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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

JAN 2 9 2015

John Sullivan
Chief Executive Officer
Biltrite Construction
150 Shirley Street
Roxbury, MA 02119

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Patriot Homes Construction site located at 273 D Street & 244 Athens Street, South Boston, MA 02127, Suffolk County; Authorization # MAG910658

Dear Mr. Sullivan:

Based on the review of a Notice of Intent (NOI) submitted by Jennifer Lenz from GZA GeoEnvironmental, Inc., on behalf of South Boston Neighborhood Development Corporation for 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.

Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on selected dilution ranges and technology-based ceiling limitations. With the absence of dilution of freshwater into tidal water, EPA determined that the Dilution Factor Range (DFR) for each parameter for this site is in the one and five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities). Therefore, the limits for arsenic of 36 ug/L, cadmium of 8.9 ug/L, trivalent chromium of 100 ug/L, copper of 3.7 ug/L, lead of 8.5 ug/L, nickel of 8.2 ug/L, selenium of 71 ug/L,

zinc of 85.6 ug/L and iron of 1,000 ug/L, are required to achieve permit compliance at your site.

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 EPA general permit and authorization to discharge will expire on September 9, 2015. You have reported this project will terminate on January15, 2016. Please be aware you are required to reapply for coverage after the EPA expired permit has been reissued. The reissuance date as well as the reapplication submittal date will be posted on the EPA web site at that time. Also, regardless of your project termination date you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 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
Stephen Shea, Boston Water & Sewer Commission
Jennifer A. Lenz, GZA GeoEnvironmental, Inc.

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910658**
Authorization Issued:	January, 2015
Facility/Site Name:	Patriot Homes Construction Development
Facility/Site Address:	273 D Street & 244 Athens Street, South Boston, MA 02127
	Email address of owner: mwinkeller@caritascommunities.org
Legal Name of Operator:	Biltrite Construction
Operator contact name, title, and Address:	John Sullivan, CEO, 150 Shirley Street, Roxbury, MA 02119
	Email: jsullivan@biltrileconstruction.com
Estimated date of the site's Completion:	January 15, 2016
Category and Sub-Category:	Category III. Contaminated Construction Dewatering. Subcategory A&B. General Urban Fill Sites and Known Contaminated Sites
RGP Termination Date:	September 10, 2015
Receiving Water:	Boston Harbor

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

	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)
	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) [4]	100 ug/L/ Me#8260C/ ML 2ug/L
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether (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

	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)
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L
	a. Benzo(a) Anthracene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	b. Benzo(a) Pyrene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	c. Benzo(b)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	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 Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]		Minimum level=ML	
			Saltwater		
	39. Antimony	5.6/ML 10			
√	40. Arsenic **		36	ML	20
√	41. Cadmium **		8.9	ML	10
√	42. Chromium III (trivalent) **		100	ML	15
	43. Chromium VI (hexavalent) **		50.3	ML	10
√	44. Copper **		3.7	ML	15
√	45. Lead **		8.5	ML	20
	46. Mercury **		1.1	ML	0.2
√	47. Nickel **		8.2	ML	20
√	48. Selenium **		71	ML	20
	49. Silver		2.2	ML	10
√	50. Zinc **		85	ML	15
√	51. Iron	1,000		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 "Aroclor 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

January 13, 2015
File No. 01.0171121.40

Mr. Victor Alvarez
United States Environmental Protection Agency – Region 1
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

133 Federal Street
Boston
Massachusetts
02110
617-963-1000
FAX 617-482-6868
http://www.gza.com

Re: Submittal of Notice of Intent (NOI)
Remedial General Permit
Patriot Homes – 273 D Street & 244 Athens Street
South Boston, Massachusetts

Dear Mr. Alvarez:

On behalf of our client, South Boston Neighborhood Development Corp., GZA GeoEnvironmental, Inc. (GZA) is submitting the attached Notice of Intent (NOI) form (Attachment 1) for the Remedial General Permit (RGP) for the Patriot Homes project (the Site).

BACKGROUND

The Site consists of three contiguous properties: 273 D Street (Parcel #01606000), a relatively small lot on Athens Street adjacent to the 273 D Street (Parcel #01605000), and 244 Athens Street (Parcel #01604000). A site locus plan is included as Figure 1 (Attachment 2); a site plan is included as Figure 2 (Attachment 3). The combined lot size of the properties is approximately 17,000 square feet. About two-thirds of the existing building will be demolished and the remaining approximately 40 feet of building fronting D Street will be renovated. A multi-story wood-framed apartment building will be constructed along Athens Street.

It is anticipated that construction dewatering will be required to control groundwater during excavations below the groundwater table. Pumped water will be discharged to a catch basin located on Athens Street near the corner of D Street that connects to the dedicated storm drain line under D Street as shown in Figure 2 (Attachment 3). The storm drain discharges to the Boston Harbor as shown in Figure 3 (Attachment 4)

Dewatering will be accomplished using submersible pumps which will discharge to a sedimentation tank. Sedimentation tank specifications and a schematic are attached in Figure 4 (Attachment 5). The sedimentation tank will include a sorbent boom located near the tank outlet to aid in removing petroleum contaminants if they are encountered. The tank will be accessible for maintenance, monitoring, and sampling purposes.

The sedimentation tank will hold 10,000 gallons and will be constructed to include baffles. The tank size was based on an assumed maximum pumping rate of 100 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 filter prior to discharge. The bag filter 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. The tank shall have a removable cover to facilitate sediment removal and will be equipped with sample ports to obtain discharge measurements.

NOTICE OF INTENT

This NOI has included a review of all 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 City of Boston, Massachusetts.

- Review of the 2012 EPA 303(d) list of Impaired Waters and Total Maximum Daily Loads (TMDLs) for Part 5 of Attachment 1 indicated that the Boston Inner Harbor is listed as an impaired water for dissolved oxygen, enterococcus bacteria, fecal coliform, and polychlorinated biphenyls in fish tissue. A TMDL has not been established for the Boston Inner Harbor. A final TMDL for bacteria has been prepared for the Neponset River, which flows into the Boston Harbor.

- Review of the Interactive Priority and Estimated Habitats provided by the MassWildlife online viewer (2008) shows that neither the Site nor the discharge point are located within a National Heritage & Endangered Species Program (NHESP) Priority Habitats of Rare Species area or Estimated Habitats of Rare Wildlife area. Therefore, permit eligibility meets "Criterion A." As shown on the map generated by the MassWildlife online viewer, which can be found in Attachment 6, no Priority Habitats of Rare Species or Estimated Habitats of Rare Wildlife areas are located downstream of the discharge location.

- An electronic review of the Massachusetts Cultural Resource Information System database, made available through Massachusetts Historical Commission, found no area, building, burial ground, object, or structure is located on the property located at 273 D Street or at 244 Athens Street. The documentation of this review can be found in Attachment 7. In addition, this project involves new construction and the demolition of existing buildings, and historic properties are not affected by the discharge or identified in the path of the discharge; therefore, permit eligibility meets "Criterion 2."

- Laboratory analytical results shown in Part 3 of Attachment 1 are included as Attachment 8.

- Dissolved metals concentrations for arsenic, cadmium, copper, iron, lead, and zinc are below the Appendix III limits. The laboratory analytical results for these dissolved metals are included as Attachment 9.

Please do not hesitate to contact the undersigned, if you have any questions or require further information.

Sincerely,

GZA GEOENVIRONMENTAL, INC.

Jennifer A. Lenz, P.E.
Assistant Project Manager

Mary B. Hall, P.E.
Senior 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: NHESP Map
Attachment 7: MHC Report
Attachment 8: Laboratory Analytical Results
Attachment 9: Supplemental Information – Dissolved Metals Laboratory Analytical Results

cc: MassDEP – Northeastern Region

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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**: Patriot Homes		**Facility/site** mailing address:		
Location of **facility/site**: longitude: -71.05 latitude: 42.34	Facility SIC code(s):	Street: 273 D Street & 244 Athens Street		
b) Name of **facility/site owner:**		Town: South Boston		
Email address of facility/site owner: mwinkeller@caritascommunities.org		State: MA	Zip: 02127	County: Suffolk
Telephone no. of facility/site **owner**: 781-843-1242				
Fax no. of facility/site **owner**: 781-356-1770		**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ⊙ 4. Other ○ if so, describe:		
Address of **owner** (if different from site):		South Boston Veterans Housing LLC		
Street: 365 West Broadway				
Town: South Boston	State: MA	Zip: 02127	County: Suffolk	
c) Legal name of **operator**: Biltrite Construction	**Operator** telephone no: 617-541-9777	**Operator** fax no.:	**Operator** email: see below	
Operator contact name and title: John Sullivan jsullivan@biltriteconstruction.com				
Address of **operator** (if different from owner):	Street: 150 Shirley Street			
Town: Roxbury	State: MA	Zip: 02119	County: Suffolk	

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:

Construction dewatering

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 0.22 Is maximum flow a **design value**? Y ◉ N ○
Average flow (include units) 0.17 Is average flow a design value or estimate? estimate

3) Latitude and longitude of each discharge within 100 feet:
pt.1: lat. 42.3391 long. -71.0502; 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 2/15/2015 end 1/15/2016

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). Figure 4

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 ug/L	916000			
2. Total Residual Chlorine (TRC)		☒	☐	1	grab	4500-ClE	200 ug/L	<10			
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	1	grab	1664A	5000 ug/L	<5000			
4. Cyanide (CN)	57125	☒	☐	1	grab	4500 CN CE	5	<5			
5. Benzene (B)	71432	☒	☐	1	grab	8260B	2	<1.0			
6. Toluene (T)	108883	☒	☐	1	grab	8260B	2	<1.0			
7. Ethylbenzene (E)	100414	☒	☐	1	grab	8260B	2	<1.0			
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐	1	grab	8260B	4	<1.0			
9. Total BTEX [2]	n/a	☒	☐	1	grab	8260B	2	<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	<1.0			
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	1	grab	8260B	10	<25			

***** 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	<1.0			
14. Naphthalene	91203	☒	☐	1	grab	8260B	2	<1.0			
15. Carbon Tetrachloride	56235	☒	☐	1	grab	8260B	5	<1.0			
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	1	grab	8260B	5	<1.0			
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	1	grab	8260B	5	<1.0			
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	1	grab	8260B	5	<1.0			
18a. Total dichlorobenzene		☒	☐	1	grab	8260B	5	<1.0			
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	1	grab	8260B	5	<1.0			
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	1	grab	8260B	5	<1.0			
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	1	grab	8260B	5	<1.0			
22. cis-1,2 Dichloroethene (DCE)	156592	☒	☐	1	grab	8260B	5	<1.0			
23. Methylene Chloride	75092	☒	☐	1	grab	8260B	5	<2.0			
24. Tetrachloroethene (PCE)	127184	☒	☐	1	grab	8260B	5	<1.0			
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	1	grab	8260B	5	<1.0			
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	1	grab	8260B	5	<1.0			
27. Trichloroethene (TCE)	79016	☒	☐	1	grab	8260B	5	<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	<1.0			
29. Acetone	67641	☒	☐	1	grab	8260B	50	<10.0			
30. 1,4 Dioxane	123911	☒	☐	1	grab	8270D SIM	5	<0.3			
31. Total Phenols	108952	☒	☐	1	grab	420.1	2	<100			
32. Pentachlorophenol (PCP)	87865	☒	☐	1	grab	8270C SIM	5	<1.00			
33. Total Phthalates (Phthalate esters) [4]		☒	☐	1	grab	8270C SIM	5	<2.78			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	1	grab	8270C SIM	5	<2.78			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐								
a. Benzo(a) Anthracene	56553	☒	☐	1	grab	8270C SIM	0.1	<0.06			
b. Benzo(a) Pyrene	50328	☒	☐	1	grab	8270C SIM	0.1	<0.06			
c. Benzo(b)Fluoranthene	205992	☒	☐	1	grab	8270C SIM	0.1	<0.06			
d. Benzo(k)Fluoranthene	207089	☒	☐	1	grab	8270C SIM	0.1	<0.06			
e. Chrysene	21801	☒	☐	1	grab	8270C SIM	0.1	<0.06			
f. Dibenzo(a,h)anthracene	53703	☒	☐	1	grab	8270C SIM	0.1	<0.06			
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	1	grab	8270C SIM	0.1	<0.06			
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	0.1	<0.22			
i. Acenaphthylene	208968	☒	☐	1	grab	8270C SIM	0.1	<0.22			
j. Anthracene	120127	☒	☐	1	grab	8270C SIM	0.1	<0.22			
k. Benzo(ghi) Perylene	191242	☒	☐	1	grab	8270C SIM	0.1	<0.22			
l. Fluoranthene	206440	☒	☐	1	grab	8270C SIM	0.1	<0.22			
m. Fluorene	86737	☒	☐	1	grab	8270C SIM	0.1	<0.22			
n. Naphthalene	91203	☒	☐	1	grab	8270C SIM	0.1	<0.22			
o. Phenanthrene	85018	☒	☐	1	grab	8270C SIM	0.1	<0.22			
p. Pyrene	129000	☒	☐	1	grab	8270C SIM	0.1	<0.22			
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	1	grab	8082A	0.5	<0.12			
38. Chloride	16887006	☐	☒	1	grab	300.0	100	72,700			
39. Antimony	7440360	☒	☐	1	grab	6020A	0.5	<0.5			
40. Arsenic	7440382	☐	☒	1	grab	6020A	1.0	10.2			
41. Cadmium	7440439	☐	☒	1	grab	6020A	0.2	0.3 J			
42. Chromium III (trivalent)	16065831	☐	☒	1	grab	6020A	1.0	28			
43. Chromium VI (hexavalent)	18540299	☒	☐	1	grab	7196A	10	<10			
44. Copper	7440508	☐	☒	1	grab	6020A	0.5	52.5			
45. Lead	7439921	☐	☒	1	grab	6020A	0.2	130			
46. Mercury	7439976	☒	☐	1	grab	7470A	0.2	<0.20			
47. Nickel	7440020	☐	☒	1	grab	6020A	0.2	28.4			
48. Selenium	7782492	☐	☒	1	grab	6020A	2	2.0			
49. Silver	7440224	☒	☐	1	grab	6020A	0.2	<0.2			
50. Zinc	7440666	☐	☒	1	grab	6020A	5	87.9 J			
51. Iron	7439896	☐	☒	1	grab	6020A	50	22100			
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? Copper, Lead, Nickel, Zinc, Iron
Step 2: For any metals which exceed the **Appendix III** limits, calculate the **dilution factor (DF)** using the formula in Part I.A.3.c (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metal: Copper, Lead, Nickel, Zinc, Iron DF: 1 Metal: DF: Metal: DF: Metal: DF: Etc.	Look up the limit calculated at the corresponding dilution factor in **Appendix IV.** Do any of the metals in the **influent** have the potential to exceed the corresponding **effluent** limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y◉ N○ If Y, list which metals: Copper, Lead, Nickel, Zinc, Iron

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:

Dewatering will be accomplished using a submersible pump(s) which will discharge to a sedimentation tank. Sedimentation tank specifications and a schematic are attached in Figure 4. The sedimentation tank will include a sorbent boom located near the tank outlet to aid in removing petroleum contaminants if they are encountered. The sedimentation tank will hold 10,000 gallons and will be constructed to include baffles. The tank size was based on an assumed maximum pumping rate of 100 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 filter prior to discharge.

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 75 gpm Maximum flow rate of treatment system 100 gpm
Design flow rate of treatment system 100 gpm

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

None

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 Boston Harbor via Reserved Channel.

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 SB

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

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.

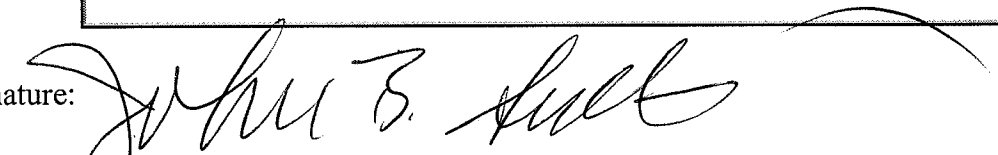
7. Supplemental information.

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

Dissolved metals concentrations are below the Appendix III limits for the following analytes detected as part of recent testing:
Arsenic - 6.2 ug/L
Cadmium - <0.12 ug/L
Copper - <2.5 ug/L
Iron - 405 ug/L
Lead - <2.5 ug/L
Zinc - 32 ug/L
Dissolved metals laboratory analytical results are included as Attachment 9.

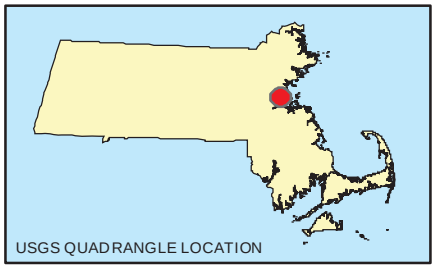
8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

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:	Patriot Homes
Operator signature:	
Printed Name &Title:	John Sullivan CEO
Date:	January 9th, 2015

ATTACHMENT 2

FIGURE 1 – SITE LOCUS MAP



SOURCE : SCANNED USGS TOPOGRAPHIC QUADRANGLES
SCANNED BY THE MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS, MASSGIS. DISTRIBUTED JUNE, 2001.

Data Supplied by : MASSGIS

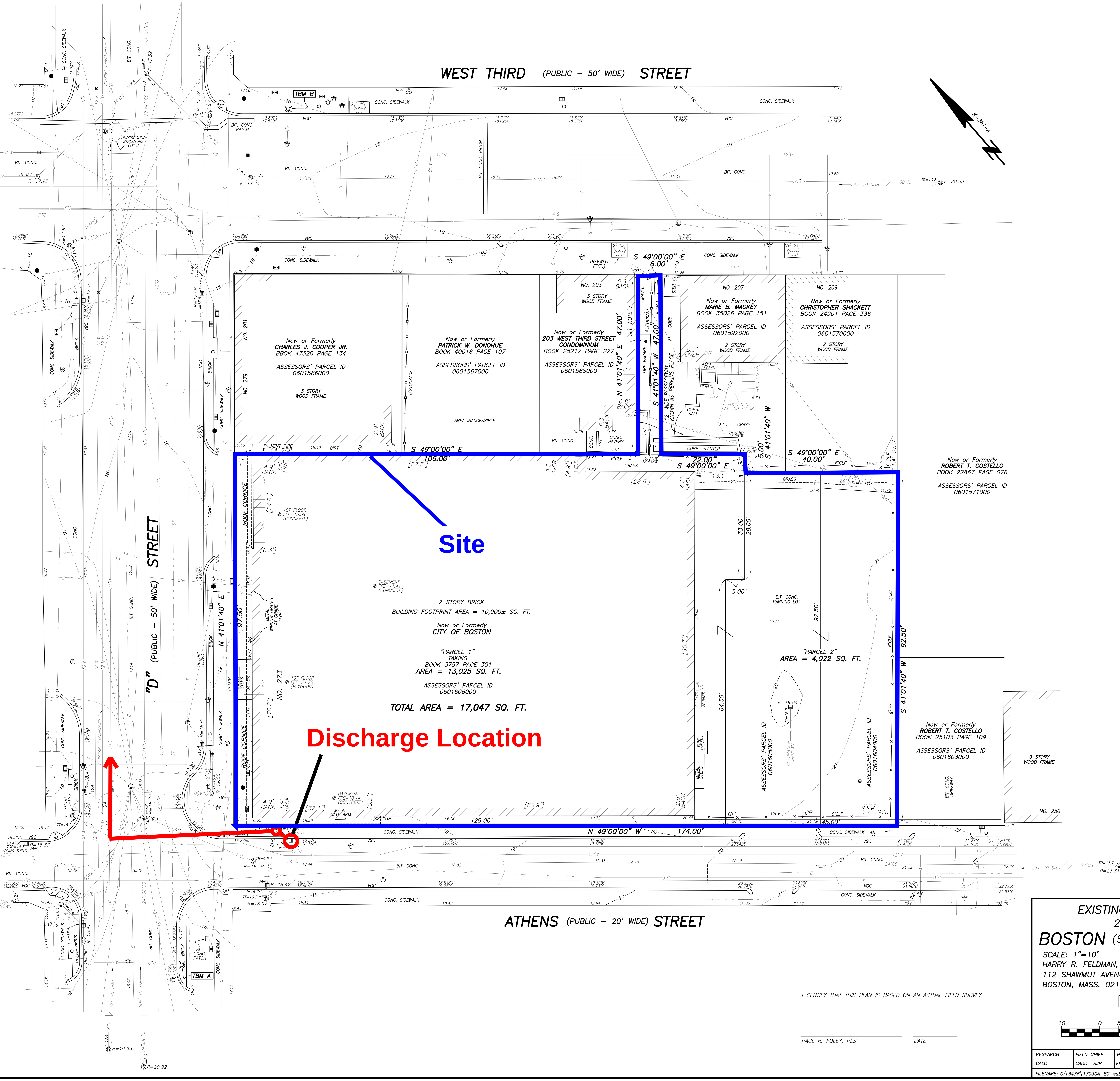
0 1,000 2,000 4,000 6,000 Feet

N W E S

GZA	PROJ. MGR.: DEL DESIGNED BY: DEL REVIEWED BY: LF OPERATOR: EMD DATE: 12-20-2012	LOCUS PLAN SHOWING 500 FOOT & 1/2 MILE RADII	JOB NO. 01.0171121.12
		273 D STREET SOUTH BOSTON, MASSACHUSETTS	FIGURE NO. 1

ATTACHMENT 3

FIGURE 2 – SITE PLAN



NOTES:

1) BENCH MARK INFORMATION:

BENCH MARKS USED:
RIGHT OUTSIDE CORNER OF LOWER STONE STEP AT #167 D STREET.
ELEVATION=17.30

CHISELED SQUARE ON THE LEFT OUTSIDE CORNER OF LOWER CONCRETE STEP AT THE ENTRANCE OF THE CONDON SCHOOL ON D STREET.
ELEVATION=22.28

TEMPORARY BENCH MARKS SET:
TBM–A: X–CUT ON FRONT RIGHT HYDRANT BOLT ON THE SOUTHEASTERLY CORNER OF D STREET AND ATHENS STREET. (AS SHOWN ON PLAN)
ELEVATION=21.60

TBM–B: X–CUT ON FRONT LEFT HYDRANT BOLT ON THE NORTHEASTERLY CORNER OF D STREET AND WEST THIRD STREET. (AS SHOWN ON PLAN)
ELEVATION=20.05

2) ELEVATIONS REFER TO BOSTON CITY BASE.

3) CONTOUR INTERVAL EQUALS ONE (1) FOOT.

4) BY GRAPHIC PLOTTING ONLY, THE PARCELS SHOWN HEREON LIE WITHIN A ZONE "X" (UNSHADED), AN AREA OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD, AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A) FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR SUFFOLK COUNTY, MASSACHUSETTS, MAP NUMBER 25025C0083G, AND COMMUNITY PANEL NUMBER 250286 HAVING AN EFFECTIVE DATE OF SEPTEMBER 25, 2009.

5) UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY. WE CANNOT ASSUME RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES THAT ARE OMITTED OR INACCURATELY SHOWN ON SAID RECORD PLANS, SINCE SUB–SURFACE UTILITIES CANNOT BE VISIBLY VERIFIED. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED AND THE ACTUAL LOCATION OF SUB–SURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL, TOLL FREE, THE DIG SAFE CALL CENTER AT 1–888–344–7233 SEVENTY–TWO HOURS PRIOR TO EXCAVATION.

6) THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF HARRY R. FELDMAN, INC. ISSUED TO OUR CLIENT FOR PURPOSES RELATED DIRECTLY AND SOLELY TO HARRY R. FELDMAN INC.'S SCOPE OF SERVICES UNDER CONTRACT TO OUR CLIENT FOR THIS PROJECT. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY REASON BY ANY PARTY FOR PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN CONSENT IS PROVIDED BY HARRY R. FELDMAN, INC.

7) THERE ARE MULTIPLE ENCROACHMENTS UPON LOCUS BELONGING TO NO. 203 WEST THIRD STREET AND NO. 207 WEST THIRD STREET, INCLUDING, BUT NOT LIMITED TO: LANDSCAPING TIMBERS, A COBBLESTONE PLANTER, A FIRE ESCAPE, A 4' STOCKADE FENCE, AND PAVING.

REFERENCES:

SUFFOLK COUNTY REGISTRY OF DEEDS
BOOK 3757 PAGE 301
BOOK 3780 PAGE 037
BOOK 10236 PAGE END
BOOK 29443 PAGE END

CITY OF BOSTON ENGINEERING DEPARTMENT
PLAN NO. K–861–A
PLAN NO. L–1055
PLAN NO. L–4560

LEGEND

Ⓢ	SEWER MANHOLE
Ⓓ	DRAIN MANHOLE
Ⓔ	ELECTRIC MANHOLE
Ⓒ	CABLE TV MANHOLE
Ⓣ	TELEPHONE MANHOLE
MH	MANHOLE
	CATCH BASIN
	GAS SHUT OFF
	WATER SHUT OFF
	BOSTON WATER VALVE
	HYDRANT
SP	STANDPIPE
	OBSERVATION WELL
AD	AREA DRAIN
CO	CLEANOUT
GP	GATE POST
FA	FIRE ALARM
	LIGHT POLE
	UTILITY POLE
HH	HANDHOLE
	TRAFFIC CONTROL BOX
	TRAFFIC SIGNAL
MAIL	MAILBOX
	HANDICAP RAMP
	DECIDUOUS TREE
TBM	TEMPORARY BENCH MARK
TYP.	TYPICAL
VGC	VERTICAL GRANITE CURB
BIT.	BITUMINOUS
CONC.	CONCRETE
COBB.	COBBLESTONE
ENT.	ENTRANCE
ABD	ABANDONED
CLF	CHAIN LINK FENCE
LST	LANDSCAPE TIMBER
TC	TOP OF CURB
BC	BOTTOM OF CURB
TW	TOP OF WALL
BW	BOTTOM OF WALL
TS	TOP OF STEP
BS	BOTTOM OF STEP
R=	RIM ELEVATION
I=	INVERT ELEVATION
TR=	CENTERLINE OF TROUGH
TT=	TOP OF TRAP
NVP	NO VISIBLE PIPE
SMH	SEWER MANHOLE
DMH	DRAIN MANHOLE
FFE	FINISHED FLOOR ELEVATION
[x.x']	BUILDING DIMENSION
——S——	SEWER
——D——	DRAIN
——CS——	COMBINED SEWER
——W——	WATER
——G——	GAS
——E——	ELECTRIC
——T——	TELEPHONE
——C——	CABLE
——ST——	STEAM
——L——	LIGHTING
——PTC——	PIPE TYPE CABLE
– – –	DIGSAFE PAINT MARKING
——OHW——	OVERHEAD WIRE
—X——X—	FENCE
—□——□—	WOOD FENCE

EXISTING CONDITIONS PLAN

273 "D" STREET

BOSTON (SOUTH BOSTON), MASS.

SCALE: 1"=10' — JULY 26, 2012

HARRY R. FELDMAN, INC. — LAND SURVEYORS
112 SHAWMUT AVENUE — PHONE: (617)357–9740
BOSTON, MASS. 02118 — www.harryrfeldman.com

FELDMAN
Professional Land Surveyors

10 0 5 10 20 40
GRAPHIC SCALE

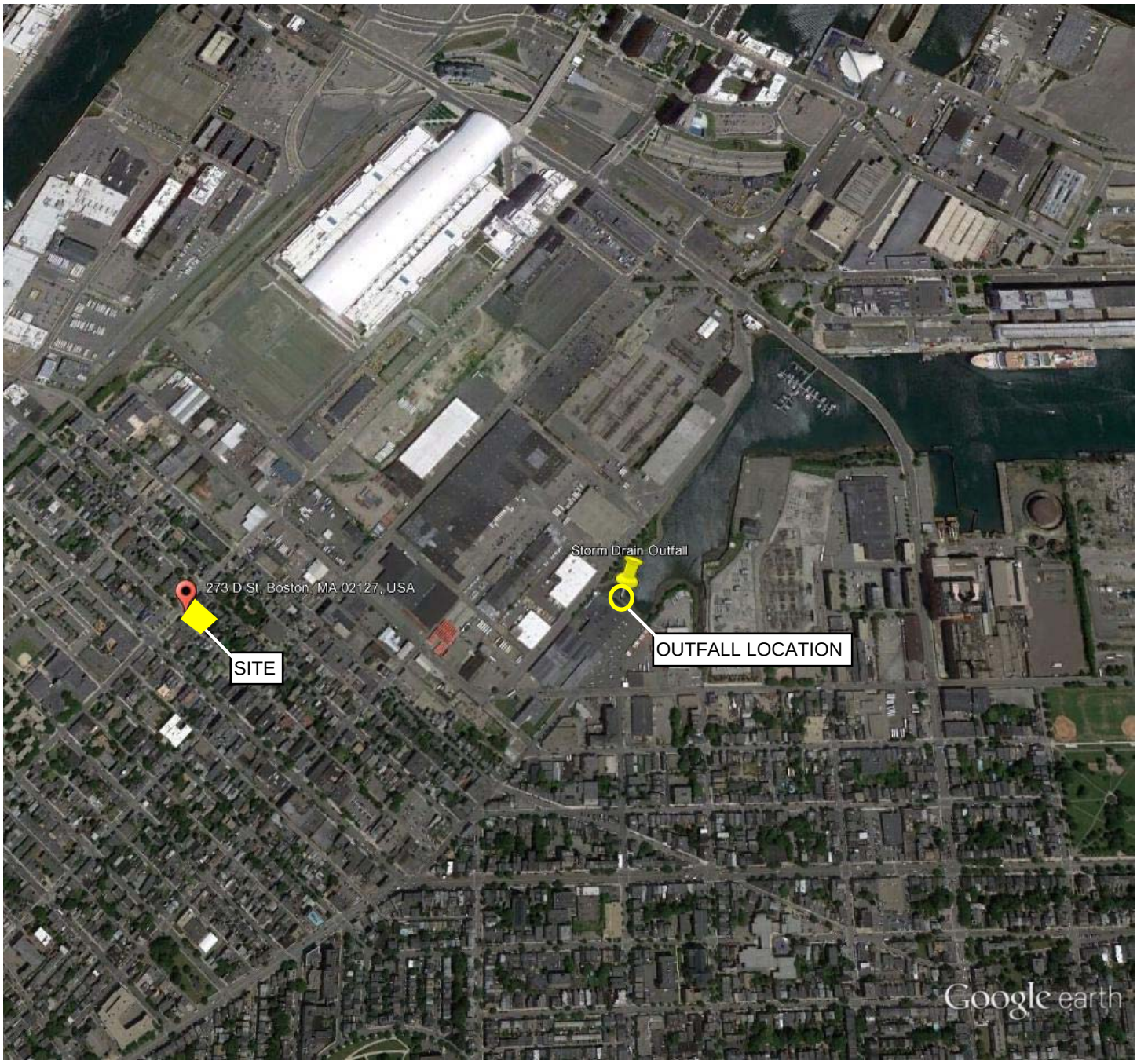
RESEARCH	FIELD CHIEF	PROJ MGR PRF	APPROVED	SHEET NO. 1 OF 1
CALC	CADD RJP	FIELD CHECKED	CRD FILE 13030A–EC	JOB NO. 13030A

FILENAME: C:\3436\13030A–EC–submitted–08–09–2012.dwg

ATTACHMENT 4

FIGURE 3 –OUTFALL DISCHARGE LOCATION

Figure 3 - Storm Drain Outfall Location

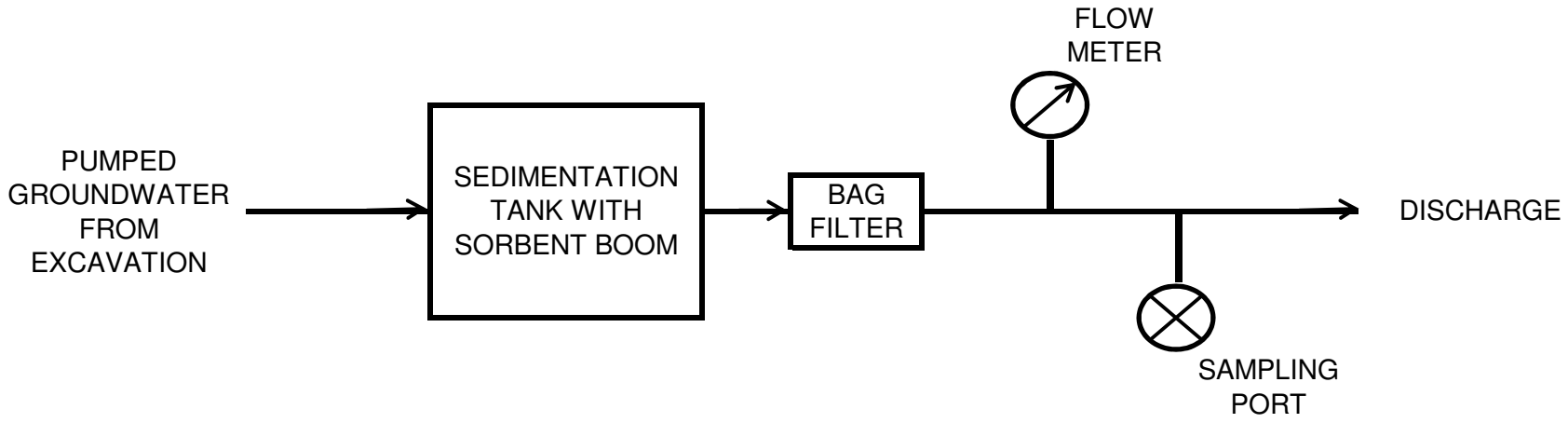


Google earth

feet 2000
meters 800

ATTACHMENT 5

FIGURE 4 – PROCESS FLOW DIAGRAM



DISCHARGE TO DEDICATED STORM DRAIN CATCH BASIN ON ATHENS STREET NEAR THE CORNER OF D STREET

FIGURE 4
PROCESS FLOW DIAGRAM
PATRIOTS HOME
BOSTON, MA

Jun-13
GZA FILE NO. 01.0171121.40

ATTACHMENT 6

NHESP MAP

Attachment 6

ATTACHMENT 7

MHC REPORT

Massachusetts Cultural Resource Information System
MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street No: 273; Street Name: D St; Resource Type(s): Building, Area, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

No Results Found

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street No: 244; Street Name: Athens St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

No Results Found

ATTACHMENT 8

LABORATORY ANALYTICAL RESULTS

CERTIFICATE OF ANALYSIS

Jennifer Lenz
GZA GeoEnvironmental, Inc.
249 Vanderbilt Avenue
Norwood, MA 02062

RE: Caritas S Boston - RGP (01.0171121.40)
ESS Laboratory Work Order Number: 1303520

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 12:22 pm, Apr 08, 2013

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 Calibratins, 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: Caritas S Boston - RGP

ESS Laboratory Work Order: 1303520

SAMPLE RECEIPT

The following samples were received on March 28, 2013 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	SampleName	Matrix	Analysis
1303520-01	B-1 OW	Ground Water	1664A, 2540D, 300.0, 420.1, 4500 CN CE, 4500-Cl E, 504.1, 6020A, 7196A, 7470A, 8082A, 8260B, 8270C SIM, 8270D

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP

ESS Laboratory Work Order: 1303520

PROJECT NARRATIVE

8270C(SIM) Polynuclear Aromatic Hydrocarbons
CWD0003-CCV1 **Calibration required quadratic regression (Q).**
Diethylphthalate (113% @ 70-130%)

Total Metals Aqueous
CD30330-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Silver (121% @ 80-120%)

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: Caritas S Boston - RGP

ESS Laboratory Work Order: 1303520

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
8015C - 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
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5035 - Solid Purge and Trap

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP
Client Sample ID: B-1 OW
Date Sampled: 03/28/13 12:00
Percent Solids: N/A

ESS Laboratory Work Order: 1303520
ESS Laboratory Sample ID: 1303520-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3020A

Total Metals Aqueous

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (0.5)	0.2	6020A		1	SVD	04/04/13 18:56	50	25	CD30330
Arsenic	**10.2** (1.0)	0.5	6020A		1	SVD	04/04/13 18:56	50	25	CD30330
Cadmium	**J 0.3** (0.5)	0.2	6020A		1	SVD	04/04/13 18:56	50	25	CD30330
Chromium	**28** (20)		6020A		20	SVD	04/05/13 13:18	50	25	CD30330
Chromium (III)	**28** (20)		6020A		20	LLZ	04/05/13 13:18	1	1	[CALC]
Copper	**52.5** (20.0)	10.0	6020A		20	SVD	04/05/13 13:18	50	25	CD30330
Iron	**22100** (1000)	500	6020A		20	SVD	04/05/13 13:18	50	25	CD30330
Lead	**130** (4.0)	2.0	6020A		20	SVD	04/05/13 13:18	50	25	CD30330
Mercury	ND (0.20)		7470A		1	NAR	04/04/13 8:48	20	40	CD30202
Nickel	**28.4** (4.0)	2.0	6020A		20	SVD	04/05/13 13:18	50	25	CD30330
Selenium	**2.0** (1.0)	0.5	6020A		1	SVD	04/04/13 18:56	50	25	CD30330
Silver	ND (0.2)	0.1	6020A		1	SVD	04/04/13 18:56	50	25	CD30330
Zinc	**J 87.9** (100)	50.0	6020A		20	SVD	04/05/13 13:18	50	25	CD30330

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP
Client Sample ID: B-1 OW
Date Sampled: 03/28/13 12:00
Percent Solids: N/A
Initial Volume: 860
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 1303520
ESS Laboratory Sample ID: 1303520-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: TAJ
Prepared: 4/2/13 11:00
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.12)	8082A		1	04/04/13 7:42		CD30416
Aroclor 1221	ND (0.12)	8082A		1	04/04/13 7:42		CD30416
Aroclor 1232	ND (0.12)	8082A		1	04/04/13 7:42		CD30416
Aroclor 1242	ND (0.12)	8082A		1	04/04/13 7:42		CD30416
Aroclor 1248	ND (0.12)	8082A		1	04/04/13 7:42		CD30416
Aroclor 1254	ND (0.12)	8082A		1	04/04/13 7:42		CD30416
Aroclor 1260	ND (0.12)	8082A		1	04/04/13 7:42		CD30416
Aroclor 1262	ND (0.12)	8082A		1	04/04/13 7:42		CD30416
Aroclor 1268	ND (0.12)	8082A		1	04/04/13 7:42		CD30416

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*61 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*60 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*59 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*65 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP
Client Sample ID: B-1 OW
Date Sampled: 03/28/13 12:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1303520
ESS Laboratory Sample ID: 1303520-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: NS

8260B Volatile Organic Compounds

Analyte	Results (MRL)	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1-Trichloroethane	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
1,1,2-Trichloroethane	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
1,1-Dichloroethane	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
1,1-Dichloroethene	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
1,2-Dichlorobenzene	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
1,2-Dichloroethane	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
1,3-Dichlorobenzene	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
1,4-Dichlorobenzene	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Acetone	ND (10.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Benzene	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Carbon Tetrachloride	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
cis-1,2-Dichloroethene	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Ethylbenzene	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Methyl tert-Butyl Ether	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Methylene Chloride	ND (2.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Naphthalene	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Tertiary-amyl methyl ether	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Tertiary-butyl Alcohol	ND (25.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Tetrachloroethene	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Toluene	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Trichloroethene	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Vinyl Chloride	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Xylene O	ND (1.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227
Xylene P,M	ND (2.0)	8260B		1	04/02/13 19:34	CWD0029	CD30227

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*114 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*91 %*		*70-130*
Surrogate: Dibromofluoromethane	*115 %*		*70-130*
Surrogate: Toluene-d8	*103 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP
Client Sample ID: B-1 OW
Date Sampled: 03/28/13 12:00
Percent Solids: N/A
Initial Volume: 910
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 1303520
ESS Laboratory Sample ID: 1303520-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 4/1/13 18:00

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

Analyte	Results (MRL)	Method	Limit	DF	Analyzed	Sequence	Batch
1,4-Dioxane	ND (0.3)	8270D		1	04/03/13 1:02	CWD0028	CD30123

	%Recovery	Qualifier	Limits
Surrogate: 1,4-Dioxane-d8	65 %		15-115

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP
Client Sample ID: B-1 OW
Date Sampled: 03/28/13 12:00
Percent Solids: N/A
Initial Volume: 900
Final Volume: 0.25
Extraction Method: 3510C

ESS Laboratory Work Order: 1303520
ESS Laboratory Sample ID: 1303520-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: IBM
Prepared: 4/1/13 14:00

8270C(SIM) Polynuclear Aromatic Hydrocarbons

Analyte	Results (MRL)	Method	Limit	DF	Analyzed	Sequence	Batch
Acenaphthene	ND (0.22)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Acenaphthylene	ND (0.22)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Anthracene	ND (0.22)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Benzo(a)anthracene	ND (0.06)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Benzo(a)pyrene	ND (0.06)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Benzo(b)fluoranthene	ND (0.06)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Benzo(g,h,i)perylene	ND (0.22)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Benzo(k)fluoranthene	ND (0.06)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
bis(2-Ethylhexyl)phthalate	ND (2.78)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Butylbenzylphthalate	ND (2.78)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Chrysene	ND (0.06)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Dibenzo(a,h)Anthracene	ND (0.06)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Diethylphthalate	ND (2.78)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Dimethylphthalate	ND (2.78)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Di-n-butylphthalate	ND (2.78)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Di-n-octylphthalate	ND (2.78)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Fluoranthene	ND (0.22)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Fluorene	ND (0.22)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Indeno(1,2,3-cd)Pyrene	ND (0.06)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Naphthalene	ND (0.22)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Pentachlorophenol	ND (1.00)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Phenanthrene	ND (0.22)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118
Pyrene	ND (0.22)	8270C SIM		1	04/01/13 20:25	CWD0003	CD30118

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*85 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*52 %*		*15-110*
Surrogate: 2-Fluorobiphenyl	*44 %*		*30-130*
Surrogate: Nitrobenzene-d5	*39 %*		*30-130*
Surrogate: p-Terphenyl-d14	*92 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP
Client Sample ID: B-1 OW
Date Sampled: 03/28/13 12:00
Percent Solids: N/A

ESS Laboratory Work Order: 1303520
ESS Laboratory Sample ID: 1303520-01
Sample Matrix: Ground Water

Classical Chemistry

Analyte	Results (MRL)	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Chloride	**72.7** (50.0)	300.0		100	JLK	04/03/13 13:12	mg/L	CD30305
Hexavalent Chromium	ND (10)	7196A		1	LLZ	03/29/13 9:30	ug/L	CC32905
Phenols	ND (100)	420.1		1	EEM	04/02/13 15:05	ug/L	CD30217
Total Cyanide (LL)	ND (0.0050)	4500 CN CE		1	JLK	04/02/13 13:10	mg/L	CD30221
Total Petroleum Hydrocarbon	ND (5)	1664A		1	BLY	04/03/13 0:00	mg/L	CD30133
Total Residual Chlorine	ND (10)	4500-Cl E		1	EEM	03/29/13 11:40	ug/L	CC32909
Total Suspended Solids	**916** (10)	2540D		1	BLY	03/29/13 10:10	mg/L	CC32903

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP
Client Sample ID: B-1 OW
Date Sampled: 03/28/13 12:00
Percent Solids: N/A
Initial Volume: 35
Final Volume: 2
Extraction Method: 504/8011

ESS Laboratory Work Order: 1303520
ESS Laboratory Sample ID: 1303520-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: SEP
Prepared: 3/29/13 17:00

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

Analyte	Results (MRL)	Method	Limit	DF	Analyzed	Sequence	Batch
1,2-Dibromoethane	ND (0.015)	504.1		1	03/30/13 4:37		CC32946

	%Recovery	Qualifier	Limits
Surrogate: Pentachloroethane	*104 %*		*30-150*
Surrogate: Pentachloroethane [2C]	*138 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP

ESS Laboratory Work Order: 1303520

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals Aqueous										
Batch CD30202 - 245.1/7470A										
Blank										
Mercury	ND	0.20	ug/L							
LCS										
Mercury	5.15	0.20	ug/L	6.000		86	80-120			
LCS Dup										
Mercury	5.25	0.20	ug/L	6.000		88	80-120	2	20	
Batch CD30330 - 3020A										
Blank										
Antimony	ND	0.5	ug/L							
Arsenic	ND	1.0	ug/L							
Cadmium	ND	0.5	ug/L							
Chromium	ND	1	ug/L							
Copper	ND	1.0	ug/L							
Iron	ND	50.0	ug/L							
Nickel	0.1	0.2	ug/L							J
Selenium	ND	1.0	ug/L							
Silver	ND	0.2	ug/L							
Zinc	ND	5.0	ug/L							
LCS										
Antimony	9.5	0.5	ug/L	10.00		95	80-120			
Arsenic	9.5	1.0	ug/L	10.00		95	80-120			
Cadmium	9.9	0.5	ug/L	10.00		99	80-120			
Chromium	9.83	1	ug/L	10.00		98	80-120			
Copper	10.3	1.0	ug/L	10.00		103	80-120			
Iron	471	50.0	ug/L	500.0		94	80-120			
Nickel	9.4	0.2	ug/L	10.00		94	80-120			
Selenium	9.7	1.0	ug/L	10.00		97	80-120			
Silver	11.7	0.2	ug/L	10.00		117	80-120			
Zinc	10.0	5.0	ug/L	10.00		100	80-120			
LCS Dup										
Antimony	9.9	0.5	ug/L	10.00		99	80-120	3	20	
Arsenic	9.6	1.0	ug/L	10.00		96	80-120	0.9	20	
Cadmium	10.3	0.5	ug/L	10.00		103	80-120	3	20	
Chromium	10.2	1	ug/L	10.00		102	80-120	4	20	
Copper	10.5	1.0	ug/L	10.00		105	80-120	2	20	
Iron	470	50.0	ug/L	500.0		94	80-120	0.2	20	
Nickel	9.4	0.2	ug/L	10.00		94	80-120	0.07	20	
Selenium	10.1	1.0	ug/L	10.00		101	80-120	4	20	
Silver	12.1	0.2	ug/L	10.00		121	80-120	3	20	B+
Zinc	10.0	5.0	ug/L	10.00		100	80-120	0.5	20	
8082A Polychlorinated Biphenyls (PCB)										
Batch CD30416 - 3510C										

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP

ESS Laboratory Work Order: 1303520

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CD30416 - 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							
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							

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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 CD30416 - 3510C										
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							
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							

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Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CD30416 - 3510C										
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	*0.0356*		ug/L	*0.05000*		*71*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0359*		ug/L	*0.05000*		*72*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0243*		ug/L	*0.05000*		*49*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0247*		ug/L	*0.05000*		*49*	*30-150*			
LCS										
Aroclor 1016	0.93	0.10	ug/L	1.000		93	40-140			
Aroclor 1260	0.82	0.10	ug/L	1.000		82	40-140			
Surrogate: Decachlorobiphenyl	*0.0486*		ug/L	*0.05000*		*97*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0441*		ug/L	*0.05000*		*88*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0328*		ug/L	*0.05000*		*66*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0348*		ug/L	*0.05000*		*70*	*30-150*			
LCS Dup										
Aroclor 1016	0.93	0.10	ug/L	1.000		93	40-140	0.3	20	
Aroclor 1260	0.85	0.10	ug/L	1.000		85	40-140	4	20	
Surrogate: Decachlorobiphenyl	*0.0477*		ug/L	*0.05000*		*95*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0450*		ug/L	*0.05000*		*90*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0323*		ug/L	*0.05000*		*65*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0346*		ug/L	*0.05000*		*69*	*30-150*			
8260B Volatile Organic Compounds										
Batch CD30227 - 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							
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							

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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 CD30227 - 5030B										
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	*28.8*		ug/L	*25.00*		*115*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*23.1*		ug/L	*25.00*		*92*	*70-130*			
Surrogate: Dibromofluoromethane	*28.6*		ug/L	*25.00*		*114*	*70-130*			
Surrogate: Toluene-d8	*25.4*		ug/L	*25.00*		*102*	*70-130*			
LCS										
1,1,1-Trichloroethane	12.5		ug/L	10.00		125	70-130			
1,1,2-Trichloroethane	12.0		ug/L	10.00		120	70-130			
1,1-Dichloroethane	11.3		ug/L	10.00		113	70-130			
1,1-Dichloroethene	10.2		ug/L	10.00		102	70-130			
1,2-Dichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2-Dichloroethane	12.2		ug/L	10.00		122	70-130			
1,3-Dichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,4-Dichlorobenzene	11.2		ug/L	10.00		112	70-130			
Acetone	57.7		ug/L	50.00		115	70-130			
Benzene	10.9		ug/L	10.00		109	70-130			
Carbon Tetrachloride	11.3		ug/L	10.00		113	70-130			
cis-1,2-Dichloroethene	10.6		ug/L	10.00		106	70-130			
Ethylbenzene	9.0		ug/L	10.00		90	70-130			
Methyl tert-Butyl Ether	10.0		ug/L	10.00		100	70-130			
Methylene Chloride	12.3		ug/L	10.00		123	70-130			
Naphthalene	9.3		ug/L	10.00		93	70-130			
Tertiary-amyl methyl ether	9.4		ug/L	10.00		94	70-130			
Tertiary-butyl Alcohol	47.2		ug/L	50.00		94	70-130			
Tetrachloroethene	7.9		ug/L	10.00		79	70-130			
Toluene	10.8		ug/L	10.00		108	70-130			
Trichloroethene	11.4		ug/L	10.00		114	70-130			
Vinyl Chloride	12.0		ug/L	10.00		120	70-130			
Xylene O	8.7		ug/L	10.00		87	70-130			
Xylene P,M	17.1		ug/L	20.00		86	70-130			
Surrogate: 1,2-Dichloroethane-d4	*25.3*		ug/L	*25.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*22.4*		ug/L	*25.00*		*89*	*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 CD30227 - 5030B										
Surrogate: Dibromofluoromethane	*25.9*		ug/L	*25.00*		*103*	*70-130*			
Surrogate: Toluene-d8	*22.3*		ug/L	*25.00*		*89*	*70-130*			
LCS Dup										
1,1,1-Trichloroethane	12.2		ug/L	10.00		122	70-130	2	25	
1,1,2-Trichloroethane	11.5		ug/L	10.00		115	70-130	5	25	
1,1-Dichloroethane	11.1		ug/L	10.00		111	70-130	1	25	
1,1-Dichloroethene	11.0		ug/L	10.00		110	70-130	8	25	
1,2-Dichlorobenzene	10.0		ug/L	10.00		100	70-130	3	25	
1,2-Dichloroethane	12.1		ug/L	10.00		121	70-130	1	25	
1,3-Dichlorobenzene	10.0		ug/L	10.00		100	70-130	3	25	
1,4-Dichlorobenzene	10.8		ug/L	10.00		108	70-130	4	25	
Acetone	52.0		ug/L	50.00		104	70-130	10	25	
Benzene	10.9		ug/L	10.00		109	70-130	0.09	25	
Carbon Tetrachloride	11.9		ug/L	10.00		119	70-130	5	25	
cis-1,2-Dichloroethene	11.1		ug/L	10.00		111	70-130	4	25	
Ethylbenzene	9.0		ug/L	10.00		90	70-130	0.3	25	
Methyl tert-Butyl Ether	10.1		ug/L	10.00		101	70-130	0.4	25	
Methylene Chloride	12.0		ug/L	10.00		120	70-130	3	25	
Naphthalene	8.8		ug/L	10.00		88	70-130	6	25	
Tertiary-amyl methyl ether	9.1		ug/L	10.00		91	70-130	3	25	
Tertiary-butyl Alcohol	43.7		ug/L	50.00		87	70-130	8	25	
Tetrachloroethene	8.0		ug/L	10.00		80	70-130	1	25	
Toluene	10.8		ug/L	10.00		108	70-130	0.09	25	
Trichloroethene	11.7		ug/L	10.00		117	70-130	3	25	
Vinyl Chloride	11.8		ug/L	10.00		118	70-130	2	25	
Xylene O	8.4		ug/L	10.00		84	70-130	3	25	
Xylene P,M	17.3		ug/L	20.00		86	70-130	0.9	25	
Surrogate: 1,2-Dichloroethane-d4	*24.8*		ug/L	*25.00*		*99*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*21.9*		ug/L	*25.00*		*87*	*70-130*			
Surrogate: Dibromofluoromethane	*25.5*		ug/L	*25.00*		*102*	*70-130*			
Surrogate: Toluene-d8	*22.4*		ug/L	*25.00*		*90*	*70-130*			
8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution										
Batch CD30123 - 3520C										
Blank										
1,4-Dioxane	ND	0.2	ug/L							
Surrogate: 1,4-Dioxane-d8	*3.24*		ug/L	*5.000*		*65*	*15-115*			
LCS										
1,4-Dioxane	10.0	0.2	ug/L	10.00		100	40-140			
Surrogate: 1,4-Dioxane-d8	*3.64*		ug/L	*5.000*		*73*	*15-115*			
LCS Dup										
1,4-Dioxane	9.7	0.2	ug/L	10.00		97	40-140	3	20	
Surrogate: 1,4-Dioxane-d8	*3.79*		ug/L	*5.000*		*76*	*15-115*			

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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 CD30118 - 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	*0.662*		ug/L	*0.6250*		*106*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*1.05*		ug/L	*0.9375*		*112*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*0.492*		ug/L	*0.6250*		*79*	*30-130*			
Surrogate: Nitrobenzene-d5	*0.458*		ug/L	*0.6250*		*73*	*30-130*			
Surrogate: p-Terphenyl-d14	*0.690*		ug/L	*0.6250*		*110*	*30-130*			
LCS										
Acenaphthene	2.89	0.20	ug/L	4.000		72	40-140			
Acenaphthylene	2.74	0.20	ug/L	4.000		69	40-140			
Anthracene	3.02	0.20	ug/L	4.000		75	40-140			
Benzo(a)anthracene	3.24	0.05	ug/L	4.000		81	40-140			
Benzo(a)pyrene	3.22	0.05	ug/L	4.000		80	40-140			
Benzo(b)fluoranthene	3.37	0.05	ug/L	4.000		84	40-140			
Benzo(g,h,i)perylene	3.64	0.20	ug/L	4.000		91	40-140			
Benzo(k)fluoranthene	3.32	0.05	ug/L	4.000		83	40-140			
bis(2-Ethylhexyl)phthalate	3.65	2.50	ug/L	4.000		91	40-140			
Butylbenzylphthalate	3.94	2.50	ug/L	4.000		99	40-140			
Chrysene	3.24	0.05	ug/L	4.000		81	40-140			
Dibenzo(a,h)Anthracene	3.79	0.05	ug/L	4.000		95	40-140			
Diethylphthalate	3.87	2.50	ug/L	4.000		97	40-140			
Dimethylphthalate	3.36	2.50	ug/L	4.000		84	40-140			
Di-n-butylphthalate	2.89	2.50	ug/L	4.000		72	40-140			

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Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270C(SIM) Polynuclear Aromatic Hydrocarbons										
Batch CD30118 - 3510C										
Di-n-octylphthalate	3.85	2.50	ug/L	4.000		96	40-140			
Fluoranthene	3.16	0.20	ug/L	4.000		79	40-140			
Fluorene	3.20	0.20	ug/L	4.000		80	40-140			
Indeno(1,2,3-cd)Pyrene	3.67	0.05	ug/L	4.000		92	40-140			
Naphthalene	2.04	0.20	ug/L	4.000		51	40-140			
Pentachlorophenol	4.22	0.90	ug/L	4.000		106	30-130			
Phenanthrene	2.98	0.20	ug/L	4.000		74	40-140			
Pyrene	3.36	0.20	ug/L	4.000		84	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*0.682*		ug/L	*0.6250*		*109*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*1.37*		ug/L	*0.9375*		*146*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*0.532*		ug/L	*0.6250*		*85*	*30-130*			
Surrogate: Nitrobenzene-d5	*0.568*		ug/L	*0.6250*		*91*	*30-130*			
Surrogate: p-Terphenyl-d14	*0.592*		ug/L	*0.6250*		*95*	*30-130*			
LCS Dup										
Acenaphthene	3.12	0.20	ug/L	4.000		78	40-140	7	20	
Acenaphthylene	3.05	0.20	ug/L	4.000		76	40-140	11	20	
Anthracene	3.31	0.20	ug/L	4.000		83	40-140	9	20	
Benzo(a)anthracene	3.66	0.05	ug/L	4.000		91	40-140	12	20	
Benzo(a)pyrene	3.44	0.05	ug/L	4.000		86	40-140	7	20	
Benzo(b)fluoranthene	3.75	0.05	ug/L	4.000		94	40-140	11	20	
Benzo(g,h,i)perylene	3.60	0.20	ug/L	4.000		90	40-140	1	20	
Benzo(k)fluoranthene	3.64	0.05	ug/L	4.000		91	40-140	9	20	
bis(2-Ethylhexyl)phthalate	3.89	2.50	ug/L	4.000		97	40-140	6	20	
Butylbenzylphthalate	4.26	2.50	ug/L	4.000		107	40-140	8	20	
Chrysene	3.56	0.05	ug/L	4.000		89	40-140	9	20	
Dibenzo(a,h)Anthracene	3.77	0.05	ug/L	4.000		94	40-140	0.6	20	
Diethylphthalate	4.00	2.50	ug/L	4.000		100	40-140	3	20	
Dimethylphthalate	3.57	2.50	ug/L	4.000		89	40-140	6	20	
Di-n-butylphthalate	3.20	2.50	ug/L	4.000		80	40-140	10	20	
Di-n-octylphthalate	4.00	2.50	ug/L	4.000		100	40-140	4	20	
Fluoranthene	3.54	0.20	ug/L	4.000		88	40-140	11	20	
Fluorene	3.32	0.20	ug/L	4.000		83	40-140	4	20	
Indeno(1,2,3-cd)Pyrene	3.69	0.05	ug/L	4.000		92	40-140	0.5	20	
Naphthalene	2.32	0.20	ug/L	4.000		58	40-140	13	20	
Pentachlorophenol	4.70	0.90	ug/L	4.000		118	30-130	11	20	
Phenanthrene	3.18	0.20	ug/L	4.000		79	40-140	6	20	
Pyrene	3.70	0.20	ug/L	4.000		93	40-140	10	20	
Surrogate: 1,2-Dichlorobenzene-d4	*0.695*		ug/L	*0.6250*		*111*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*1.47*		ug/L	*0.9375*		*157*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*0.512*		ug/L	*0.6250*		*82*	*30-130*			
Surrogate: Nitrobenzene-d5	*0.555*		ug/L	*0.6250*		*89*	*30-130*			
Surrogate: p-Terphenyl-d14	*0.662*		ug/L	*0.6250*		*106*	*30-130*			
Classical Chemistry										
Batch CC32903 - General Preparation										

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP

ESS Laboratory Work Order: 1303520

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch CC32903 - General Preparation										
Blank										
Total Suspended Solids	ND	5	mg/L							
LCS										
Total Suspended Solids	58		mg/L	58.60		99	80-120			
Batch CC32905 - General Preparation										
Blank										
Hexavalent Chromium	ND	10	ug/L							
Hexavalent Chromium	ND	10	ug/L							
LCS										
Hexavalent Chromium	0.5		mg/L	0.4998		104	90-110			
Hexavalent Chromium	0.5		mg/L	0.4998		104	90-110			
LCS Dup										
Hexavalent Chromium	0.5		mg/L	0.4998		104	90-110	0.3	20	
Hexavalent Chromium	0.5		mg/L	0.4998		104	90-110	0.3	20	
Batch CC32909 - General Preparation										
Blank										
Total Residual Chlorine	ND	10	ug/L							
LCS										
Total Residual Chlorine	1		mg/L	1.390		101	85-115			
Batch CD30133 - General Preparation										
Blank										
Total Petroleum Hydrocarbon	ND	5	mg/L							
LCS										
Total Petroleum Hydrocarbon	13	5	mg/L	18.66		70	66-114			
Batch CD30217 - General Preparation										
Blank										
Phenols	ND	100	ug/L							
LCS										
Phenols	97	100	ug/L	100.0		97	80-120			
LCS										
Phenols	1040	100	ug/L	1000		104	80-120			
Batch CD30221 - TCN Prep										
Blank										
Total Cyanide (LL)	ND	0.0050	mg/L							
LCS										
Total Cyanide (LL)	0.0205	0.0050	mg/L	0.02006		102	90-110			
LCS										
Total Cyanide (LL)	0.155	0.0050	mg/L	0.1504		103	90-110			
LCS Dup										
Total Cyanide (LL)	0.156	0.0050	mg/L	0.1504		104	90-110	0.5	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP

ESS Laboratory Work Order: 1303520

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch CD30305 - General Preparation										
Blank										
Chloride	ND	0.5	mg/L							
LCS										
Chloride	2.3		mg/L	2.500		93	90-110			
504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane										
Batch CC32946 - 504/8011										
Blank										
1,2-Dibromoethane	ND	0.015	ug/L							
Surrogate: Pentachloroethane	*0.192*		ug/L	*0.2000*		*96*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.252*		ug/L	*0.2000*		*126*	*30-150*			
LCS										
1,2-Dibromoethane	0.203	0.015	ug/L	0.2000		102	60-140			
Surrogate: Pentachloroethane	*0.180*		ug/L	*0.2000*		*90*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.236*		ug/L	*0.2000*		*118*	*30-150*			
LCS										
1,2-Dibromoethane	0.074	0.015	ug/L	0.08000		93	60-140			
Surrogate: Pentachloroethane	*0.0897*		ug/L	*0.08000*		*112*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.116*		ug/L	*0.08000*		*145*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP

ESS Laboratory Work Order: 1303520

Notes and Definitions

U	Analyte included in the analysis, but not detected
Q	Calibration required quadratic regression (Q).
J	Reported between MDL and MRL; Estimated value.
D	Diluted.
B+	Blank Spike recovery is above upper control limit (B+).
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: Caritas S Boston - RGP

ESS Laboratory Work Order: 1303520

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/labs/waterlabs-instate.php

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 PotableWater, Solid and Hazardous Waste: 2424
http://www4.egov.nh.gov/des/nhelap/namesearch.asp

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/DEP_OPRA/

United States Department of Agriculture Soil Permit: S-54210

Maryland Potable Water: 301
http://www.mde.state.md.us/assets/document/WSP_labs-2009apr20.pdf

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: 13030520
Date Project Due: 4/4/13
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: **4.3**		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
1	Yes	1 L Glass	6	NP
1	Yes	1 L Plastic	2	H2SO4
1	Yes	250 ml Plastic	1	HNO3
1	Yes	250 ml Plastic	1	NaOH
1	Yes	250 ml Plastic	2	NP
1	Yes	40 ml - VOA	6	HCL
1	Yes	500 ml Plastic	1	NP

Completed By: AG Date/Time: 3/28/13
Reviewed By: _____ Date/Time: 3/28/13

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

Page 1 of 1

Turn Time ✓ Standard Other _____
If faster than 5 days, prior approval by laboratory is required # _____

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

Is this project for any of the following:
MA-MCP Navy USACE Other _____

Reporting Limits

ESS LAB PROJECT ID: 130352

Electronic Deliverable Yes ✓ No ___

Format: Excel ✓ Access ___ PDF ✓ Other _____

Co. Name	Project #	Project Name (20 Char. or less)
GZA GeoENVIRONMENTAL, INC	17112.40	CARITAS - S. BOSTON

Contact Person	Address
~~Jennifer Lenz~~ Jennifer Lenz	249 Vanderbilt Ave

City	State	Zip	PO#
NORWOOD	MA	02062	—

Telephone #	Fax #	Email Address
(781) 278 - 3700	—	Jennifer.Lenz ~~Jenifer.Lenz~~ @gza.com

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	Write Required Analysis: TSS method 2540D	TRC method 4500-Cl	TPH method 1664A	Cyanide method 4500 CN C/E	VOC's 8260	EDB method 504.1	Total Phenols 420.1	SVOC's 8270	PAH, PCB's & Bis PCB's 8082	Chloride Method 300	Metals (Sb, As, Cd, Cu, Pb, Se, Ag, Ni, Zn, Fe, Hg	Hexavalent Cr	X Trivalent Cr
01	3-28-13	12:00		✓	GW	B-1 (OW)				X	X	X	X	X	X	X	X	X	X	X	X	X

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

Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No Internal Use Only

Seals Intact ___ Yes ___ No NA: ✓ [✓] Pickup

Cooler Temp: 4.3 [ ] Technicians _____

Preservation Code 1- NP, 2- HCl, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- _____

Sampled by: Daniel Scanlon, Daniel.scanlon@gza.com

Comments: Metals were not filtered (Total Metals), Meet "CAM" criteria,

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	3-28-13 | 14:30	[signature]	3-28-13 | 14:38	[signature]	3-28-13 | 18:00	[signature]	3/28/13 | 2310
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

ATTACHMENT 9

SUPPLEMENTAL INFORMATION – DISSOLVED METALS LABORATORY ANALYTICAL RESULTS

CERTIFICATE OF ANALYSIS

Jennifer Lenz
GZA GeoEnvironmental, Inc.
249 Vanderbilt Avenue
Norwood, MA 02062

RE: Caritas S Boston - RGP (01.0171121.40)
ESS Laboratory Work Order Number: 1304420

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 1:42 pm, May 01, 2013

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 Calibratins, 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: Caritas S Boston - RGP

ESS Laboratory Work Order: 1304420

SAMPLE RECEIPT

The following samples were received on April 18, 2013 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.

Question I: All samples for Metals were analyzed for a subset of the required MCP list per the client's request.

Lab Number	SampleName	Matrix	Analysis
1304420-01	B-1 OW	Ground Water	6010B, 7010

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP

ESS Laboratory Work Order: 1304420

PROJECT NARRATIVE

Dissolved Metals Aqueous

CD32430-BS2 **Blank Spike recovery is above upper control limit (B+).**
Copper (123% @ 80-120%)

CD32430-BSD2 **Relative percent difference for duplicate is outside of criteria (D+).**
Copper (31%)

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: Caritas S Boston - RGP

ESS Laboratory Work Order: 1304420

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
8015C - 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
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5035 - Solid Purge and Trap

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP

ESS Laboratory Work Order: 1304420

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **1304420-01**

Matrices: (X) Ground Water/Surface Water ( ) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

CAM Protocol (check all that apply below):

( ) 8260 VOC CAM II A	( ) 7470/7471 Hg CAM III B	( ) MassDEP VPH CAM IV A	( ) 8081 Pesticides CAM V B	( ) 7196 Hex Cr CAM VI B	( ) MassDEP APH CAM IX A
( ) 8270 SVOC CAM II B	(X) 7010 Metals CAM III C	( ) MassDEP EPH CAM IV B	( ) 8151 Herbicides CAM V C	( ) 8330 Explosives CAM VIII A	( ) TO-15 VOC CAM IX B
(X) 6010 Metals CAM III A	( ) 6020 Metals CAM III D	( ) 8082 PCB CAM V A	( ) 6860 Perchlorate CAM VIII B	( ) 9014 Total Cyanide/PAC CAM VI A	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes (X) No ( )
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes (X) No ( )
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	Yes (X) No ( )
D	Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes (X) No ( )
E	a. VPH, EPH, APH and TO-15 only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	Yes ( ) No ( )
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes ( ) No ( )
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	Yes (X) No ( )

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)?	Yes (X) No ( )*
	***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**	
H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	Yes ( ) No (X)*
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ( ) No (X)*

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: _____ Date: May 01, 2013

Printed Name: Laurel Stoddard Position: Laboratory Director

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP
Client Sample ID: B-1 OW
Date Sampled: 04/17/13 11:30
Percent Solids: N/A

ESS Laboratory Work Order: 1304420
ESS Laboratory Sample ID: 1304420-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A

Dissolved Metals Aqueous

Analyte	Results (MRL)	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**6.2** (2.5)	7010		1	JP	04/26/13 15:33	100	50	CD32430
Cadmium	ND (0.12)	7010		1	JP	04/29/13 20:28	100	50	CD32430
Copper	ND (2.5)	7010		1	JP	04/30/13 19:17	100	50	CD32430
Iron	**405** (50)	6010B		1	JP	04/27/13 21:40	100	50	CD32430
Lead	ND (2.5)	7010		1	JP	04/25/13 20:33	100	50	CD32430
Zinc	**32** (25)	6010B		1	JP	04/27/13 21:40	100	50	CD32430

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP

ESS Laboratory Work Order: 1304420

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Dissolved Metals Aqueous										
Batch CD32430 - 3005A										
Blank										
Arsenic	ND	2.5	ug/L							
Cadmium	ND	0.12	ug/L							
Copper	ND	2.5	ug/L							
Iron	ND	50	ug/L							
Lead	ND	2.5	ug/L							
Zinc	ND	25	ug/L							
Blank										
Arsenic	ND	2.5	ug/L							
Zinc	ND	25	ug/L							
LCS										
Iron	1280	50	ug/L	1250		102	80-120			
Zinc	251	25	ug/L	250.0		101	80-120			
LCS										
Arsenic	10.1	2.5	ug/L	10.00		101	80-120			
Cadmium	4.99	2.50	ug/L	5.000		100	80-120			
Copper	12.3	2.5	ug/L	10.00		123	80-120			B+
Lead	10.0	2.5	ug/L	10.00		100	80-120			
LCS Dup										
Iron	1160	50	ug/L	1250		93	80-120	10	20	
Zinc	230	25	ug/L	250.0		92	80-120	9	20	
LCS Dup										
Arsenic	10.3	2.5	ug/L	10.00		103	80-120	1	20	
Cadmium	5.29	2.50	ug/L	5.000		106	80-120	6	20	
Copper	9.0	2.5	ug/L	10.00		90	80-120	31	20	D+
Lead	10.7	2.5	ug/L	10.00		107	80-120	8	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Caritas S Boston - RGP

ESS Laboratory Work Order: 1304420

Notes and Definitions

U	Analyte included in the analysis, but not detected
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
B+	Blank Spike recovery is above upper control limit (B+).
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: Caritas S Boston - RGP

ESS Laboratory Work Order: 1304420

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/labs/waterlabs-instate.php

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 PotableWater, Solid and Hazardous Waste: 2424
http://www4.egov.nh.gov/des/nhelap/namesearch.asp

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/DEP_OPRA/

United States Department of Agriculture Soil Permit: S-54210

Maryland Potable Water: 301
http://www.mde.state.md.us/assets/document/WSP_labs-2009apr20.pdf

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: 13040420
Date Project Due: 4/25/13
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?	Yes	12. Any air bubbles in the VOA vials?	~~N/A~~ NO
3. Were Custody Seals Intact?	Yes	13. Holding times exceeded?	No OAT 4/18/13
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: **2.8**		16. Are ESS labels on correct containers?	Yes|No
Iced With: **Icepacks**		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
1	Yes	250 ml Plastic	2	HNO3

Completed By: [signature] Date/Time: 4/18/13

Reviewed By: _____ Date/Time: 4/19/13

[redacted]

Custody Seal

Job # 01.0171121.40

Signature [signature]

Date 4-17-13 **Time** 12:40

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

Turn Time ✓ Standard Other ____
If faster than 5 days, prior approval by laboratory is required # ____

States where samples were collected from:
MA RI CT NH NJ NY ME Other ____

Is this project for any of the following:
MA-MCP Navy USACE Other ____

Reporting Limits

ESS LAB PROJECT ID: 130420

Electronic Deliverable Yes ✓ No ____
Format: Excel ✓ Access ____ PDF ✓ Other ____

Co. Name	Project #	Project Name (20 Char. or less)
GZA GeoEnvironmental, Inc.	171121.40	Caritas S. Boston

Contact Person	Address
Jen Lenz	249 Vanderbilt Ave

City	State	Zip	PO#
Norwood	MA	02062	—

Telephone #	Fax #	Email Address
(781) 278-3700	(781) 278-5701	Jennifer.Lenz@gza.com

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	Write Required Analysis: Dissolved Metals	Arsenic	Cadmium	Copper	Iron	Lead	Zinc
01	4-17-13	11:30		X	GW	B-1 (OW)	4	1	P	X	X	X	X	X	X	X

Container Type: P-Poly G-Glass S-Sterile V-VOA
Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No
Seals Intact ___ Yes ___ No NA: ___
Cooler Temp: 2.8°C BB

Internal Use Only
[✓] Pickup
[ ] Technicians ____

Preservation Code 1- NP, 2- HCl, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- ____

Sampled by: Daniel Scanlon, Daniel.Scanlon@gza.com CC: Mary Hall per client request 4/19/13 AT

Comments: Must meet CAM criteria, Metals were field filtered. (0.45 µm)

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Dan Scanlon	4-17-13 12:40	Brian Beacon	4/18/13 0730	Brian Beacon	4/18/13 0900	SR Cooler	4/18/13 0900
SR Cooler	4/18/13 2205						

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A