Analysis Batch: 236220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-78248-1	ESM-20 EFF	Total/NA	Water	6010C	235912
480-78248-2	ESM-20 MID	Total/NA	Water	6010C	235912
480-78248-3	ESM-20 INF	Total/NA	Water	6010C	235912
LCS 480-235912/2-A	Lab Control Sample	Total/NA	Water	6010C	235912
MB 480-235912/1-A	Method Blank	Total/NA	Water	6010C	235912

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-78248-1

Client Sample ID: ESM-20 EFF

Lab Sample ID: 480-78248-1

Date Collected: 04/08/15 11:30

Matrix: Water

Date Received: 04/11/15 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			235630	04/13/15 08:20	TAS	TAL BUF
Dissolved	Analysis	6010C		1	236218	04/14/15 19:40	LMH	TAL BUF
Total/NA	Prep	3005A			235912	04/14/15 12:00	TAS	TAL BUF
Total/NA	Analysis	6010C		1	236220	04/14/15 21:31	LMH	TAL BUF

Client Sample ID: ESM-20 MID

Lab Sample ID: 480-78248-2

Date Collected: 04/08/15 11:35

Matrix: Water

Date Received: 04/11/15 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			235630	04/13/15 08:20	TAS	TAL BUF
Dissolved	Analysis	6010C		1	236218	04/14/15 19:51	LMH	TAL BUF
Total/NA	Prep	3005A			235912	04/14/15 12:00	TAS	TAL BUF
Total/NA	Analysis	6010C		1	236220	04/14/15 21:33	LMH	TAL BUF

Client Sample ID: ESM-20 INF

Lab Sample ID: 480-78248-3

Date Collected: 04/08/15 11:40

Matrix: Water

Date Received: 04/11/15 01:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		40	237148	04/19/15 20:20	CDC	TAL BUF
Dissolved	Prep	3005A			235630	04/13/15 08:20	TAS	TAL BUF
Dissolved	Analysis	6010C		1	236218	04/14/15 19:54	LMH	TAL BUF
Total/NA	Prep	3005A			235912	04/14/15 12:00	TAS	TAL BUF
Total/NA	Analysis	6010C		1	236220	04/14/15 21:36	LMH	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-78248-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New Hampshire	NELAP	1	2337	11-17-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260C		Water	1,2-Dichloropropane
8260C		Water	1,3,5-Trichlorobenzene
8260C		Water	2,2-Dichloropropane
8260C		Water	Bromobenzene
8260C		Water	Chloromethane
8260C		Water	cis-1,2-Dichloroethene
8260C		Water	Diethyl ether
8260C		Water	Diisopropyl ether
8260C		Water	Ethyl tert-butyl ether
8260C		Water	Methylene Chloride
8260C		Water	tert-Butyl alcohol
8260C		Water	Tetrachloroethylene
8260C		Water	Tetrahydrofuran

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-78248-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-78248-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-78248-1	ESM-20 EFF	Water	04/08/15 11:30	04/11/15 01:20
480-78248-2	ESM-20 MID	Water	04/08/15 11:35	04/11/15 01:20
480-78248-3	ESM-20 INF	Water	04/08/15 11:40	04/11/15 01:20

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☑

Tes THE LEAD

480-78248 Chain of Custody

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Environmental Strategies + Management	Angela Boyd		276553
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
273 W. Main St.	508-226-1800		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Norton / MA / 02766		Paul McMahon/Devo	
Project Name and Location (State)	**Carrier/Waybill Number**		
GSH Alkenstown, NH			
Contract/Purchase Order/Quote No.			
CRA-GSH contract. SSOW ENV757_53559 Part 1 INV-			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: Total Iron	Dissolved Iron	VOC 8260C	Special Instructions/ Conditions of Receipt
ESM-20 Eff	4/8/15	11:30		X					2				X	X		Dissolved Iron
ESM-20 Mid	4/8/15	11:35		X					2				X	X		samples have been
ESM-20 Inf	4/8/15	11:40		X					2	3			X	X	X	field filtered
																NHDES full
																list of VOCs

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☑ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1.		4/8/15	18:00	Angela Boyd	4/8/15	18:00
2.	Angela Boyd	4/10/15	13:15		4/10/15	1315
3.		4/10/15			11 APR 15	0120

Comments

1.0 #1

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-78248-1

Login Number: 78248
List Number: 1
Creator: Janish, Carl M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	esm
Samples received within 48 hours of sampling.	False	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

ES&M QAQC Review Log

Lab	Project Number	Sample Date	Matrix	CAM Form Included?	Lab Presumptive Certainty?	QC Performance Standards Met?	Reporting Limits Achieved?	All Analytes Reported?	Data Usability Status
Test America	480-82925	6/24/2015	GW	No	NA	NA	NA	NA	Usable

Sample ID	Date	Lab ID	Matrix	Analysis
ESM-20	6/24/2015	480-82925-1	GW	TSS, TPH

New Hampshire Site - CAM does not apply

All QAQC data, including method blank, laboratory control sample (LCS) and matrix spike results were reviewed. This report was deemed usable by Angela Boyd on 7/14/15.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-82925-1
Client Project/Site: ENV757, Former Bob's Citgo

For:
GHD Services Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

Attn: Mr. Paul McMahon

Authorized for release by:
7/13/2015 10:17:32 AM
Rebecca Jones, Project Management Assistant I
rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I
(716)504-9874
melissa.deyo@testamericainc.com

Table of Contents

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-82925-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-82925-1

Job ID: 480-82925-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-82925-1

Receipt
The sample was received on 6/26/2015 2:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 0.8° C.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-82925-1

Client Sample ID: ESM-20

Lab Sample ID: 480-82925-1

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	117		4.0		mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Client: GHD Services Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-82925-1

Client Sample ID: ESM-20
Date Collected: 06/24/15 14:00
Date Received: 06/26/15 02:00

Lab Sample ID: 480-82925-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (SGT-HEM)	ND	F1	4.9		mg/L		07/09/15 10:01	07/09/15 11:32	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**117**		4.0		mg/L			06/29/15 12:01	1

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 480-252393/1-A
Matrix: Water
Analysis Batch: 252399

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 252393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (SGT-HEM)	ND		5.0		mg/L		07/09/15 10:01	07/09/15 11:32	1

Lab Sample ID: LCS 480-252393/2-A
Matrix: Water
Analysis Batch: 252399

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 252393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Petroleum Hydrocarbons (SGT-HEM)	20.0	15.90		mg/L		80	64 - 132

Lab Sample ID: 480-82925-1 MS
Matrix: Water
Analysis Batch: 252399

Client Sample ID: ESM-20
Prep Type: Total/NA
Prep Batch: 252393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Petroleum Hydrocarbons (SGT-HEM)	ND	F1	9.80	7.35	F1	mg/L		52	64 - 132

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 480-250732/1
Matrix: Water
Analysis Batch: 250732

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0		mg/L			06/29/15 12:01	1

Lab Sample ID: LCS 480-250732/2
Matrix: Water
Analysis Batch: 250732

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	261	261.6		mg/L		100	88 - 110

QC Association Summary

Client: GHD Services Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-82925-1

General Chemistry

Analysis Batch: 250732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82925-1	ESM-20	Total/NA	Water	SM 2540D	
LCS 480-250732/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 480-250732/1	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 252393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82925-1	ESM-20	Total/NA	Water	1664A	
480-82925-1 MS	ESM-20	Total/NA	Water	1664A	
LCS 480-252393/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 480-252393/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 252399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82925-1	ESM-20	Total/NA	Water	1664A	252393
480-82925-1 MS	ESM-20	Total/NA	Water	1664A	252393
LCS 480-252393/2-A	Lab Control Sample	Total/NA	Water	1664A	252393
MB 480-252393/1-A	Method Blank	Total/NA	Water	1664A	252393

Lab Chronicle

Client: GHD Services Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-82925-1

Client Sample ID: ESM-20
Date Collected: 06/24/15 14:00
Date Received: 06/26/15 02:00

Lab Sample ID: 480-82925-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1664A			252393	07/09/15 10:01	LAW	TAL BUF
Total/NA	Analysis	1664A		1	252399	07/09/15 11:32	LAW	TAL BUF
Total/NA	Analysis	SM 2540D		1	250732	06/29/15 12:01	EKB	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: GHD Services Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-82925-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New Hampshire	NELAP	1	2337	11-17-15

Method Summary

Client: GHD Services Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-82925-1

Method	Method Description	Protocol	Laboratory
1664A	HEM and SGT-HEM	1664A	TAL BUF
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL BUF

Protocol References:

1664A = EPA-821-98-002

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: GHD Services Inc.
Project/Site: ENV757, Former Bob's Citgo

TestAmerica Job ID: 480-82925-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-82925-1	ESM-20	Water	06/24/15 14:00	06/26/15 02:00

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☑

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
ES+M	Angela Boyd		286720
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
273 West Main St.	(508) 226-1800		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	**Analysis (Attach list if more space is needed)**
Norton / MA / 02766	Angela Boyd	Melissa Deyo	
Project Name and Location (State)	**Carrier/Waybill Number**		
GSH Allenstown			
Contract/Purchase Order/Quote No.			
GSH CRA SSOW ENV-757			

480-82925 Chain of Custody

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	TSS	TPH
ESM-20	6/24/15	14:00		X			1	2					X	X

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☑ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Angela Boyd	6/24/15	4:00	1. Received By:	6/24/15	4:00
2. Relinquished By:	6/25/15	12:40	2. Received By:	6-25-15	1210
3. Relinquished By:	6-25-15	1710	3. Received By: FED EX 2 Day 0200		

Comments

0.8

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 480-82925-1

Login Number: 82925
List Number: 1
Creator: Williams, Christopher S

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ESM
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	