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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

MAY 23 2014

Mario Manchese
Project Manager
W.L. French
3 Survey Circle
Billerica, MA 01862

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Joseph M. Smith Community Health Center site located at 1420 Soldiers Field Road, Brighton, MA 02134, Suffolk County; Authorization # MAG910621

Dear Mr. Manchese:

Based on the review of a Notice of Intent (NOI) submitted by Russell Parker from GZA Environmental, Inc. on behalf 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 exceeded Appendix III limits. The checklist also includes other parameters for which your laboratory reports indicated there was insufficient sensitivity to detect these parameters at the minimum levels established in Appendix VI of the RGP.

Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on a dilution factor range (DFR), due to the ample dilution at the point of discharge (131) the DFR applicable for this pollutant is within a dilution range greater than one hundred (>100) established in the RGP. (See the

RGP Appendix IV for Massachusetts facilities). Therefore, the limit for antimony of 141 ug/L, arsenic of 540 ug/L, hexavalent chromium of 1,710 ug/L, lead of 132 ug/L, zinc of 1,480ug/L and iron of 5,000 ug/L, shall not be exceeded in the discharge.

Finally, please note the checklist of pollutants attached to this authorization is subject to a recertification if the operations at the site result in a discharge lasting longer than six months. A recertification can be submitted to EPA within six (6) to twelve (12) months of operations in accordance with the 2010 RGP regulations.

This general permit and authorization to discharge will expire on September 9, 2015. You have reported this project will terminate on November 1, 2014. You are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 30 days of project completion.

Thank you in advance for your cooperation in this matter. Please contact Victor Alvarez at 617-918-1572 or Alvarez.Victor@epa.gov, if you have any questions.

Sincerely,

Thelma Murphy

Thelma Murphy, Chief
Storm Water and Construction
Permits Section

Enclosure

cc: Robert Kubit, MassDEP
Paul Canavan, BWSC
Russell Parkman, GZA

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910621**
Authorization Issued:	May, 2014
Facility/Site Name:	Joseph Smith Community Health Center
Facility/Site Address:	1420 Soldier Field Road, Brighton, MA 02134
	Email address of owner: ebrown@jmschc.org
Legal Name of Operator:	W.L. French
Operator contact name, title, and Address:	Mario Manchese, Project Manager, 3 Survey Circle, Billerica, MA 01862
	Email:mmarchese@wifrench.com
Estimated date of the site's Completion:	November 1, 2014
Category and Sub-Category:	Category III- Contaminated Construction Dewatering. Sub-category B. Known Contaminated sites
RGP Termination Date:	September 10, 2015
Receiving Water:	Charles River

Monitoring & Limits are applicable if checked. All samples are to be collected as grab samples

	Parameter	**Effluent Limit/Method#/ML** (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
✓	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/L) **, 50 mg/L for hydrostatic testing ** 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 /50.0 ug/L for hydrostatic testing only/ 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	100 ug/L/ Me#8260C/ ML 2ug/L

	Parameter	Effluent Limit/Method#/ML (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	(BTEX) [4]	
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l/Me#8260C/ML 10ug/L
	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

	Parameter	Effluent Limit/Method#/ML (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	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
	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 parameter	Total Recoverable MA/Metal Limit H [10] = 50 mg/l CaCO3, Units = ug/l [11/12] Freshwater Limts	Minimum level=ML	
	39. Antimony	5.6	ML	10
√	40. Arsenic **	500	ML	20
√	41. Cadmium **	20	ML	10
	42. Chromium III (trivalent) **	48.8	ML	15
	43. Chromium VI (hexavalent) **	11.4	ML	10
√	44. Copper **	520	ML	15
√	45. Lead **	132	ML	20
	46. Mercury **	0.9	ML	02
√	47. Nickel **	2,380	ML	20
	48. Selenium **	5	ML	20
	49. Silver	1.2	ML	10
√	50. Zinc **	1,480	ML	15
√	51. Iron	5,000	ML	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[13]
	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.3; 1/Month/Grab[13]
	56. pH Range for Class B Waters in NH	6.5-8; 1/Month/Grab[13]
	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab[14]
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab[14]
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab[14]
	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab[14]
	61. Maximum Change in Temperature in MA – Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab[14]
	62. Maximum Change in Temperature in MA – Any Class SA water body - Coastal	1.5°F; 1/Month/Grab[14]
	63. Maximum Change in Temperature in MA – Any Class SB water body - July to September	1.5°F; 1/Month/Grab[14]
	64. Maximum Change in Temperature in MA –Any Class SB water body - October to June	4°F; 1/Month/Grab[14]

Footnotes:

[1] Although the maximum values for TRC are 11ug/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] For a Dilution Factor (DF) from 1 to 5, metals limits are calculated using DF times the base limit for the metal. See Appendix IV. For example, iron limits are calculated using DF x 1,000ug/L (the iron base limit). Therefore DF is 1.5, the iron limit will be 1,500 ug/L; DF 2, then iron limit =1,000 x 2 =2,000 ug/L., etc. not to exceed the DF=5.
[12] 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).
[13] pH sampling for compliance with permit limits may be performed using field methods as provided for in EPA test Method 150.1.
[14] Temperature sampling per Method 170.1

GZA
GeoEnvironmental, Inc.

Engineers and
Scientists

May 12, 2014
File No. 18.0170852.10

Mr. Victor Alvarez
United States Environmental Protection Agency – Region 1
5 Post Office Square, Mail Code OEP06-4
Boston, Massachusetts, 02109-3912

372 Merrimac Street
Newburyport
Massachusetts 01950
781-278-4800 Phone
978-465-2640 FAX
www.gza.com

Re: Submittal of Notice of Intent (NOI)
Remedial General Permit
Joseph Smith, 1420 Soldiers Field Road
Brighton, Massachusetts

Dear Mr. Alvarez:

On behalf of our client, Joseph Smith Community Health Center, GZA GeoEnvironmental, Inc. (GZA) is submitting the attached Notice of Intent (NOI) form (Attachment 1) for the Remedial General Permit (RGP) for the Joseph Smith Community Health Center project (the Site) located in Brighton, Massachusetts.

BACKGROUND

The Site is located between Western Avenue and Soldiers Field Road in Brighton, Massachusetts. The subject property was most recently occupied by a Massachusetts State Police barracks and a Department of Conservation and Recreation (DCR) vehicle maintenance facility. A site locus plan is included as Figure 1 (Attachment 2), and a site plan is shown on Figure 2 (Attachment 3). The Owner is planning to construct a new medical facility on land granted from the Commonwealth of Massachusetts. The site is currently listed as an MCP disposal site under two open Release Tracking Numbers (RTNs). RTN 3-28635 was issued for a spill from a 10,000-gallon No. 2 fuel oil underground storage tank (UST) removed in 1998. This UST was located along the building wall between the salt storage shed and the southeast corner of the main Site building. RTN 3-28636 was assigned to the property for an apparently separate release of chlorinated solvents found in soil and groundwater at the Site; this release appears to have originated on the southeast portion of the 1420 Soldiers Field Road property.

It is anticipated that construction dewatering will be required to control groundwater during foundation excavation. Foundation excavation is anticipated to extend about 1 to 3 feet below the existing groundwater level. Excavation dewatering will be necessary while these excavations are open.

The proposed discharge point is the catch basin located in the northwestern corner of the 1420 Soldiers Field Road property. The approximate location of the catch basin is shown in Figure 2 (Attachment 3). This catch basin leads to storm drain lines owned by the Department of Conservation and Recreation (DCR). According to utility maps obtained

from the DCR, the storm drain lines have been determined to ultimately outlet into the Charles River as shown in Figure 3 (Attachment 4).

Dewatering will be accomplished using submersible pumps which will discharge to a frac tank. Sedimentation tank specifications and a schematic are attached in Figure 4 (Attachment 5). The tank will be accessible for maintenance, monitoring, and sampling purposes.

The sedimentation tank will hold 20,000 gallons. The tank size was based on an assumed maximum pumping rate of 50 gallons per minute (gpm). The actual pumping rate may vary due to the size and depth of well/sumps and hydrogeologic characteristics of the soil/fill material. In addition to the sedimentation tank, water will be pumped through a bag filters and activated carbon units prior to discharge. The bag filters will be replaced periodically and the tank will be cleaned out when sediments accumulate to a depth equal to one-quarter of the liquid level. A flow meter will be installed so that the discharge quantity can be observed.

NOTICE OF INTENT

This NOI has included a review of literature pertaining to Areas of Critical Environmental Concern (ACEC), Endangered Species Act (ESA), and the National Historic Preservation Act (NHPA), as documented below:

- Review of Appendix I "Areas of Critical Environmental Concern" (June 2009) found that the Site does not discharge to an ACEC.
- Review of Appendix II "Federally Listed Endangered and Threatened Species in Massachusetts" (July 2008) found that there are no listed species in the Allston/ Brighton neighborhood of the City of Boston, Massachusetts.
- Review of the Massachusetts Geographic Information Systems (MassGIS) DEP Priority Resources Map of Allston shows that there are no ACECs and no habitats of Species of Special Concern or Threatened or Endangered Species within 500 feet of the subject site. Therefore, permit eligibility meets "Criterion A." As shown on the map generated by the MassGIS online viewer, which can be found in Attachment 6, no ACECs or Estimated Habitats of Rare Wildlife areas are located within a half mile downstream of the discharge location.
- Review of the New England Field Office Division of Fisheries and Wildlife online database identified no threatened or endangered species at the point of discharge. Additionally, National Oceanic and Atmospheric Administration (NOAA) was contacted for information regarding oceanic fisheries and their response (Attachment 7) states that no listed species will be affected by the discharges into the Charles River.
- An electronic review of the Massachusetts Cultural Resource Information System database, made available through Massachusetts Historical Commission, found one listing for a historical building, Metropolitan District Commission Police Station, on the Site. The police station was decommissioned in 2013 and the building is currently undergoing demolition in preparation for construction of the Joseph Smith Community Health Center project. Additionally, the Charles River Speedway Buildings located adjacent to the Site are also listed as historical buildings. The documentation of this review can be found in Attachment 8. The

water generated during the excavation for the new building foundation will be treated on-Site and then pumped directly into a catch basin located on-Site. The historical properties adjacent to the Site will not be affected by the discharge and, therefore, permit eligibility meets "Criterion 2."

- Laboratory analytical results shown in Part 3 of Attachment 1 are included as Attachment 9. Groundwater was tested on February 3, 2014. Groundwater samples were taken from TP-8, which is located to the east of the existing electrical shed within the footprint of the foundation area anticipated to require dewatering. It should be noted that a few of the results were not reported to the required minimum level (ML) of the test method. However, we do not have reason to believe these parameters are present in the groundwater based on historical use. The only detected analytes which exceeded the effluent limits listed in Appendix III were arsenic, cadmium and copper. A dilution factor was calculated for the discharge point (Attachment 10) and used to compare to the corresponding effluent limits in Appendix IV. None of the analytes exceeded the limits set in Appendix IV.

Please do not hesitate to contact the undersigned at (617) 963-1014 if you have any questions or require further information.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Russell Parkman, P.E.
Senior Project Manager

Lawrence Feldman
Consultant/Reviewer

Frank Vetere, LSP, P.E.
Associate Principal

Attachments: Attachment 1: NOI Form
Attachment 2: Figure 1 – Site Locus Map
Attachment 3: Figure 2 – Site Plan
Attachment 4: Figure 3 – Storm Drain Outfall Location
Attachment 5: Figure 4 – Process Flow Diagram
Attachment 6: MassGIS DEP Priority Resources Map
Attachment 7: Correspondence with NOAA Fisheries Service
Attachment 8: MHC Report
Attachment 9: Laboratory Analytical Results
Attachment 10: Dilution Factor Calculation

cc: MassDEP – Northeastern Region

ATTACHMENT 1

NOI FORM

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:** Joseph M. Smith Community Health		**Facility/site** mailing address:		
Location of **facility/site:** longitude: -71.14 latitude: 42.36	Facility SIC code(s):	Street: 1420 Soldiers Field Road		
b) Name of **facility/site owner:**		Town: Brighton		
Email address of facility/site owner: ebrowne@jmschc.org		State: MA	Zip: 02134	County:
Telephone no. of facility/site **owner:** 617-208-1511				
Fax no. of facility/site **owner:**		**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ◉ 4. Other ○ if so, describe:		
Address of **owner** (if different from site):				
Street: 287 Western Avenue,				
Town: Allston,	State: MA	Zip: 02134	County:	
c) Legal name of **operator:**	**Operator** telephone no: 978 663 2623			
W.L. French	**Operator** fax no.: 978 663 0229	**Operator** email: mmarchese@wlfrench.com		
Operator contact name and title: Mario Marchese - Project Manager				
Address of **operator** (if different from owner):	Street: 3 Survey Circle			
Town: Billerica	State: MA	Zip: 01862	County:	

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:
2. permit or license # assigned:
3. state agency contact information: name, location, and telephone number:

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:

Temporary construction dewatering for a building foundation

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) 0.01 Is average flow a design value or estimate? estimate

3) Latitude and longitude of each discharge within 100 feet:

pt.1: lat	42.3626	long	-71.1445	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 6/1/2014 end 11/1/2014

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).

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	2540D	5000	<5000			
2. Total Residual Chlorine (TRC)		☒	☐	1	Grab	4500-Cl E	10.0	<10			
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	1	Grab	1664A	5000	<5000			
4. Cyanide (CN)	57125	☒	☐	1	Grab	4500 CN CE	5.0	<5			
5. Benzene (B)	71432	☒	☐	1	Grab	8260B	2.0	<1.0			
6. Toluene (T)	108883	☒	☐	1	Grab	8260B	2.0	<1.0			
7. Ethylbenzene (E)	100414	☒	☐	1	Grab	8260B	2.0	<1.0			
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐	1	Grab	8260B	4.0	<1.0			
9. Total BTEX [2]	n/a	☒	☐			CALC	2.0	<1.0			
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☒	☐	1	Grab	504.1	0.01	<0.015			
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐	1	Grab	8260B	10.0	<1.0			
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	1	Grab	8260B	10.0	<25.0			

* 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	8260B	10.0	<1.0			
14. Naphthalene	91203	☒	☐	1	Grab	8260B	2.0	<1.0			
15. Carbon Tetrachloride	56235	☒	☐	1	Grab	8260B	5.0	<1.0			
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	1	Grab	8260B	5.0	<1.0			
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	1	Grab	8260B	5.0	<1.0			
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	1	Grab	8260B	5.0	<1.0			
18a. Total dichlorobenzene		☒	☐			CALC		<1.0			
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	1	Grab	8260B	5.0	<1.0			
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	1	Grab	8260B	5.0	<1.0			
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	1	Grab	8260B	5.0	<1.0			
22. cis-1,2 Dichloroethene (DCE)	156592	☒	☐	1	Grab	8260B	5.0	<1.0			
23. Methylene Chloride	75092	☒	☐	1	Grab	8260B	5.0	<2.0			
24. Tetrachloroethene (PCE)	127184	☒	☐	1	Grab	8260B	5.0	<1.0			
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	1	Grab	8260B	5.0	<1.0			
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	1	Grab	8260B	5.0	<1.0			
27. Trichloroethene (TCE)	79016	☒	☐	1	Grab	8260B	5.0	<1.0			

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	☒	☐	1	Grab	8260B	5.0	<1.0			
29. Acetone	67641	☐	☒	1	Grab	8260B	50.0	14.7			
30. 1,4 Dioxane	123911	☐	☒	1	Grab	8270D SIM	5.0	0.3			
31. Total Phenols	108952	☒	☐	1	Grab	420.1	2.0	<100			
32. Pentachlorophenol (PCP)	87865	☒	☐	1	Grab	8270C SIM	5.0	<0.84			
33. Total Phthalates (Phthalate esters) [4]		☒	☐	1	Grab	8270C SIM		<2.34			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	1	Grab	8270C SIM	5.0	<2.34			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐								
a. Benzo(a) Anthracene	56553	☒	☐	1	Grab	8270C SIM	5.0	<0.05			
b. Benzo(a) Pyrene	50328	☒	☐	1	Grab	8270C SIM	5.0	<0.05			
c. Benzo(b)Fluoranthene	205992	☒	☐	1	Grab	8270C SIM	5.0	<0.05			
d. Benzo(k)Fluoranthene	207089	☒	☐	1	Grab	8270C SIM	5.0	<0.05			
e. Chrysene	21801	☒	☐	1	Grab	8270C SIM	5.0	<0.05			
f. Dibenzo(a,h)anthracene	53703	☒	☐	1	Grab	8270C SIM	5.0	<0.05			
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	1	Grab	8270C SIM	5.0	<0.05			
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	☒	☐	1	Grab	8270C SIM	5.0	<0.19			
i. Acenaphthylene	208968	☒	☐	1	Grab	8270C SIM	5.0	<0.19			
j. Anthracene	120127	☒	☐	1	Grab	8270C SIM	5.0	<0.19			
k. Benzo(ghi) Perylene	191242	☒	☐	1	Grab	8270C SIM	5.0	<0.19			
l. Fluoranthene	206440	☒	☐	1	Grab	8270C SIM	5.0	<0.19			
m. Fluorene	86737	☒	☐	1	Grab	8270C SIM	5.0	<0.19			
n. Naphthalene	91203	☐	☒	1	Grab	8270C SIM	5.0	0.27			
o. Phenanthrene	85018	☒	☐	1	Grab	8270C SIM	5.0	<0.19			
p. Pyrene	129000	☒	☐	1	Grab	8270C SIM	5.0	<0.19			
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	1	Grab	8082A	0.5	<0.09			
38. Chloride	16887006	☐	☒	1	Grab	300.0	100	2200000			
39. Antimony	7440360	☒	☐	1	Grab	6020A	0.5	<0.4			
40. Arsenic	7440382	☐	☒	1	Grab	6020A	1.0	25.7			
41. Cadmium	7440439	☐	☒	1	Grab	6020A	0.2	1.1			
42. Chromium III (trivalent)	16065831	☒	☐	1	Grab	Calc		<10			
43. Chromium VI (hexavalent)	18540299	☒	☐	1	Grab	7196A	10.0	<10			
44. Copper	7440508	☐	☒	1	Grab	6020A	0.5	18.6			
45. Lead	7439921	☐	☒	1	Grab	6020A	0.2	0.4			
46. Mercury	7439976	☒	☐	1	Grab	7470A	0.2	<0.20			
47. Nickel	7440020	☐	☒	1	Grab	6020A	0.2	21.6			
48. Selenium	7782492	☒	☐	1	Grab	6020A	2.0	<4.0			
49. Silver	7440224	☒	☐	1	Grab	6020A	0.2	<0.4			
50. Zinc	7440666	☐	☒	1	Grab	6010B	15	42			
51. Iron	7439896	☒	☐	1	Grab	6010B	20	<100			
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? Arsenic, Cadmium, Copper
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: Arsenic DF: 131 Metal: Cadmium DF: 131 Metal: Copper DF: 131 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:

Groundwater encountered during construction activities will be pumped into a treatment system prior to discharge into the storm drain. The first element of the treatment system will be a frac tank where solids will settle out. The effluent will then pass through the following: bag filter and granular activated carbon vessel. The effluent will then be discharged through the existing storm drain system.

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 50 gpm

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

None Anticipated

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:
Discharges to a storm drain catch basin which discharges to the Charles River via the outfall location shown on Figure 3 (Attachment 4).

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 Class B

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 14.3 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)?

Is there a final TMDL? Y ● N ○ If yes, for which pollutant(s)? nutrients, phosphorus, pathogens

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.

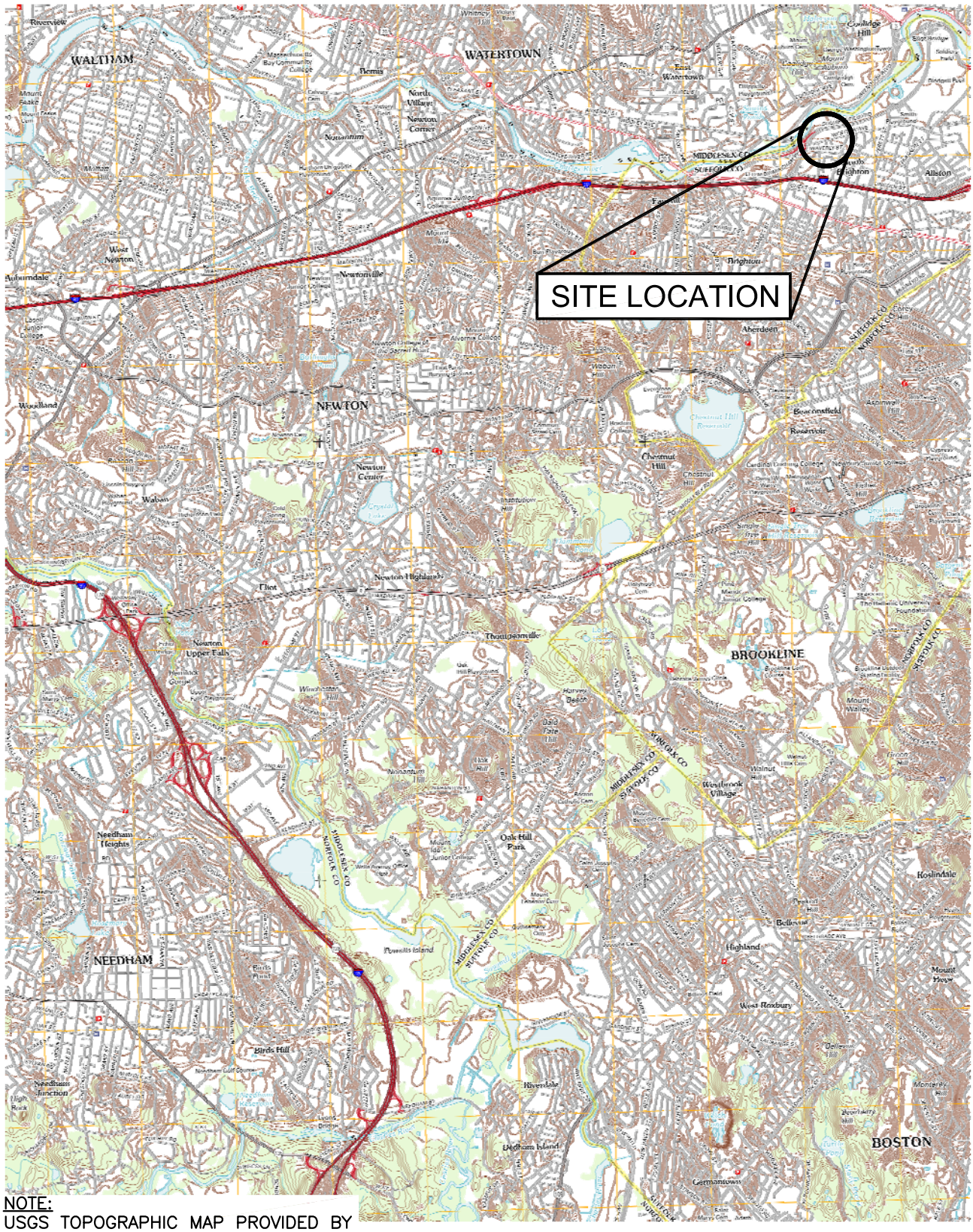
8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

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:	Joseph M. Smith Community Health Center
Operator signature:	
Printed Name &Title:	Mario Marchese - Project Manager
Date:	5/2/2014

ATTACHMENT 2

FIGURE 1 – SITE LOCUS MAP



NOTE:
USGS TOPOGRAPHIC MAP PROVIDED BY THE US DEPARTMENT OF THE INTERIOR

NO.	ISSUE/DESCRIPTION	BY	DATE

SUPPLEMENTAL SITE INVESTIGATION AND ANALYSIS
1420 SOLDIERS FIELD ROAD
ALLSTON, MASSACHUSETTS
RTNs 3-28635 AND 3-28636

SITE LOCATION PLAN

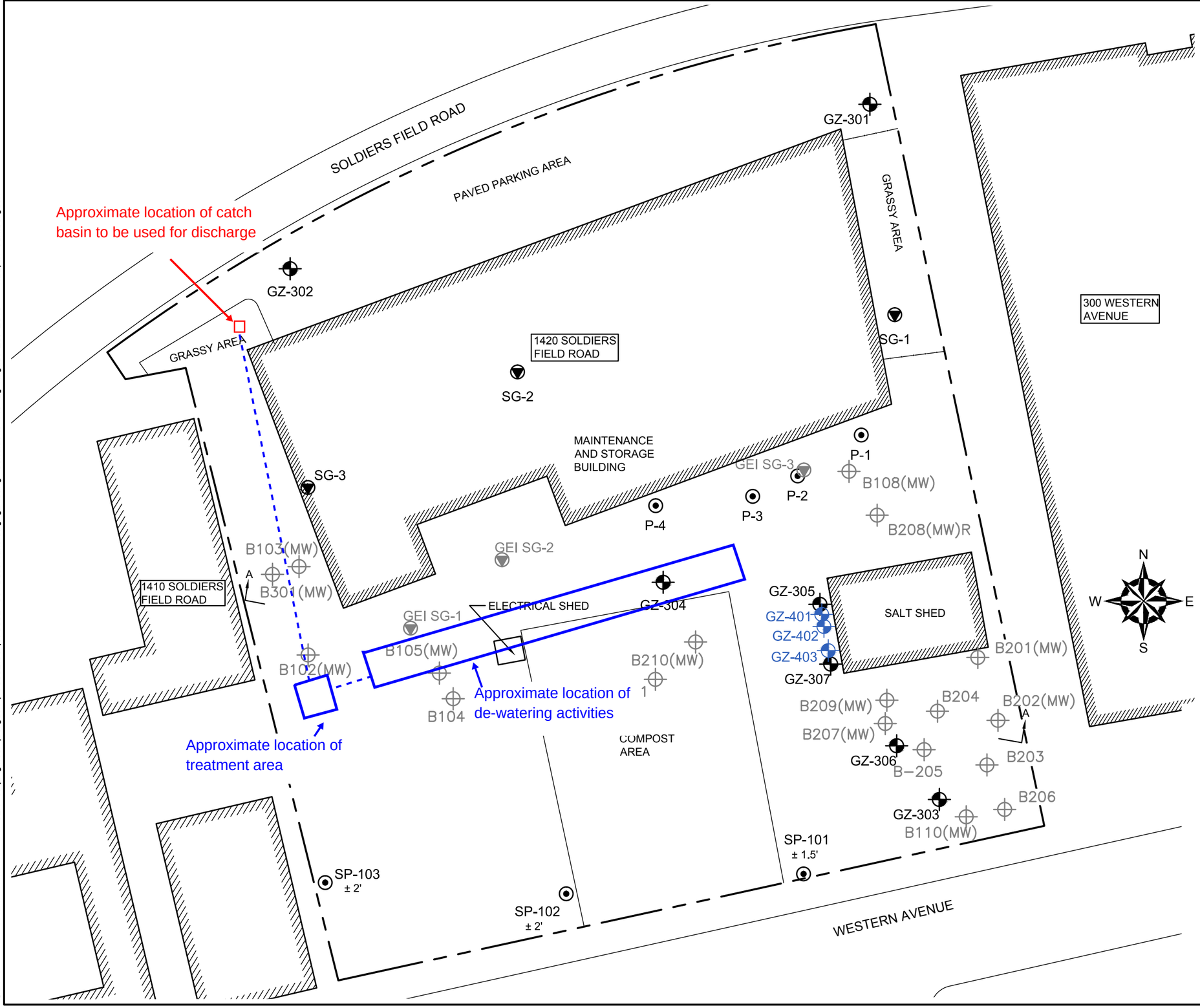
PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
Joseph M. Smith Community Health Center

PROJ MGR: MLS	REVIEWED BY: FSV	CHECKED BY: FSV	FIGURE 1
DESIGNED BY: MLS	DRAWN BY: MLS	SCALE: 1" = 5000'	
DATE: 11/9/2012	PROJECT NO. 18.0170852.04	REVISION NO.	SHEET NO.

ATTACHMENT 3

FIGURE 2 – SITE PLAN



LEGEND:

- P- SHALLOW SOIL PROBES PERFORMED NOVEMBER, 2012
- B- HISTORIC BORING AND DESTROYED HISTORIC MONITORING WELL LOCATIONS
- B- HISTORIC BORING AND EXISTING HISTORIC MONITORING WELL LOCATIONS
- GZ- BORING AND MONITORING WELL LOCATIONS INSTALLED NOVEMBER, 2012.
- GEI SG- HISTORIC SOIL GAS PROBE LOCATIONS
- SG- SOIL GAS PROBES INSTALLED NOVEMBER, 2012
- GZ- MONITORING WELL LOCATIONS INSTALLED JULY 2, 2013

NOTES:

1. BASE MAP DEVELOPED FROM PLAN PROVIDED BY GEI CONSULTANTS, INC., ENTITLED "SITE PLAN", DATED JULY 2012, ORIGINAL SCALE 1"=50' AND AERIAL IMAGERY PROVIDED BY MASS GIS.
2. THE LOCATION OF EXPLORATION AND "FOUND" SITE FEATURES WERE DETERMINED BY USING A TOTAL STATION SURVEY DEVISE TO OBTAIN FIELD COORDINATES OR LINE-OF-SIGHT MEASUREMENTS. THE SURVEY DATA WAS INCORPORATED INTO THE ABOVE REFERENCED SITE PLAN BY ALIGNING "FOUND" SITE FEATURES IN THE DRAWING FILE. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

0 20 40 80
SCALE IN FEET

JOSEPH M. SMITH COMMUNITY HEALTH CENTER
1420 SOLDIERS FIELD ROAD
BRIGHTON, MASSACHUSETTS

EXISTING CONDITIONS

PREPARED BY:	PREPARED FOR:		
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	Joseph M. Smith Community Health Center		
PROJ MGR: FSV	REVIEWED BY: FSV	CHECKED BY: FSV	FIGURE 2
DESIGNED BY: FSV	DRAWN BY: MLS\VKGW	SCALE: 1" = 40'	
DATE: AUGUST 2013	PROJECT NO. 18.0170852.06	REVISION NO.	

ATTACHMENT 4

FIGURE 3 – STORM DRAIN OUTFALL LOCATION

Notes:
1. Map imagery provided by Bing Maps
2. Catch basin, manhole, and storm drain locations are approximate. Information provided by DCR.

NO.	ISSUE/DESCRIPTION	BY	DATE

1420 SOLDIERS FIELD ROAD
ALLSTON, MASSACHUSETTS
RTNs 3-28635 AND 3-28636

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

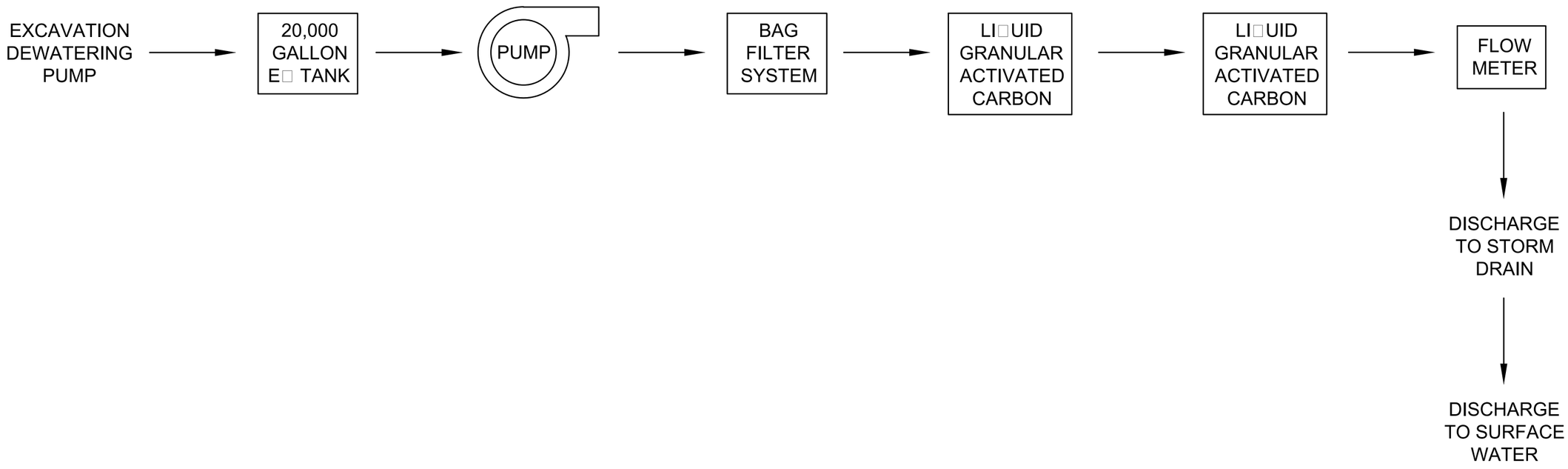
PREPARED FOR:
Joseph M. Smith Community Health Center

DISCHARGE LOCATION PLAN

PROJ MGR: MLS	REVIEWED BY: FSV	CHECKED BY: FSV	FIGURE 3
DESIGNED BY: MLS	DRAWN BY: MLS	SCALE: 1" = 5000'	
DATE: 4/28/14	PROJECT NO. 18.0170852.04	REVISION NO.	SHEET NO.

ATTACHMENT 5

FIGURE 4 – PROCESS FLOW DIAGRAM



APPROVED:

NO.	ISSUE/DESCRIPTION	BY	DATE
2			
1			

JMSCHC
1420 SOLDIERS FILED ROAD
BRIGHTON, MASSACHUSETTS

PROCESS FLOW DIAGRAM

PREPARED BY:
GZA G□□□□□r□□□ □□□□, □nc.
Engi □ee r□□□d□cient st □
www.gza.com

PREPARED FOR:
JMSCHC

PROJ MGR: RJM	REVIEWED BY: RJM	CHECKED BY:	FIGURE 4
DESIGNED BY: RBP	DRAWN BY: SBB	SCALE: NOT TO SCALE	
DATE: APRIL 2014	PROJECT NO. 18.0170852.10	REVISION NO.	

ATTACHMENT 6

MASSGIS DEP PRIORITY RESOURCES MAP

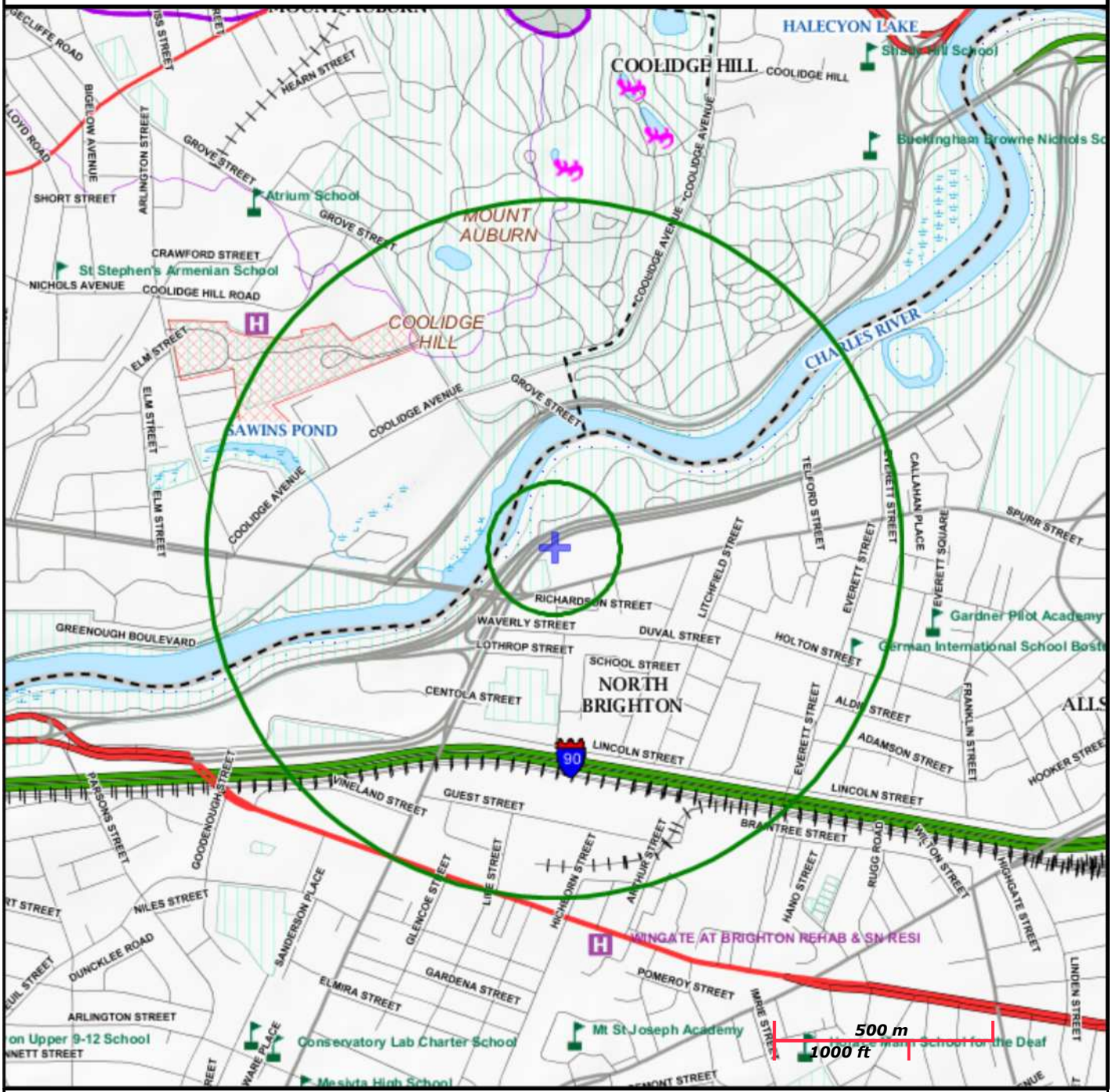
MassDEP - Bureau of Waste Site Cleanup

MCP Numerical Ranking System Map: 500 feet & 0.5 Mile Radii

Site Information:
JOSPEH SMITH
1420 SOLDIERS FIELD ROAD BOSTON, MA
NAD83 UTM Meters:
5215447mN , -7919769mE (Zone: 18)
April 22, 2014

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam
Aquifers: Medium Yield, High Yield, EPA Sole Source
Non Potential Drinking Water Source Area: Medium, High (Yield)
PWS Protection Areas: Zone II, IWPA, Zone A
Hydrography: Open Water, PWS Reservoir, Tidal Flat
Wetlands: Freshwater, Saltwater, Cranberry Bog
FEMA 100yr Floodplain; Protected Open Space; ACEC
Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential
Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

ATTACHMENT 7

CORRESPONDENCE WITH NOAA FISHERIES SERVICE

Jennifer McKechnie

From: Christine Vaccaro - NOAA Federal <christine.vaccaro@noaa.gov>
Sent: Tuesday, April 22, 2014 12:39 PM
To: Jennifer McKechnie
Subject: Re: Remediation General Permit Question

Hi there,
We do not expect any of our species to be affected by these discharges. As such, no consultation is required.

Cheers,
Chris

Chris Vaccaro
Fisheries Biologist
Protected Resources Division
NOAA Fisheries
Gloucester, MA
Phone: 978-281-9167
Email: christine.vaccaro@noaa.gov

On Tue, Apr 22, 2014 at 12:26 PM, Jennifer McKechnie <jennifer.mckechnie@gza.com> wrote:

Hi Christine,

GZA is submitting a Notice of Intent for a Remediation General Permit (RPG) for construction dewatering at 1420 Soldiers Field Road in Allston, MA. The effluent will be discharged to the Charles River. I have attached a map with the approximate location of the catch basin to which we will be discharging. We are currently working with DCR to determine the exact location of the discharge point into the Charles. For the RGP application we need to investigate whether the proposed temporary discharge has the potential to adversely affect any federally listed species in the Charles River downstream of this area. Do you have readily available information on this?

Thanks for your help.

Feel free to email or call me with any questions.

Jenn

Jennifer McKechnie

Assistant Project Manager

GZA GeoEnvironmental, Inc.

249 Vanderbilt Avenue

Norwood, Massachusetts 02062

781-278-3864

781-589-3866 (cell)

781-278-5701 (fax)

jennifer.mckechnie@gza.com

PROACTIVE BY DESIGN.® Our Company Commitment.

For information about GZA GeoEnvironmental, Inc. and its services, please visit our website at www.gza.com.

ATTACHMENT 8

MHC REPORT

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Allston; Street Name: Soldiers Field Rd;

Inv. No.	Property Name	Street	Town	Year
BOS.8350	Harvard Business School - Kresge Hall	Soldiers Field Rd	Boston	1953
BOS.8351	Harvard Business School - Teele Hall	Soldiers Field Rd	Boston	1968
BOS.8352	Harvard Business School - Burden Hall	Soldiers Field Rd	Boston	1969
BOS.8353	Harvard Business School - Cumnock Hall	Soldiers Field Rd	Boston	1969
BOS.8354	Soldiers Field Park Apartments	Soldiers Field Rd	Boston	1974
BOS.8355	Harvard Business School - Shadd Gymnasium	Soldiers Field Rd	Boston	1990
BOS.8356	Harvard Business School Chapel	Soldiers Field Rd	Boston	1990
BOS.8357	Harvard Business School Dean's Residence	Soldiers Field Rd	Boston	1929
BOS.8358	Harvard Business School - Humphrey Hall	Soldiers Field Rd	Boston	1926
BOS.8359	Harvard Business School - McCullough Hall	Soldiers Field Rd	Boston	1926
BOS.8360	Harvard Business School - Glass Hall	Soldiers Field Rd	Boston	1926
BOS.8361	Harvard Business School - Mellon Hall	Soldiers Field Rd	Boston	1926
BOS.8362	Harvard Business School - Dillon Hall	Soldiers Field Rd	Boston	1926
BOS.8363	Harvard Business School - Chase Hall	Soldiers Field Rd	Boston	1926
BOS.8364	Harvard Business School Students Club	Soldiers Field Rd	Boston	1926
BOS.8365	Harvard Business School - Aldrich Hall	Soldiers Field Rd	Boston	1953
BOS.8366	Harvard Business School - Baker Library	Soldiers Field Rd	Boston	1927
BOS.8367	Harvard Business School - Hamilton Hall	Soldiers Field Rd	Boston	1926
BOS.8368	Harvard Business School Faculty Club	Soldiers Field Rd	Boston	1926
BOS.8369	Harvard Business School - Gallatin Hall	Soldiers Field Rd	Boston	1926
BOS.8370	Harvard Business School - Fowler Hall	Soldiers Field Rd	Boston	1926
BOS.8371	Harvard Business School - Morgan Hall	Soldiers Field Rd	Boston	1927
BOS.8372	Harvard Business School - Loeb Hall	Soldiers Field Rd	Boston	1926
BOS.8373	Harvard Business School - Morris Hall	Soldiers Field Rd	Boston	1926
BOS.8374	Harvard Business School - Sherman Hall	Soldiers Field Rd	Boston	1926
BOS.8376	Harvard University - Briggs Cage	Soldiers Field Rd	Boston	1926
BOS.8377	Harvard University - Dillon Field House	Soldiers Field Rd	Boston	1929

Inv. No.	Property Name	Street	Town	Year
BOS.8378	Harvard University - Dixon, Palmer Tennis Courts	Soldiers Field Rd	Boston	1965
BOS.8379	Harvard University - Bright Hockey Center	Soldiers Field Rd	Boston	1950
BOS.8380	Harvard University Gordon Track and Tennis Center	Soldiers Field Rd	Boston	1950
BOS.9602	Charles River Reservation - Soldiers Field Road	Soldiers Field Rd	Boston	1899
BOS.9603	Soldiers Field Road Planted Median	Soldiers Field Rd	Boston	1920
BOS.9605	Soldiers Field Underpass at Western Avenue	Soldiers Field Rd	Boston	1954
BOS.9606	Soldiers Field Road - North Beacon Street Oval	Soldiers Field Rd	Boston	1958
BOS.8312	Harvard University - Newell Boat House	801-805 Soldiers Field Rd	Boston	1900
BOS.8063	Institute of Contemporary Art	1175 Soldiers Field Rd	Boston	1959
BOS.8064	Charles River Speedway Superintendent's Residence	1420-1440 Soldiers Field Rd	Boston	1899
BOS.9731	Charles River Speedway Courtyard	1420-1440 Soldiers Field Rd	Boston	1899
BOS.15893	Charles River Speedway Headquarters and Stable	1420-1440 Soldiers Field Rd	Boston	1899
BOS.15894	Metropolitan District Commission Police Station	1420-1440 Soldiers Field Rd	Boston	1904
BOS.15895	Charles River Speedway - South Shed	1420-1440 Soldiers Field Rd	Boston	1899
BOS.15896	Charles River Speedway - East Shed	1420-1440 Soldiers Field Rd	Boston	1899
BOS.15897	Charles River Speedway Garage	1420-1440 Soldiers Field Rd	Boston	1940
BOS.15898	Charles River Speedway Maintenance Garage	1420-1440 Soldiers Field Rd	Boston	1940

ATTACHMENT 9

LABORATORY ANALYTICAL RESULTS

CERTIFICATE OF ANALYSIS

Russell Parkman
GZA GeoEnvironmental, Inc.
372 Merrimac Street
Newburyport, MA 01950

RE: Joseph Smith (18.0170852.10)
ESS Laboratory Work Order Number: 1402014

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:21 pm, Feb 12, 2014

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with NELAC Standards, A2LA and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith

ESS Laboratory Work Order: 1402014

SAMPLE RECEIPT

The following samples were received on February 03, 2014 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has performed and reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Data Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

For EPH soil samples, the aromatic range results have been corrected for identified cartridge contaminant in accordance with the CAM protocol.

Lab Number	Sample Name	Matrix	Analysis
1402014-01	TP-8	Ground Water	1664A, 2540D, 300.0, 420.1, 4500 CN CE, 4500-Cl E, 504.1, 6010B, 6020A, 7196A, 7470A, 8082A, 8260B, 8270C SIM, 8270D, Calc

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith

ESS Laboratory Work Order: 1402014

PROJECT NARRATIVE

Classical Chemistry
1402014-01 **The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.**

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith

ESS Laboratory Work Order: 1402014

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015D - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH / VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith
Client Sample ID: TP-8
Date Sampled: 02/03/14 12:45
Percent Solids: N/A

ESS Laboratory Work Order: 1402014
ESS Laboratory Sample ID: 1402014-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A

Total Metals Aqueous

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (0.4)		6020A		4	LLZ	02/10/14 14:09	50	25	CB40701
Arsenic	**25.7** (0.2)		6020A		2	LLZ	02/07/14 14:31	50	25	CB40701
Cadmium	**1.1** (0.4)		6020A		4	LLZ	02/10/14 14:09	50	25	CB40701
Chromium (III)	ND (10)		Calc		1	EEM	02/06/14 15:39	1	1	[CALC]
Copper	**18.6** (0.2)		6020A		2	LLZ	02/07/14 14:31	50	25	CB40701
Iron	ND (100)		6010B		2	LLZ	02/07/14 11:19	50	25	CB40609
Lead	**0.4** (0.4)		6020A		4	LLZ	02/10/14 14:09	50	25	CB40701
Mercury	ND (0.20)		7470A		1	NAR	02/07/14 10:13	20	40	CB40619
Nickel	**21.6** (0.2)		6020A		2	LLZ	02/07/14 14:31	50	25	CB40701
Selenium	ND (4.0)		6020A		4	JP	02/10/14 20:04	50	25	CB40701
Silver	ND (0.4)		6020A		4	LLZ	02/10/14 14:09	50	25	CB40701
Zinc	**42** (25)		6010B		1	JP	02/06/14 15:39	50	25	CB40609

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith
Client Sample ID: TP-8
Date Sampled: 02/03/14 12:45
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 1402014
ESS Laboratory Sample ID: 1402014-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: TAJ
Prepared: 2/4/14 16:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.09)		8082A		1	02/04/14 21:14		CB40430
Aroclor 1221	ND (0.09)		8082A		1	02/04/14 21:14		CB40430
Aroclor 1232	ND (0.09)		8082A		1	02/04/14 21:14		CB40430
Aroclor 1242	ND (0.09)		8082A		1	02/04/14 21:14		CB40430
Aroclor 1248	ND (0.09)		8082A		1	02/04/14 21:14		CB40430
Aroclor 1254	ND (0.09)		8082A		1	02/04/14 21:14		CB40430
Aroclor 1260	ND (0.09)		8082A		1	02/04/14 21:14		CB40430
Aroclor 1262	ND (0.09)		8082A		1	02/04/14 21:14		CB40430
Aroclor 1268	ND (0.09)		8082A		1	02/04/14 21:14		CB40430

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*75 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*73 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*55 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*66 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith
Client Sample ID: TP-8
Date Sampled: 02/03/14 12:45
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1402014
ESS Laboratory Sample ID: 1402014-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1-Trichloroethane	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
1,1,2-Trichloroethane	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
1,1-Dichloroethane	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
1,1-Dichloroethene	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
1,2-Dichlorobenzene	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
1,2-Dichloroethane	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
1,3-Dichlorobenzene	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
1,4-Dichlorobenzene	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Acetone	**14.7** (10.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Benzene	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Carbon Tetrachloride	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
cis-1,2-Dichloroethene	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Ethylbenzene	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Methyl tert-Butyl Ether	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Methylene Chloride	ND (2.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Naphthalene	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Tertiary-amyl methyl ether	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Tertiary-butyl Alcohol	ND (25.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Tetrachloroethene	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Toluene	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Trichloroethene	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Vinyl Chloride	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Xylene O	ND (1.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520
Xylene P,M	ND (2.0)		8260B		1	02/05/14 14:02	CXB0038	CB40520

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*89 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*99 %*		*70-130*
Surrogate: Dibromofluoromethane	*90 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith
Client Sample ID: TP-8
Date Sampled: 02/03/14 12:45
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 1402014
ESS Laboratory Sample ID: 1402014-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: EEB
Prepared: 2/10/14 19:02

8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,4-Dioxane	**0.3** (0.2)		8270D		1	02/11/14 21:57	CXB0106	CB41031

	%Recovery	Qualifier	Limits
Surrogate: 1,4-Dioxane-d8	*85 %*		*15-115*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith
Client Sample ID: TP-8
Date Sampled: 02/03/14 12:45
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 0.25
Extraction Method: 3510C

ESS Laboratory Work Order: 1402014
ESS Laboratory Sample ID: 1402014-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 2/6/14 10:45

8270C(SIM) Polynuclear Aromatic Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Acenaphthene	ND (0.19)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Acenaphthylene	ND (0.19)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Anthracene	ND (0.19)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Benzo(a)anthracene	ND (0.05)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Benzo(a)pyrene	ND (0.05)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Benzo(b)fluoranthene	ND (0.05)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Benzo(g,h,i)perylene	ND (0.19)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Benzo(k)fluoranthene	ND (0.05)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
bis(2-Ethylhexyl)phthalate	ND (2.34)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Butylbenzylphthalate	ND (2.34)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Chrysene	ND (0.05)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Dibenzo(a,h)Anthracene	ND (0.05)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Diethylphthalate	ND (2.34)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Dimethylphthalate	ND (2.34)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Di-n-butylphthalate	ND (2.34)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Di-n-octylphthalate	ND (2.34)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Fluoranthene	ND (0.19)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Fluorene	ND (0.19)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Indeno(1,2,3-cd)Pyrene	ND (0.05)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Naphthalene	**0.27** (0.19)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Pentachlorophenol	ND (0.84)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Phenanthrene	ND (0.19)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602
Pyrene	ND (0.19)		8270C SIM		1	02/07/14 0:02	CXB0055	CB40602

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*57 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*90 %*		*15-110*
Surrogate: 2-Fluorobiphenyl	*65 %*		*30-130*
Surrogate: Nitrobenzene-d5	*77 %*		*30-130*
Surrogate: p-Terphenyl-d14	*74 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith
Client Sample ID: TP-8
Date Sampled: 02/03/14 12:45
Percent Solids: N/A

ESS Laboratory Work Order: 1402014
ESS Laboratory Sample ID: 1402014-01
Sample Matrix: Ground Water

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Chloride	**2200** (500)		300.0		1000	EEM	02/06/14 19:01	mg/L	CB40615
Hexavalent Chromium	ND (10)		7196A		1	EEM	02/03/14 17:50	ug/L	CB40329
Phenols	ND (0.10)		420.1		1	EEM	02/06/14 14:15	mg/L	CB40616
Total Cyanide (LL)	ND (0.0050)		4500 CN CE		1	JLK	02/06/14 12:45	mg/L	CB40621
Total Petroleum Hydrocarbon	ND (5)		1664A		1	CRR	02/06/14 10:20	mg/L	CB40613
Total Residual Chlorine	ND (0.01)		4500-Cl E		1	EEM	02/03/14 17:35	mg/L	CB40328
Total Suspended Solids	ND (5)		2540D		1	EEM	02/06/14 16:30	mg/L	CB40618

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith
Client Sample ID: TP-8
Date Sampled: 02/03/14 12:45
Percent Solids: N/A
Initial Volume: 35
Final Volume: 2
Extraction Method: 504/8011

ESS Laboratory Work Order: 1402014
ESS Laboratory Sample ID: 1402014-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: ML
Prepared: 2/7/14 14:30

504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2-Dibromoethane	ND (0.015)		504.1		1	02/07/14 14:59		CB40708

	%Recovery	Qualifier	Limits
Surrogate: Pentachloroethane	*77 %*		*30-150*
Surrogate: Pentachloroethane [2C]	*82 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith

ESS Laboratory Work Order: 1402014

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals Aqueous										
Batch CB40609 - 3005A										
Blank										
Iron	ND	50	ug/L							
Zinc	ND	25	ug/L							
LCS										
Iron	1240	50	ug/L	1250		99	80-120			
Zinc	244	25	ug/L	250.0		98	80-120			
LCS Dup										
Iron	1370	50	ug/L	1250		110	80-120	11	20	
Zinc	249	25	ug/L	250.0		100	80-120	2	20	
Batch CB40619 - 245.1/7470A										
Blank										
Mercury	ND	0.20	ug/L							
LCS										
Mercury	6.15	0.20	ug/L	6.000		102	80-120			
LCS Dup										
Mercury	6.23	0.20	ug/L	6.000		104	80-120	1	20	
Batch CB40701 - 3005A										
Blank										
Antimony	ND	0.5	ug/L							
Arsenic	ND	1.0	ug/L							
Cadmium	ND	0.2	ug/L							
Copper	0.5	0.5	ug/L							
Lead	ND	0.2	ug/L							
Nickel	ND	0.2	ug/L							
Selenium	ND	2.0	ug/L							
Silver	ND	0.2	ug/L							
LCS										
Antimony	26.7	0.5	ug/L	25.00		107	80-120			
Arsenic	26.4	1.0	ug/L	25.00		106	80-120			
Cadmium	24.9	0.2	ug/L	25.00		99	80-120			
Copper	27.5	0.5	ug/L	25.00		110	80-120			
Lead	26.8	0.2	ug/L	25.00		107	80-120			
Nickel	26.3	0.2	ug/L	25.00		105	80-120			
Selenium	26.1	2.0	ug/L	25.00		104	80-120			
Silver	25.7	0.2	ug/L	25.00		103	80-120			
LCS Dup										
Antimony	27.3	0.5	ug/L	25.00		109	80-120	2	20	
Arsenic	25.1	1.0	ug/L	25.00		100	80-120	5	20	
Cadmium	24.5	0.2	ug/L	25.00		98	80-120	1	20	
Copper	26.2	0.5	ug/L	25.00		105	80-120	5	20	
Lead	28.8	0.2	ug/L	25.00		115	80-120	7	20	
Nickel	25.1	0.2	ug/L	25.00		100	80-120	5	20	
Selenium	23.6	2.0	ug/L	25.00		95	80-120	10	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith

ESS Laboratory Work Order: 1402014

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals Aqueous										
Batch CB40701 - 3005A										
Silver	25.5	0.2	ug/L	25.00		102	80-120	0.9	20	
8082A Polychlorinated Biphenyls (PCB)										
Batch CB40430 - 3510C										
Blank										
Aroclor 1016	ND	0.10	ug/L							
Aroclor 1016 (1)	ND	0.10	ug/L							
Aroclor 1016 (1) [2C]	ND	0.10	ug/L							
Aroclor 1016 (2)	ND	0.10	ug/L							
Aroclor 1016 (2) [2C]	ND	0.10	ug/L							
Aroclor 1016 (3)	ND	0.10	ug/L							
Aroclor 1016 (3) [2C]	ND	0.10	ug/L							
Aroclor 1016 (4)	ND	0.10	ug/L							
Aroclor 1016 (4) [2C]	ND	0.10	ug/L							
Aroclor 1016 (5)	ND	0.10	ug/L							
Aroclor 1016 (5) [2C]	ND	0.10	ug/L							
Aroclor 1221	ND	0.10	ug/L							
Aroclor 1221 (1)	ND	0.10	ug/L							
Aroclor 1221 (1) [2C]	ND	0.10	ug/L							
Aroclor 1221 (2)	ND	0.10	ug/L							
Aroclor 1221 (2) [2C]	ND	0.10	ug/L							
Aroclor 1221 (3)	ND	0.10	ug/L							
Aroclor 1221 (3) [2C]	ND	0.10	ug/L							
Aroclor 1221 (4)	ND	0.10	ug/L							
Aroclor 1221 (4) [2C]	ND	0.10	ug/L							
Aroclor 1221 (5)	ND	0.10	ug/L							
Aroclor 1221 (5) [2C]	ND	0.10	ug/L							
Aroclor 1232	ND	0.10	ug/L							
Aroclor 1232 (1)	ND	0.10	ug/L							
Aroclor 1232 (1) [2C]	ND	0.10	ug/L							
Aroclor 1232 (2)	ND	0.10	ug/L							
Aroclor 1232 (2) [2C]	ND	0.10	ug/L							
Aroclor 1232 (3)	ND	0.10	ug/L							
Aroclor 1232 (3) [2C]	ND	0.10	ug/L							
Aroclor 1232 (4)	ND	0.10	ug/L							
Aroclor 1232 (4) [2C]	ND	0.10	ug/L							
Aroclor 1232 (5)	ND	0.10	ug/L							
Aroclor 1232 (5) [2C]	ND	0.10	ug/L							
Aroclor 1242	ND	0.10	ug/L							
Aroclor 1242 (1)	ND	0.10	ug/L							
Aroclor 1242 (1) [2C]	ND	0.10	ug/L							
Aroclor 1242 (2)	ND	0.10	ug/L							
Aroclor 1242 (2) [2C]	ND	0.10	ug/L							
Aroclor 1242 (3)	ND	0.10	ug/L							
Aroclor 1242 (3) [2C]	ND	0.10	ug/L							

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Client Name: GZA GeoEnvironmental, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CB40430 - 3510C										
Aroclor 1242 (4)	ND	0.10	ug/L							
Aroclor 1242 (4) [2C]	ND	0.10	ug/L							
Aroclor 1242 (5)	ND	0.10	ug/L							
Aroclor 1242 (5) [2C]	ND	0.10	ug/L							
Aroclor 1248	ND	0.10	ug/L							
Aroclor 1248 (1)	ND	0.10	ug/L							
Aroclor 1248 (1) [2C]	ND	0.10	ug/L							
Aroclor 1248 (2)	ND	0.10	ug/L							
Aroclor 1248 (2) [2C]	ND	0.10	ug/L							
Aroclor 1248 (3)	ND	0.10	ug/L							
Aroclor 1248 (3) [2C]	ND	0.10	ug/L							
Aroclor 1248 (4)	ND	0.10	ug/L							
Aroclor 1248 (4) [2C]	ND	0.10	ug/L							
Aroclor 1248 (5)	ND	0.10	ug/L							
Aroclor 1248 (5) [2C]	ND	0.10	ug/L							
Aroclor 1254	ND	0.10	ug/L							
Aroclor 1254 (1)	ND	0.10	ug/L							
Aroclor 1254 (1) [2C]	ND	0.10	ug/L							
Aroclor 1254 (2)	ND	0.10	ug/L							
Aroclor 1254 (2) [2C]	ND	0.10	ug/L							
Aroclor 1254 (3)	ND	0.10	ug/L							
Aroclor 1254 (3) [2C]	ND	0.10	ug/L							
Aroclor 1254 (4)	ND	0.10	ug/L							
Aroclor 1254 (4) [2C]	ND	0.10	ug/L							
Aroclor 1254 (5)	ND	0.10	ug/L							
Aroclor 1254 (5) [2C]	ND	0.10	ug/L							
Aroclor 1260	ND	0.10	ug/L							
Aroclor 1260 (1)	ND	0.10	ug/L							
Aroclor 1260 (1) [2C]	ND	0.10	ug/L							
Aroclor 1260 (2)	ND	0.10	ug/L							
Aroclor 1260 (2) [2C]	ND	0.10	ug/L							
Aroclor 1260 (3)	ND	0.10	ug/L							
Aroclor 1260 (3) [2C]	ND	0.10	ug/L							
Aroclor 1260 (4)	ND	0.10	ug/L							
Aroclor 1260 (4) [2C]	ND	0.10	ug/L							
Aroclor 1260 (5)	ND	0.10	ug/L							
Aroclor 1260 (5) [2C]	ND	0.10	ug/L							
Aroclor 1262	ND	0.10	ug/L							
Aroclor 1262 (1)	ND	0.10	ug/L							
Aroclor 1262 (1) [2C]	ND	0.10	ug/L							
Aroclor 1262 (2)	ND	0.10	ug/L							
Aroclor 1262 (2) [2C]	ND	0.10	ug/L							
Aroclor 1262 (3)	ND	0.10	ug/L							
Aroclor 1262 (3) [2C]	ND	0.10	ug/L							
Aroclor 1262 (4)	ND	0.10	ug/L							

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Client Name: GZA GeoEnvironmental, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CB40430 - 3510C										
Aroclor 1262 (4) [2C]	ND	0.10	ug/L							
Aroclor 1262 (5)	ND	0.10	ug/L							
Aroclor 1262 (5) [2C]	ND	0.10	ug/L							
Aroclor 1268	ND	0.10	ug/L							
Aroclor 1268 (1)	ND	0.10	ug/L							
Aroclor 1268 (1) [2C]	ND	0.10	ug/L							
Aroclor 1268 (2)	ND	0.10	ug/L							
Aroclor 1268 (2) [2C]	ND	0.10	ug/L							
Aroclor 1268 (3)	ND	0.10	ug/L							
Aroclor 1268 (3) [2C]	ND	0.10	ug/L							
Aroclor 1268 (4)	ND	0.10	ug/L							
Aroclor 1268 (4) [2C]	ND	0.10	ug/L							
Aroclor 1268 (5)	ND	0.10	ug/L							
Aroclor 1268 (5) [2C]	ND	0.10	ug/L							
Surrogate: Decachlorobiphenyl	*0.0362*		ug/L	*0.05000*		*72*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0339*		ug/L	*0.05000*		*68*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0274*		ug/L	*0.05000*		*55*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0312*		ug/L	*0.05000*		*62*	*30-150*			
LCS										
Aroclor 1016	0.77	0.10	ug/L	1.000		77	40-140			
Aroclor 1260	0.75	0.10	ug/L	1.000		75	40-140			
Surrogate: Decachlorobiphenyl	*0.0398*		ug/L	*0.05000*		*80*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0383*		ug/L	*0.05000*		*77*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0312*		ug/L	*0.05000*		*62*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0358*		ug/L	*0.05000*		*72*	*30-150*			
LCS Dup										
Aroclor 1016	0.75	0.10	ug/L	1.000		75	40-140	3	20	
Aroclor 1260	0.74	0.10	ug/L	1.000		74	40-140	1	20	
Surrogate: Decachlorobiphenyl	*0.0373*		ug/L	*0.05000*		*75*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0365*		ug/L	*0.05000*		*73*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0331*		ug/L	*0.05000*		*66*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0368*		ug/L	*0.05000*		*74*	*30-150*			
8260B Volatile Organic Compounds										
Batch CB40520 - 5030B										
Blank										
1,1,1-Trichloroethane	ND	1.0	ug/L							
1,1,2-Trichloroethane	ND	1.0	ug/L							
1,1-Dichloroethane	ND	1.0	ug/L							
1,1-Dichloroethene	ND	1.0	ug/L							
1,2-Dichlorobenzene	ND	1.0	ug/L							
1,2-Dichloroethane	ND	1.0	ug/L							

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Client Name: GZA GeoEnvironmental, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CB40520 - 5030B										
1,3-Dichlorobenzene	ND	1.0	ug/L							
1,4-Dichlorobenzene	ND	1.0	ug/L							
Acetone	ND	10.0	ug/L							
Benzene	ND	1.0	ug/L							
Carbon Tetrachloride	ND	1.0	ug/L							
cis-1,2-Dichloroethene	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tertiary-butyl Alcohol	ND	25.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Toluene	ND	1.0	ug/L							
Trichloroethene	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*22.7*		ug/L	*25.00*		*91*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*24.9*		ug/L	*25.00*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*22.8*		ug/L	*25.00*		*91*	*70-130*			
Surrogate: Toluene-d8	*25.7*		ug/L	*25.00*		*103*	*70-130*			
LCS										
1,1,1-Trichloroethane	9.4		ug/L	10.00		94	70-130			
1,1,2-Trichloroethane	9.6		ug/L	10.00		96	70-130			
1,1-Dichloroethane	9.8		ug/L	10.00		98	70-130			
1,1-Dichloroethene	9.6		ug/L	10.00		96	70-130			
1,2-Dichlorobenzene	10.2		ug/L	10.00		102	70-130			
1,2-Dichloroethane	8.8		ug/L	10.00		88	70-130			
1,3-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,4-Dichlorobenzene	10.0		ug/L	10.00		100	70-130			
Acetone	55.1		ug/L	50.00		110	70-130			
Benzene	10.1		ug/L	10.00		101	70-130			
Carbon Tetrachloride	9.6		ug/L	10.00		96	70-130			
cis-1,2-Dichloroethene	9.7		ug/L	10.00		97	70-130			
Ethylbenzene	10.5		ug/L	10.00		105	70-130			
Methyl tert-Butyl Ether	9.7		ug/L	10.00		97	70-130			
Methylene Chloride	9.4		ug/L	10.00		94	70-130			
Naphthalene	11.0		ug/L	10.00		110	70-130			
Tertiary-amyl methyl ether	9.6		ug/L	10.00		96	70-130			
Tertiary-butyl Alcohol	50.2		ug/L	50.00		100	70-130			
Tetrachloroethene	9.7		ug/L	10.00		97	70-130			
Toluene	10.3		ug/L	10.00		103	70-130			
Trichloroethene	9.8		ug/L	10.00		98	70-130			
Vinyl Chloride	10.4		ug/L	10.00		104	70-130			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CB40520 - 5030B										
Xylene O	10.8		ug/L	10.00		108	70-130			
Xylene P,M	21.2		ug/L	20.00		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	*24.0*		ug/L	*25.00*		*96*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*24.9*		ug/L	*25.00*		*100*	*70-130*			
Surrogate: Dibromofluoromethane	*24.6*		ug/L	*25.00*		*98*	*70-130*			
Surrogate: Toluene-d8	*25.8*		ug/L	*25.00*		*103*	*70-130*			
LCS Dup										
1,1,1-Trichloroethane	9.5		ug/L	10.00		95	70-130	2	25	
1,1,2-Trichloroethane	9.4		ug/L	10.00		94	70-130	2	25	
1,1-Dichloroethane	9.4		ug/L	10.00		94	70-130	5	25	
1,1-Dichloroethene	9.2		ug/L	10.00		92	70-130	5	25	
1,2-Dichlorobenzene	9.9		ug/L	10.00		99	70-130	3	25	
1,2-Dichloroethane	8.9		ug/L	10.00		89	70-130	0.7	25	
1,3-Dichlorobenzene	9.7		ug/L	10.00		97	70-130	7	25	
1,4-Dichlorobenzene	9.6		ug/L	10.00		96	70-130	4	25	
Acetone	48.5		ug/L	50.00		97	70-130	13	25	
Benzene	10.2		ug/L	10.00		102	70-130	0.1	25	
Carbon Tetrachloride	9.3		ug/L	10.00		93	70-130	3	25	
cis-1,2-Dichloroethene	9.6		ug/L	10.00		96	70-130	0.9	25	
Ethylbenzene	10.2		ug/L	10.00		102	70-130	3	25	
Methyl tert-Butyl Ether	9.6		ug/L	10.00		96	70-130	1	25	
Methylene Chloride	9.3		ug/L	10.00		93	70-130	0.7	25	
Naphthalene	10.6		ug/L	10.00		106	70-130	4	25	
Tertiary-amyl methyl ether	9.5		ug/L	10.00		95	70-130	1	25	
Tertiary-butyl Alcohol	50.6		ug/L	50.00		101	70-130	0.6	25	
Tetrachloroethene	9.0		ug/L	10.00		90	70-130	7	25	
Toluene	10.2		ug/L	10.00		102	70-130	0.8	25	
Trichloroethene	9.4		ug/L	10.00		94	70-130	3	25	
Vinyl Chloride	10.2		ug/L	10.00		102	70-130	3	25	
Xylene O	10.4		ug/L	10.00		104	70-130	4	25	
Xylene P,M	21.0		ug/L	20.00		105	70-130	0.7	25	
Surrogate: 1,2-Dichloroethane-d4	*24.5*		ug/L	*25.00*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*24.7*		ug/L	*25.00*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*23.7*		ug/L	*25.00*		*95*	*70-130*			
Surrogate: Toluene-d8	*25.3*		ug/L	*25.00*		*101*	*70-130*			
8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution										
Batch CB41031 - 3520C										
Blank										
1,4-Dioxane	ND	0.2	ug/L							
Surrogate: 1,4-Dioxane-d8	*4.11*		ug/L	*5.000*		*82*	*15-115*			
LCS										
1,4-Dioxane	8.8	0.2	ug/L	10.00		88	40-140			
Surrogate: 1,4-Dioxane-d8	*3.68*		ug/L	*5.000*		*74*	*15-115*			

CERTIFICATE OF ANALYSIS

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution										
Batch CB41031 - 3520C										
LCS Dup										
1,4-Dioxane	8.4	0.2	ug/L	10.00		84	40-140	5	20	
Surrogate: 1,4-Dioxane-d8	*4.41*		ug/L	*5.000*		*88*	*15-115*			
8270C(SIM) Polynuclear Aromatic Hydrocarbons										
Batch CB40602 - 3510C										
Blank										
Acenaphthene	ND	0.20	ug/L							
Acenaphthylene	ND	0.20	ug/L							
Anthracene	ND	0.20	ug/L							
Benzo(a)anthracene	ND	0.05	ug/L							
Benzo(a)pyrene	ND	0.05	ug/L							
Benzo(b)fluoranthene	ND	0.05	ug/L							
Benzo(g,h,i)perylene	ND	0.20	ug/L							
Benzo(k)fluoranthene	ND	0.05	ug/L							
bis(2-Ethylhexyl)phthalate	ND	2.50	ug/L							
Butylbenzylphthalate	ND	2.50	ug/L							
Chrysene	ND	0.05	ug/L							
Dibenzo(a,h)Anthracene	ND	0.05	ug/L							
Diethylphthalate	ND	2.50	ug/L							
Dimethylphthalate	ND	2.50	ug/L							
Di-n-butylphthalate	ND	2.50	ug/L							
Di-n-octylphthalate	ND	2.50	ug/L							
Fluoranthene	ND	0.20	ug/L							
Fluorene	ND	0.20	ug/L							
Indeno(1,2,3-cd)Pyrene	ND	0.05	ug/L							
Naphthalene	ND	0.20	ug/L							
Pentachlorophenol	ND	0.90	ug/L							
Phenanthrene	ND	0.20	ug/L							
Pyrene	ND	0.20	ug/L							
Surrogate: 1,2-Dichlorobenzene-d4	*1.51*		ug/L	*2.500*		*60*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.15*		ug/L	*3.750*		*84*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*1.71*		ug/L	*2.500*		*68*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.98*		ug/L	*2.500*		*79*	*30-130*			
Surrogate: p-Terphenyl-d14	*1.88*		ug/L	*2.500*		*75*	*30-130*			
LCS										
Acenaphthene	2.16	0.20	ug/L	4.000		54	40-140			
Acenaphthylene	2.10	0.20	ug/L	4.000		53	40-140			
Anthracene	2.62	0.20	ug/L	4.000		66	40-140			
Benzo(a)anthracene	2.81	0.05	ug/L	4.000		70	40-140			
Benzo(a)pyrene	2.54	0.05	ug/L	4.000		64	40-140			
Benzo(b)fluoranthene	2.87	0.05	ug/L	4.000		72	40-140			
Benzo(g,h,i)perylene	2.85	0.20	ug/L	4.000		71	40-140			
Benzo(k)fluoranthene	2.69	0.05	ug/L	4.000		67	40-140			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270C(SIM) Polynuclear Aromatic Hydrocarbons										
Batch CB40602 - 3510C										
bis(2-Ethylhexyl)phthalate	3.09	2.50	ug/L	4.000		77	40-140			
Butylbenzylphthalate	3.51	2.50	ug/L	4.000		88	40-140			
Chrysene	2.78	0.05	ug/L	4.000		70	40-140			
Dibenzo(a,h)Anthracene	3.00	0.05	ug/L	4.000		75	40-140			
Diethylphthalate	2.55	2.50	ug/L	4.000		64	40-140			
Dimethylphthalate	2.55	2.50	ug/L	4.000		64	40-140			
Di-n-butylphthalate	2.70	2.50	ug/L	4.000		67	40-140			
Di-n-octylphthalate	3.21	2.50	ug/L	4.000		80	40-140			
Fluoranthene	2.99	0.20	ug/L	4.000		75	40-140			
Fluorene	2.37	0.20	ug/L	4.000		59	40-140			
Indeno(1,2,3-cd)Pyrene	2.95	0.05	ug/L	4.000		74	40-140			
Naphthalene	2.06	0.20	ug/L	4.000		51	40-140			
Pentachlorophenol	3.13	0.90	ug/L	4.000		78	30-130			
Phenanthrene	2.61	0.20	ug/L	4.000		65	40-140			
Pyrene	2.75	0.20	ug/L	4.000		69	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*1.30*		ug/L	*2.500*		*52*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.79*		ug/L	*3.750*		*101*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*1.58*		ug/L	*2.500*		*63*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.78*		ug/L	*2.500*		*71*	*30-130*			
Surrogate: p-Terphenyl-d14	*1.85*		ug/L	*2.500*		*74*	*30-130*			
LCS Dup										
Acenaphthene	2.27	0.20	ug/L	4.000		57	40-140	5	20	
Acenaphthylene	2.22	0.20	ug/L	4.000		56	40-140	6	20	
Anthracene	2.74	0.20	ug/L	4.000		68	40-140	4	20	
Benzo(a)anthracene	3.03	0.05	ug/L	4.000		76	40-140	8	20	
Benzo(a)pyrene	2.70	0.05	ug/L	4.000		67	40-140	6	20	
Benzo(b)fluoranthene	3.00	0.05	ug/L	4.000		75	40-140	4	20	
Benzo(g,h,i)perylene	3.00	0.20	ug/L	4.000		75	40-140	5	20	
Benzo(k)fluoranthene	2.86	0.05	ug/L	4.000		72	40-140	6	20	
bis(2-Ethylhexyl)phthalate	3.18	2.50	ug/L	4.000		80	40-140	3	20	
Butylbenzylphthalate	3.50	2.50	ug/L	4.000		88	40-140	0.3	20	
Chrysene	3.02	0.05	ug/L	4.000		75	40-140	8	20	
Dibenzo(a,h)Anthracene	3.14	0.05	ug/L	4.000		78	40-140	5	20	
Diethylphthalate	2.65	2.50	ug/L	4.000		66	40-140	4	20	
Dimethylphthalate	2.69	2.50	ug/L	4.000		67	40-140	5	20	
Di-n-butylphthalate	2.83	2.50	ug/L	4.000		71	40-140	5	20	
Di-n-octylphthalate	3.35	2.50	ug/L	4.000		84	40-140	4	20	
Fluoranthene	3.08	0.20	ug/L	4.000		77	40-140	3	20	
Fluorene	2.49	0.20	ug/L	4.000		62	40-140	5	20	
Indeno(1,2,3-cd)Pyrene	3.06	0.05	ug/L	4.000		76	40-140	4	20	
Naphthalene	2.22	0.20	ug/L	4.000		55	40-140	7	20	
Pentachlorophenol	2.97	0.90	ug/L	4.000		74	30-130	5	20	
Phenanthrene	2.68	0.20	ug/L	4.000		67	40-140	3	20	
Pyrene	3.05	0.20	ug/L	4.000		76	40-140	10	20	
Surrogate: 1,2-Dichlorobenzene-d4	*1.29*		ug/L	*2.500*		*51*	*30-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith

ESS Laboratory Work Order: 1402014

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270C(SIM) Polynuclear Aromatic Hydrocarbons										
Batch CB40602 - 3510C										
Surrogate: 2,4,6-Tribromophenol	*2.65*		ug/L	*3.750*		*71*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*1.51*		ug/L	*2.500*		*60*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.82*		ug/L	*2.500*		*73*	*30-130*			
Surrogate: p-Terphenyl-d14	*1.99*		ug/L	*2.500*		*80*	*30-130*			
Classical Chemistry										
Batch CB40328 - General Preparation										
Blank										
Total Residual Chlorine	ND	0.01	mg/L							
LCS										
Total Residual Chlorine	0.74		mg/L	0.7300		101	85-115			
Batch CB40329 - General Preparation										
Blank										
Hexavalent Chromium	ND	10	ug/L							
LCS										
Hexavalent Chromium	498	10	ug/L	499.8		100	90-110			
LCS Dup										
Hexavalent Chromium	496	10	ug/L	499.8		99	90-110	0.4	20	
Batch CB40613 - General Preparation										
Blank										
Total Petroleum Hydrocarbon	ND	5	mg/L							
LCS										
Total Petroleum Hydrocarbon	13	5	mg/L	19.38		68	66-114			
Batch CB40615 - General Preparation										
Blank										
Chloride	ND	0.5	mg/L							
LCS										
Chloride	2.4		mg/L	2.500		95	90-110			
Batch CB40616 - General Preparation										
Blank										
Phenols	ND	0.10	mg/L							
LCS										
Phenols	0.10	0.10	mg/L	0.1000		97	80-120			
LCS										
Phenols	1.03	0.10	mg/L	1.000		103	80-120			
Batch CB40618 - General Preparation										
Blank										
Total Suspended Solids	ND	5	mg/L							
LCS										
Total Suspended Solids	66		mg/L	65.00		102	80-120			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith

ESS Laboratory Work Order: 1402014

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch CB40621 - TCN Prep										
Blank										
Total Cyanide (LL)	ND	0.0050	mg/L							
LCS										
Total Cyanide (LL)	0.0195	0.0050	mg/L	0.02006		97	90-110			
LCS										
Total Cyanide (LL)	0.150	0.0050	mg/L	0.1504		99	90-110			
LCS Dup										
Total Cyanide (LL)	0.148	0.0050	mg/L	0.1504		99	90-110	0.7	20	
504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane										
Batch CB40708 - 504/8011										
Blank										
1,2-Dibromoethane	ND	0.015	ug/L							
1,2-Dibromoethane [2C]	ND	0.015	ug/L							
Surrogate: Pentachloroethane	*0.154*		ug/L	*0.2000*		*77*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.156*		ug/L	*0.2000*		*78*	*30-150*			
LCS										
1,2-Dibromoethane	0.192	0.015	ug/L	0.2000		96	70-130			
1,2-Dibromoethane [2C]	0.177	0.015	ug/L	0.2000		88	70-130			
Surrogate: Pentachloroethane	*0.165*		ug/L	*0.2000*		*82*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.162*		ug/L	*0.2000*		*81*	*30-150*			
LCS										
1,2-Dibromoethane	0.070	0.015	ug/L	0.08000		87	70-130			
1,2-Dibromoethane [2C]	0.069	0.015	ug/L	0.08000		87	70-130			
Surrogate: Pentachloroethane	*0.0929*		ug/L	*0.08000*		*116*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.0974*		ug/L	*0.08000*		*122*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith

ESS Laboratory Work Order: 1402014

Notes and Definitions

U	Analyte included in the analysis, but not detected
HT	The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Joseph Smith

ESS Laboratory Work Order: 1402014

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI0002
http://www.maine.gov/dep/blwq/topic/vessel/lab_list.pdf

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/labcert/labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

Sample and Cooler Receipt Checklist

Client: GZA GeoEnvironmental, Inc.
Client Project ID: _____
Shipped/Delivered Via: ESS Courier

ESS Project ID: 14020014
Date Project Due: 2/10/14
Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present?	* No	10. Are the samples properly preserved?	Yes
Air No.:		11. Proper sample containers used?	Yes
2. Were Custody Seals Present?	No	12. Any air bubbles in the VOA vials?	No
3. Were Custody Seals Intact?	N/A	13. Holding times exceeded?	No
4. Is Radiation count < 100 CPM?	Yes	14. Sufficient sample volumes?	Yes
5. Is a cooler present?	Yes	15. Any Subcontracting needed?	No
Cooler Temp: **2.6**		16. Are ESS labels on correct containers?	(Yes) / No
Iced With: **Ice**		17. Were samples received intact?	(Yes) / No
6. Was COC included with samples?	Yes	ESS Sample IDs: _____	
7. Was COC signed and dated by client?	Yes	Sub Lab: _____	
8. Does the COC match the sample	Yes	Analysis: _____	
9. Is COC complete and correct?	Yes	TAT: _____	

18. Was there need to call project manager to discuss status? If yes, please explain.

_____

_____

_____

Who was called?: _____ By whom? _____

Sample Number	Properly Preserved	Container Type	# of Containers	Preservative	pH time
1	Yes	1 L Glass	2	H2SO4	
1	Yes	1 L Glass	6	NP	
1	Yes	1 L Plastic	1	NP	
1	Yes	250 ml Plastic	1	HNO3	
1	Yes	250 ml Plastic	1	NaOH	-10 1721
1	Yes	40 ml - VOA	6	HCL	cef 2/3/14
1	Yes	500 ml Plastic	1	NP	

Completed By: _____ Date/Time: 2/3/14 1723
Reviewed By: _____ Date/Time: 2/3/14 1730

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS LAB PROJECT ID: 1402014

Turn Time ✓ Standard Rush _____ Approved By: _____

Reporting Limits -

State where samples were collected: (MA) RI CT NH NJ NY ME Other _____

Is this project for any of the following: (please circle)
MA-MCP CT-RCP (RGP) DOD Other _____

Electonic Deliverable Yes ✓ No ____
Format: Excel ___ Access ___ PDF ✓ Other _____

GZA Project Manager: ~~Roger Howard~~ Russ Parkman
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909
(401) 421-4140
Norwood Office Newburyport

Project # 18.0170852.10
Project Name: Joseph Smith CHC
Contract Pricing ____
Special Pricing WO#: _____

ESS Lab Sample ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sample Identification	# of Containers	TSS TRC, Cl	TPH 1664	Cyanide	VOC	EDB	Tot. Phenols	PAH SIM PCB + Phenols	PCB	1,4 Dioxane	Metals	Comment #
1	2-3-14	12:45	Grab	GW	TP-#8	1	P										
	↓	↓	↓	↓	↓	1		G									
						1			P								
						3				V							
						3					V						
						1						G					
						2							G				
						2								G			
						2									G		
	↓	↓	↓	↓	↓	1										P	
Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-____							1	3	5	2	2	3	1	1	1	4	
Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA																	

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present ✓ Yes ____ No
Seals Intact ____ Yes ____ No NA: ✓
Cooler Temperature: 2.6° Bagged ICE

Sampled by: Andy Sargent

Comments: * PM and location changes per client e-mail cmt 2/6/14

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	2/3/14 1600	[signature]	[signature] 2/3/14 1700		[signature] 2/3/14 1720
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Please E-mail all changes to Chain of Custody in writing.

Page ____ of ____

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS LAB PROJECT ID: 1402014

Turn Time ✓ Standard Rush_____ Approved By: _____

Reporting Limits -

State where samples were collected: (MA) RI CT NH NJ NY ME Other_____

Is this project for any of the following: (please circle)
MA-MCP CT-RCP (RGP) DOD Other_____

Electonic Deliverable Yes ✓ No___
Format: Excel___ Access___ PDF ✓ Other_____

GZA Project Manager: Roger Howard
GZA GeoEnvironmental, Inc.
530 Broadway Norwood
Providence, RI 02909 Office
(401) 421-4140

Project # 18.0170852.10
Project Name: Joseph Smith CHC
Contract Pricing ____
Special Pricing WO#: _____

ESS Lab Sample ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sample Identification	# of Containers	Analysis: Hexavalent Cr									Comment #
1	2-3-14	12:45	G	GW	~~[illegible]~~ TP-8	1	P									

Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-____ 1

Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present ✓ Yes ____ No
Seals Intact ____ Yes ____ No NA: ✓
Cooler Temperature: 2.6° Bagged Ice

Sampled by : Andy Sargent

Comments:
24 hr hold time for Cr^{+6}

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	2/3/14 16:00	[signature] 2/3/14 16:00	[signature] 2/3/14 17:00		[signature] 2/3/14 1720
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Please E-mail all changes to Chain of Custody in writing.

Page ____ of ____

ATTACHMENT 10

DILUTION FACTOR CALCULATION

Table 4.--Streamflow characteristics, in cubic feet per second, at selected stream-gaging stations (Continued)

Flow	Station name and site number				
	Charles River near Millis, Mass. (106)	Charles River at Dover, Mass. (130)	Mother Brook at Dedham, Mass. (135)	Charles River at Wellesley, Mass. (139)	Charles River at Waltham, Mass. (147)
MONTHLY (Continued)					
Q4	352	1137	381	877	1177
	246	571	159	532	595
	150	169	26.5	161	195
SDQ4	69.2	231	87.7	189	243
Q5	230	746	253	575	798
	165	359	90.6	332	355
	97.0	158	.00	176	135
SDQ5	54.4	141	56.4	114	137
Q6	103	725	238	572	694
	71.2	205	49.4	186	199
	40.6	67.2	.00	67.3	56.5
SDQ6	23.9	125	49.7	118	115
Q7	54.3	1060	339	280	915
	39.9	125	23.3	101	122
	22.5	19.5	.06	29.2	26.7
SDQ7	11.8	163	49.4	70.3	137
Q8	151	956	306	211	873
	73.8	109	21.8	79.5	105
	25.0	9.01	.00	13	14.6
SDQ8	49.1	162	53.6	58.5	145
Q9	67.6	640	189	253	616
	49.9	103	21.8	89.4	114
	17.7	7.78	.10	14.9	19.6
SDQ9	16.9	120	37.7	61.1	114
LOW FLOW					
7Q2	—	32.5	—	26.8	34.0
7Q10	—	12.9	—	10.3	14.3