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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

MAY 2 5 2011

Paul Paschke
Environmental Program Manager
Hewlett-Packard Company
3404 East Harmony Road
Fort Collins, CO 80528-9544

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Former Hewlett-Packard site located at 175 Wyman Street, Waltham, MA 02451, Middlesex County; Authorization # MAG910002 - Reissuance

Dear Mr. Paschke:

Based on the review of a Notice of Intent (NOI) submitted on behalf of Hewlett-Packard by the firm GZA GeoEnvironmental, Inc., for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the Owner and 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 total petroleum hydrocarbons (TPH) which was not reported. This pollutant is one which you are required to report in accordance with the sub-category you have selected. The checklist also includes Carbon Tetrachloride a parameter for which your laboratory reports indicated there was insufficient sensitivity to detect these parameters at the minimum levels established in Appendix VI of the RGP.

Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on a dilution factor range (DFR). With the

assumed absence of dilution in lakes and reservoirs unless supported by modeling, EPA determined that the DFR for each parameter is in the one and five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities). Thus, the limits for copper of 5.2ug/L, lead of 1.3ug/L, selenium of 5ug/L, zinc of 66.6ug/L and iron of 1,000ug/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 general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project discharge is on going for which a termination date is not known. If for any reason the discharge terminates sooner that the permit expiration 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,

David M. Webster, Chief
Industrial Permits Branch

Enclosure

cc: Kathleen Keohane, MassDEP
Patricia A. Leavenworth, MassDOT. District Highway Director
519 Appleton St., Arlington, MA 02476
John A. Colbert, GZA

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910002- Reissuance**
Authorization Issued:	May, 2011
Facility/Site Name:	Former Hewlett-Packard Site
Facility/Site Address:	Site located at 175 Wyman Street, Waltham, MA 02451, Middlesex County
	Email address of owner: paul.paschke@hp.com
Legal Name of Operator:	Hewlett-Packard Company
Operator contact name, title, and Address:	Paul Paschke, Environmental Program Manager Hewlett-Packard Company, 3404 East Harmony Road Fort Collins, CO 80528-9544
	Email: paul.paschke@hp.com
Estimated Date of Completion:	Unknown
Category and Sub-Category:	Category II. Non Petroleum Site Remediation Discharges. Sub-category A. Volatile Organic Compounds (VOC) only Sites.
Receiving Water:	Cambridge Reservoir via the Massachusetts Department of Transportation (Mass DOT) retention basin.

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#60.2/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 5ug/L
	5. Benzene (B)	5ug/L /50.0 ug/L for hydrostatic testing only/ Me#8260C/ML 2 ug/L
	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
	7. Ethylbenzene (E)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) [4]	100 ug/L/ Me#8260C/ ML 2ug/L

	Parameter	Effluent Limit/Method#/ML (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l/Me#8260C/ML 10ug/L
	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	14. Naphthalene [5]	20 ug/L /Me#8260C/ML 2ug/L
√	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/L /Me#8260C/ ML 5ug/L
	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/L /Me#8260C/ ML 5ug/L
	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML 5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
√	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
√	24. Tetrachloroethene (PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
√	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L,Me#604 &625/ML 10ug/L
	33. Total Phthalates (Phthalate esters) [6]	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L& Me#625/ML 5ug/L
	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML 5ug/L
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L
	a. Benzo(a) Anthracene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L

	Parameter	Effluent Limit/Method#/ML (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 0.1ug/L

	Metal parameter	Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]	Minimum level=ML

		Freshwater	Saltwater		
	39. Antimony	5.6/ML 10			
	40. Arsenic **	10/ML20	36/ML 20		
	41. Cadmium **	0.2/ML10	8.9/ML 10		
	42. Chromium III (trivalent) **	48.8/ML15	100/ML 15		
	43. Chromium VI (hexavalent) **	11.4/ML10	50.3/ML 10		
√	44. Copper **	5.2/ML15	3.7/ML 15		
√	45. Lead **	1.3/ML20	8.5/ML 20		
	46. Mercury **	0.9/ML0.2	1.1/ML 0.2		
	47. Nickel **	29/ML20	8.2/ML 20		
√	48. Selenium **	5/ML20	71/ML 20		
	49. Silver	1.2/ML10	2.2/ML 10		
√	50. Zinc **	66.6/ML15	85.6/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 "Oroclor analyses."Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measure of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.
[9]Although the maximum value for total PCBs is 0.000064 ug/l, the compliance limit is equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., 0.5 ug/l for Method 608 or 0.00005 ug/l when Method 1668a is approved).
[10] Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.
[11] For a Dilution Factor (DF) from 1 to 5, metals limits are calculated using DF times the base limit for the metal. See Appendix IV. For example, iron limits are calculated using DF x 1,000ug/L (the iron base limit). Therefore DF is 1.5, the iron limit will be 1,500 ug/L; DF 2, then iron limit =1,000 x 2 =2,000 ug/L., etc. not to exceed the DF=5.
[12] Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).
[13] pH sampling for compliance with permit limits may be performed using field methods as provided for in EPA test Method 150.1.
[14] Temperature sampling per Method 170.1

GZA
GeoEnvironmental, Inc.

Engineers and
Scientists

December 7, 2010
File No. 15522.01

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

One Edgewater Drive
Norwood
Massachusetts
02062
781-278-3700
FAX 781-278-5701
http://www.gza.com

Re: Submittal of Notice of Intent (NOI)
Remedial General Permit - Authorization #MAG910002
175 Wyman Street
Waltham, Massachusetts

Dear Mr. Alvarez:

GZA GeoEnvironmental, Inc. (GZA), on behalf of our client, Hewlett-Packard Company (HP), is submitting the attached Notice of Intent (NOI) form (Attachment 1) for the Remedial General Permit (RGP) for the 175 Wyman Street project (the Site). A groundwater containment and treatment system (GCTS) was installed at the Site in 1997 to treat trichloroethene (TCE)-affected groundwater associated with the Site. Coverage under the National Pollutant Discharge Elimination System (NPDES) RGP was issued by the United States Environmental Protection Agency (EPA) on September 22, 2005 for discharges associated with the treatment system[1].

BACKGROUND

The Site consists primarily of an approximately 27.5-acre parcel located on the easterly side of Route 128 (Interstate Route 95) at 175 Wyman Street, in the north central section of Waltham (Figure 1 – Attachment 2). HP used the Site from 1959 to 1995 for the manufacture of medical equipment. At the time, a one- to two-story, 360,000-square-foot building was located on the property. In 1997, HP sold the property to Beacon Properties, L.P. of Boston, Massachusetts. 175 Wyman, LLC, of Waltham, Massachusetts purchased the property in 2007 and has re-developed it with two new buildings, parking, landscaping, and a stormwater retention basin. The redevelopment work was completed in February 2010 and Figure 2 (Attachment 3) shows the location of new buildings, recovery wells and monitoring wells, and other site features.

On-Site subsurface materials generally consist of varying thicknesses of compacted sandy or blasted rock fill over glacial till underlain by bedrock. Bedrock is located at depths ranging from approximately 15 to 50 feet below ground surface. Bedrock outcrops are present in the northern portions of the property. Both regional topography and groundwater elevation measurements collected to date from on-Site and off-Site monitoring wells suggest that groundwater flows in a south-southwesterly direction from the property.

As indicated previously, a GCTS designed to remove volatile organic compounds (VOCs) from the groundwater has been operating at the Site since September 19, 1997. Operation,

[1] An NPDES Exclusion was granted on April 17, 1997 and an application for a permanent NPDES wastewater permit was submitted to the EPA on April 27, 1998. The GCTS discharge continued under the NPDES Exclusion until the EPA transitioned the permit to the RGP program.

maintenance and monitoring of the GCTS was initiated under an Immediate Response Action in accordance with the Massachusetts Contingency Plan (MCP) and was transitioned to a Comprehensive Response Action as documented in GZA's MCP Phase IV Report dated June 7, 2000. The GCTS consists of one overburden (RW-1S), one overburden/shallow bedrock (RW-6), and four deep bedrock (RW-1D, RW-3, RW-4 and RW-7) recovery wells, an equalization tank, a tray aerator, a bag filtration system, liquid-phase granular activated carbon adsorption unit with ion-exchange resin, vapor-phase granular activated carbon adsorption units, and associated instrumentation and controls. A detailed description of GCTS components was presented in the Phase IV Report, dated June 2000. Figure 3, a Process Flow Diagram, can be found in Attachment 4.

Treated groundwater is discharged to an on-property storm drain which eventually flows into an off-property Massachusetts Highway Department (MHD) storm water retention area, which in turn discharges to the Cambridge Reservoir. This discharge is made in accordance with the following permits and approvals: coverage under the NPDES Remedial General Permit (Authorization #MAG910002); approval from the City of Cambridge Water Department (CWD); and an MHD access permit (496-0271; for discharge to the storm water retention pond). Copies of these permits and approvals are included in Attachment 5.

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 there are no ACEC located in the City of Waltham, Massachusetts.
- 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 Waltham, Massachusetts.
- 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. In addition, this is not a new discharge; therefore, permit eligibility meets "Criterion A." As shown on the map generated by the MassWildlife online viewer, which can be found in Attachment 6, approximately 2,000 linear feet downstream of the discharge point is the closest edge of the Cambridge Reservoir's Priority Habitats of Rare Species and Estimated Habitats of Rare Wildlife area.
- An electronic review of the Massachusetts Cultural Resource Information System database, made available through Massachusetts Historical Commission, found that no area, building, burial ground, object, or structure is located on the property located at 175 Wyman Street or on Wyman Street in Piety Corner (the neighborhood in which the Site and discharge point are located). The documentation of this review can be found in Attachment 7. In addition, this is an existing discharge and no construction activities are required; therefore, permit eligibility meets "Criterion 1."

CHANGES TO TREAMENT SYSTEM

In the attached NOI Form section 2(b)2 the maximum design flow rate is stated to be 50 gpm. Previous permit applications had the maximum design flow rate at 100 gpm; this reduced flow rate (50 gpm) is more accurate and is based on historical system performance and recent treatment system modifications. Supplemental metals sampling results are included in Attachment 8 and used in the NOI Form section 3a. Except for the laboratory analytical reports for the April 21, 2010 and November 22, 2010 sampling events, which are included in Attachment 9, laboratory analytical reports for the sampling events included in the Supplemental Metals Data Table are available upon request. Using this new maximum flow rate, a dilution factor for metals of 3.87 was calculated for section 3b of the NOI Form with documentation of the calculations found in Attachment 10. The 2010 RGP allows applicants to determine a limit using any fraction of the 0-5 dilution factor times the metal limit, unlike the 2005 RGP. Due to these changes, GZA is requesting consideration of the calculated dilution factor to our effluent monitoring and reporting requirements.

Please do not hesitate to contact the undersigned at (781) 278-3700, if you have any questions or require further information.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Jessica Yeager
Environmental Engineer I

John A. Colbert, P.E.
Senior Project Manager

William R. Norman, LSP
Principal - Consultant/Reviewer

Attachments:
Attachment 1: NOI Form
Attachment 2: Figure 1 – Site Locus Map
Attachment 3: Figure 2 – Site Plan
Attachment 4: Figure 3 – Process Flow Diagram
Attachment 5: Copies of NPDES, CWD, and MHD Permits and Approvals
Attachment 6: NHESP Map
Attachment 7: MHC Report
Attachment 8: Supplemental Metals Data Table
Attachment 9: Laboratory Analytical Results
Attachment 10: Supplemental Information – 7Q10 data for Watershed

cc: MassDEP – Northeastern Region

ATTACHMENT 1

NOI FORM

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

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

a) Name of **facility/site**: Former Hewlett-Packard Facility		**Facility/site** mailing address:			
Location of **facility/site**: longitude: -71.25 latitude: 42.40	Facility SIC code(s): 3841	Street: 175 Wyman Street			
b) Name of **facility/site owner:** Hewlett-Packard		Town: Waltham			
Email address of facility/site owner: paul.paschke@hp.com		State: MA	Zip: 02451	County: Middlesex	
Telephone no. of facility/site **owner**: (970) 898-0573					
Fax no. of facility/site **owner**: (970) 778-4192		**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ◉ 4. Other ○ if so, describe:			
Address of **owner** (if different from site):					
Street: 3404 East Harmony Road					
Town: Fort Collins	State: CO	Zip: 80528-9544	County: Denver		
c) Legal name of **operator**:		**Operator** telephone no: (970) 898-0573			
Hewlett-Packard Company		**Operator** fax no.: (970) 778-4192	**Operator** email: paul.paschke@hp.com		
Operator contact name and title: Paul Paschke - Environmental Program Manager					
Address of **operator** (if different from owner):	Street:				
Town:	State:	Zip:	County:		

d) Check Y for "yes" or N for "no" for the following:
1. Has a prior NPDES permit exclusion been granted for the discharge? Y ⊙ N ○, if Y, number: 97-120
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge?
Y ⊙ N ○, if Y, date and tracking #: 4/27/98
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: MA: 3-13311
2. permit or license # assigned:
3. state agency contact information: name, location, and telephone number:

MassDEP Northeast Regional Office, 205B Lowell Street, Wilmington, MA 978-694-3200

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: MHD:496-0271

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:

MCP response action - groundwater remediation system for VOC impacted groundwater: extraction with six recovery wells; treatment with air stripping, liquid-phase carbon with ion-exchange resin, & vapor phase carbon; continuous operation; discharge to manhole of storm drainage system

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 0.1115 (50 gpm) Is maximum flow a **design value**? Y ◉ N ○
Average flow (include units) 0.078 (35 gpm) Is average flow a design value or estimate? estimate

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

pt.1: lat	42.40	long	-71.26	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 ongoing end ongoing

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

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)		☐	☐								
2. Total Residual Chlorine (TRC)		☐	☐								
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	1	grab	1664	5,000 ug/L	<5,000		<5,000	
4. Cyanide (CN)	57125	☐	☐								
5. Benzene (B)	71432	☒	☐	1	grab	8260	2 ug/L	<10		<10	
6. Toluene (T)	108883	☒	☐	1	grab	8260	2 ug/L	<10		<10	
7. Ethylbenzene (E)	100414	☒	☐	1	grab	8260	2 ug/L	<10		<10	
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐	1	grab	8260	4 ug/L	<10		<10	
9. Total BTEX [2]	n/a	☒	☐	1	grab	8260	2 ug/L	<10		<10	
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☐	☐								
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☐	☐								
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☐	☐								

* 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	☐	☐								
14. Naphthalene	91203	☐	☐								
15. Carbon Tetrachloride	56235	☒	☐	1	grab	8260	5 ug/L	<10		<10	
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	1	grab	8260	5 ug/L	<10		<10	
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	1	grab	8260	5 ug/L	<10		<10	
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	1	grab	8260	5 ug/L	<10		<10	
18a. Total dichlorobenzene		☒	☐	1	grab	8260	5 ug/L	<10		<10	
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	1	grab	8260	5 ug/L	<10		<10	
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	1	grab	8260	5 ug/L	<10		<10	
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	1	grab	8260	5 ug/L	<10		<10	
22. cis-1,2 Dichloroethene (DCE)	156592	☐	☒	1	grab	8260	5 ug/L	14		14	
23. Methylene Chloride	75092	☒	☐	1	grab	8260	5 ug/L	<10		<10	
24. Tetrachloroethene (PCE)	127184	☐	☒	1	grab	8260	5 ug/L	54		54	
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	1	grab	8260	5 ug/L	<10		<10	
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	1	grab	8260	5 ug/L	<10		<10	
27. Trichloroethene (TCE)	79016	☐	☒	1	grab	8260	5 ug/L	9,600		9,600	

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	8260	5 ug/L	<10		<10	
29. Acetone	67641	☒	☐	1	grab	8260	50 ug/L	<250		<250	
30. 1,4 Dioxane	123911	☒	☐	1	grab	8260	50 ug/L	<1,000		<1,000	
31. Total Phenols	108952	☒	☐	1	grab	8270	5 ug/L	<10		<10	
32. Pentachlorophenol (PCP)	87865	☒	☐	1	grab	8270	5 ug/L	<1.0		<1.0	
33. Total Phthalates (Phthalate esters) [4]		☒	☐	1	grab	8270	5 ug/L	<6.0		<6.0	
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	1	grab	8270	5 ug/L	<6.0		<6.0	
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☐	☐								
a. Benzo(a) Anthracene	56553	☐	☐								
b. Benzo(a) Pyrene	50328	☐	☐								
c. Benzo(b)Fluoranthene	205992	☐	☐								
d. Benzo(k)Fluoranthene	207089	☐	☐								
e. Chrysene	21801	☐	☐								
f. Dibenzo(a,h)anthracene	53703	☐	☐								
g. Indeno(1,2,3-cd) Pyrene	193395	☐	☐								
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☐	☐								

[4] The sum of individual phthalate compounds.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
h. Acenaphthene	83329	☐	☐								
i. Acenaphthylene	208968	☐	☐								
j. Anthracene	120127	☐	☐								
k. Benzo(ghi) Perylene	191242	☐	☐								
l. Fluoranthene	206440	☐	☐								
m. Fluorene	86737	☐	☐								
n. Naphthalene	91203	☐	☐								
o. Phenanthrene	85018	☐	☐								
p. Pyrene	129000	☐	☐								
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	1	grab	608	0.5 ug/L	<0.5		<0.5	
38. Chloride	16887006	☐	☐								
39. Antimony	7440360	☒	☐	14	grab	6010	10 ug/L	<5.0		<5.0	
40. Arsenic	7440382	☒	☐	1	grab	6010	20 ug/L	<10		<10	
41. Cadmium	7440439	☒	☐	1	grab	6010	10 ug/L	<5.0		<5.0	
42. Chromium III (trivalent)	16065831	☒	☐	1	grab	6010	15 ug/L	<5.0		<5.0	
43. Chromium VI (hexavalent)	18540299	☒	☐	1	grab	3500CrD	10 ug/L	<10		<10	
44. Copper	7440508	☐	☒	17	grab	6010	15 ug/L	55		21	
45. Lead	7439921	☐	☒	14	grab	6010	20 ug/L	5.5		4.8	
46. Mercury	7439976	☒	☐	1	grab	7470	0.2 ug/L	<0.2		<0.2	
47. Nickel	7440020	☒	☐	1	grab	6010	20 ug/L	<10		<10	
48. Selenium	7782492	☐	☒	3	grab	6010	20 ug/L	7.8		7.8	
49. Silver	7440224	☒	☐	1	grab	6010	10 ug/L	<5.0		<5.0	
50. Zinc	7440666	☐	☒	15	grab	6010	15 ug/L	41		20	
51. Iron	7439896	☐	☒	14	grab	6010	20 ug/L	3,600		1,227	
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 (Cu), Lead (Pb), Iron (Fe), Selenium (Se)
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 DF: 3.87 Metal: Lead DF: 3.87 Metal: Iron DF: 3.87 Metal: Selenium DF: 3.87 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 (Cu), Lead (Pb)

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

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

A MCP response action consisting of a groundwater remediation system with six recovery wells for extracting VOC impacted groundwater. The groundwater is treated with air stripping and liquid-phase carbon with ion-exchange resin. The effluent air from the air stripping is treated with vapor-phase carbon. The system is designed for continuous operation. The treated groundwater is discharged to a manhole associated with stormwater drainage system.

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

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 35 gpm Maximum flow rate of treatment system 50 gpm
Design flow rate of treatment system 50 gpm

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

none

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:

From an on-property storm drain to an off-property storm water retention area to the Cambridge Reservoir

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 A

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 0.32 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)?

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.

Attachment 2: Figure 1 – Site Locus Map
Attachment 3: Figure 2 – Site Plan
Attachment 4: Figure 3 – Process Flow Diagram
Attachment 5: Copies of NPDES, CWD, and MHD Permits and Approvals
Attachment 6: NHESP Map
Attachment 7: MHC Report
Attachment 8: Supplemental Metals Data Table
Attachment 9: Laboratory Analytical Results
Attachment 10: Supplemental Information – 7Q10 data for Watershed

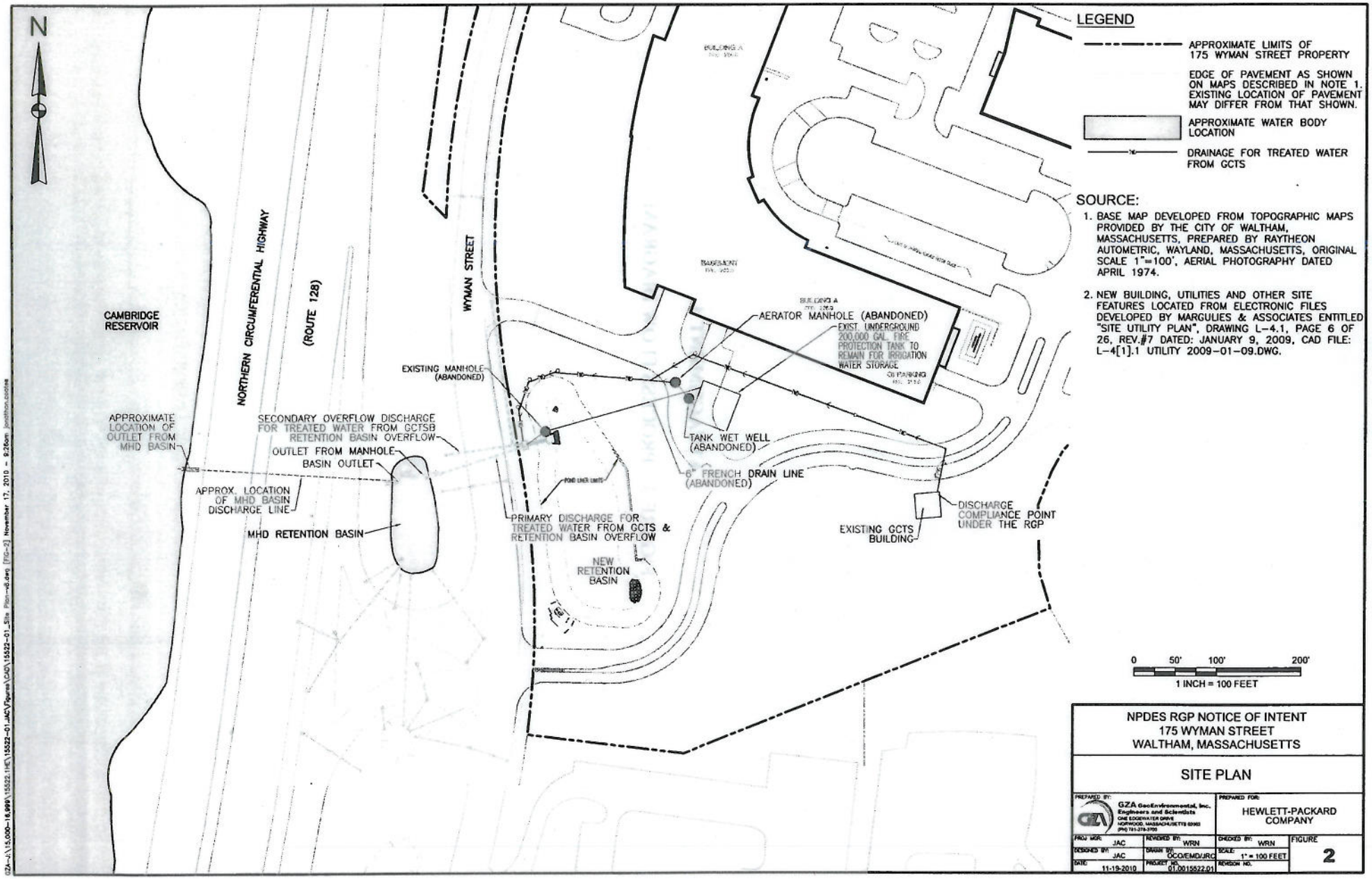
8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

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:	Former Hewlett-Packard Facility
Operator signature:	
Printed Name &Title:	Paul Paschke - Environmental Program Manager
Date:	12-6-2010

GZA	PROJ. MGR.: JAC DESIGNED BY: JAC REVIEWED BY: WRN OPERATOR: EMD DATE: 11-19-2010	LOCUS PLAN SHOWING 500 FOOT & 1/2 MILE RADII NPDES RGP NOTICE OF INTENT 175 WYMAN STREET WALTHAM, MASSACHUSETTS	JOB NO. 15522.01 FIGURE NO. 1

J:\15,000-16,999\15522.1HE\15522-01.JAC\Figures\GISMXDs\15522-01_NPDES-RGP-NOI-LOCUS-v2_FIG-1.mxd



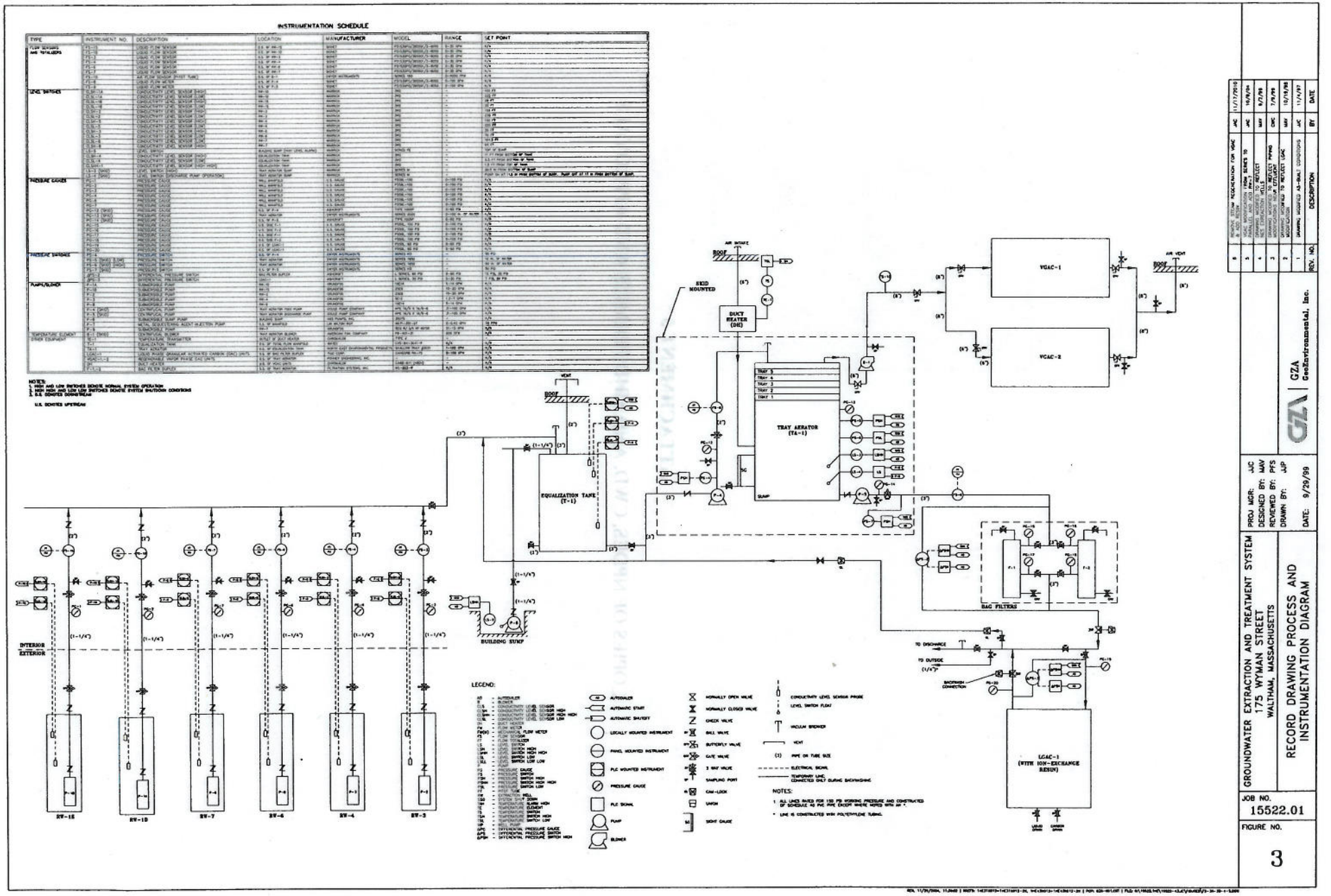
NPDES RGP NOTICE OF INTENT
175 WYMAN STREET
WALTHAM, MASSACHUSETTS

SITE PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists, ONE EDGEWATER DRIVE, NORWOOD, MASSACHUSETTS 02062, (PH) 781-278-3700

PREPARED FOR: HEWLETT-PACKARD COMPANY

PROJ MGR: JAC	REVIEWED BY: WRN	CHECKED BY: WRN	FIGURE 2
DESIGNED BY: JAC	DRAWN BY: DCO/EMD/JRC	SCALE: 1" = 100 FEET	
DATE: 11-19-2010	PROJECT NO. 01.0015522.01	REVISION NO.	



REV. NO.	DESCRIPTION	BY	DATE
6	REMOVE STEAM REGENERATION FOR VGAC	JJC	11/17/2010
5	VGAC MODIFICATION FROM SERIES TO PARALLEL AND ADD PW-3	JJC	10/9/04
4	DRAWING MODIFIED AS PROJECT WAS CONSTRUCTED	MAV	9/7/99
3	DRAWING MODIFIED AS PROJECT PIPING WAS CONSTRUCTED	CWC	7/9/99
2	DRAWING MODIFIED TO REFLECT LGAC MODIFICATION	MAV	10/19/98
1	DRAWING MODIFIED AS-BUILT CONDITIONS	JJC	11/4/97

GZA GeoEnvironmental, Inc.

PROJ MGR: JJC
DESIGNED BY: MAV
REVIEWED BY: PFS
DRAWN BY: JJP
DATE: 9/29/99

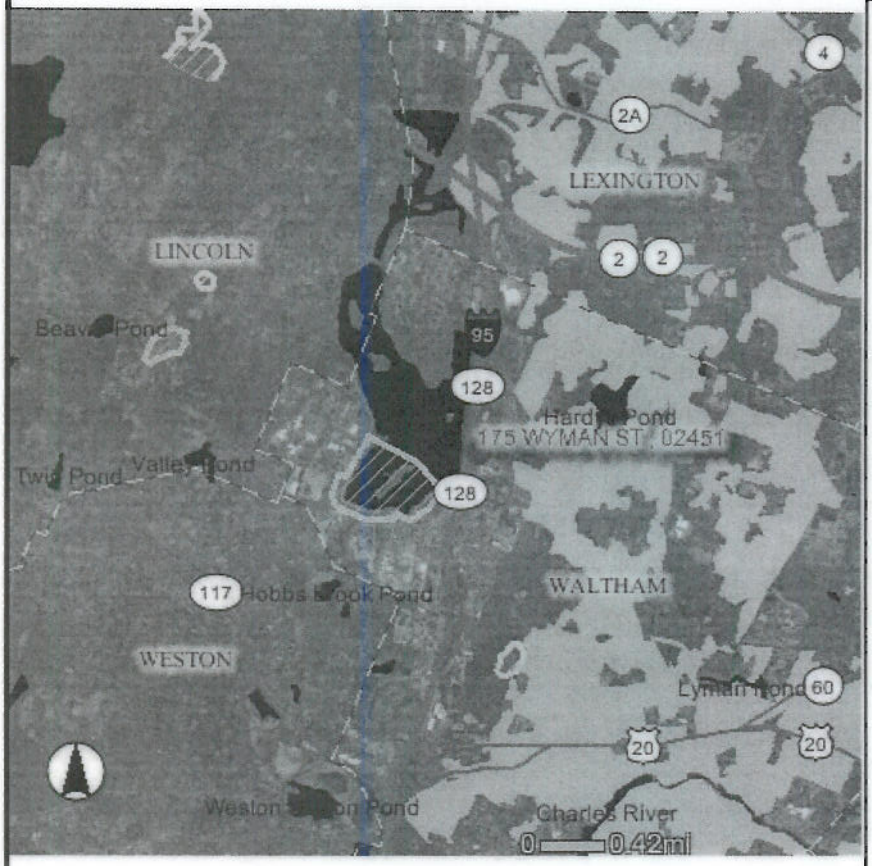
GROUNDWATER EXTRACTION AND TREATMENT SYSTEM
175 WYMAN STREET
WALTHAM, MASSACHUSETTS

RECORD DRAWING PROCESS AND INSTRUMENTATION DIAGRAM

JOB NO. 15522.01

FIGURE NO. 3

2008 Priority Habitat and Estimated Habitat Natural Heritage & Endangered Species Program



Legend

- Land Feature Names
- Major EOT-OTP Roads
- Alternate Route Numbers
- Major EOT-OTP Roads
- Limited Access Highway
- Multi-lane Hwy, Not Limited Access
- Other Numbered Hwy
- Place Names
- Surrounding States Labels
- Surrounding States
- NHESP 2008 Priority Habitats of Rare Species and also Estimated Habitats of Rare Wildlife
- NHESP 2008 MA Priority Habitats of Rare Species
- Major Lakes and Ponds
- Major Urban Area
- Color Orthos 2005
- Town Boundary

Massachusetts Cultural Resource Information System
MACRIS

MACRIS Search Results

Search Criteria: Town(s): Waltham; Street No: 175; Street Name: Wyman St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

Massachusetts Cultural Resource Information System
MACRIS

MACRIS Search Results

Search Criteria: Town(s): Waltham; Place: Piety Corner; Street Name: Wyman St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

SUPPLEMENTAL METALS DATA TABLE

175 Wyman Street
Waltham, Massachusetts

File No. 15522.01
11/30/2010

Sample Collection Date	System Influent Samples					
	Fe	Zn	Cu	Pb	Se	Sb
9/16/2009	2,200	26	45	<40	NA	<25
10/19/2009	1,600	15	9.9	<40	<50	<50
11/23/2009	1,700	14	39	<40	NA	<50
12/10/2009	65	<10	5.2	<40	NA	<50
1/7/2010	40	12	<5.0	<40	NA	<50
2/16/2010	<25	24	22	<40	NA	<50
3/8/2010	NA	28	26	NA	NA	NA
3/18/2010	NA	NA	22	NA	NA	NA
4/12/2010	NA	NA	28	NA	NA	NA
4/21/2010	150	20	55	<10	<25	<25
5/20/2010	64	6.4	3.1	<2.0	NA	<5.0
6/22/2010	240	12	4.3	<2.0	NA	<5.0
7/9/2010	290	12	17	<2.0	NA	<5.0
8/11/2010	3,600	37	16	5.4	NA	<5.0
9/20/2010	2,600	14	9.7	3.5	NA	<5.0
10/14/2010	1,200	15	7.1	<2.0	NA	<5.0
11/5/2010	2,200	41	30	5.5	NA	<5.0
11/22/2010	NA	NA	NA	NA	7.8	<5.0
Average[5]	1,146	18	21	4.5	7.8	<5.0
Maximum[5]	3,600	41	55	5.5	7.8	<5.0

Notes:

1. "<" = less than the laboratory reporting limits (RL)
2. Fe = iron; Zn = zinc; Cu = copper; Pb = lead; Se = selenium; Sb = antimony.
3. NA = Not Analyzed
4. Units are micrograms per liter (ug/L) or parts per billion (ppb).
5. Only samples that had detections included. If all non-detect, minimum RL used.
6. Laboratory analytical reports available upon request.

GZA GeoEnvironmental, Inc.
106 South Street
Hopkinton, MA 01748
(781) 278-4700

Laboratory Identification Numbers:
MA and ME: **MA092** NH: **2028**
CT: **PH0579** RI: **LAO00236**
NELAC - NYS DOH: **11063**

ANALYTICAL REPORT

GZA GeoEnvironmental, Inc.
One Edgewater Drive
Norwood, MA 02062

John Colbert

Project No.: **01.0015522.10**
Work Order No.: **1004-00187**
Date Received: **04/21/2010**
Date Reported: **05/06/2010**

SAMPLE INFORMATION

Date Sampled	Matrix	Laboratory ID	Sample ID
04/21/2010	Aqueous	1004-00187 001	INF

GZA GeoEnvironmental, Inc.
106 South Street
Hopkinton, MA 01748
(781) 278-4700

ANALYTICAL REPORT

GZA GeoEnvironmental, Inc.
One Edgewater Drive
Norwood, MA 02062

John Colbert

Project Name.:	**HP**	Date Received:	**04/21/2010**
Project No.:	**01.0015522.10**	Date Reported:	**05/06/2010**
		Work Order No.:	**1004-00187**

PROJECT NARRATIVE:

1. Sample Receipt

The samples were received on 04/21/10 via _x_GZA courier, __EC, __FEDEX, or ___hand delivered. The temperature of the _x_temperature blank/__cooler air, was 4.3 degrees C. The temperature requirement for most analyses is above freezing to 6 degrees C. The samples were received intact for all requested analyses.

The chain of custody indicates that the samples, when required, were chemically preserved in accordance with the method they reference.

2. Subcontracted Analyses

Analyses for SVOC, PCBs, and TPH were performed by ESS Laboratory, Cranston, RI.

3. EPA Method 6010B/7470A - Metals

Per the client's request, only a subset of the MCP analyte list for SW-846 Method 6010B Trace Metals by Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES) is reported.

Attach QC 6010B 04/26/10 - Aqueous
Attach QC 7470A 04/27/10 - Aqueous

4. EPA Method 8260 - VOCs

Data qualifier:
Any analytes reported from a diluted run of the original analysis have a "D" qualifier.

Sample INF (1004-00187-001) could not be analyzed accurately with a 1.0 ug/L reporting limit, therefore the lowest reporting limit with accurate surrogate recoveries is 10 ug/L.

The Continuing Calibration Verification Standard (CCV) (4/29/10 S) had a(n) MA MCP 8260 List analyte outside of the 80-120% acceptance criteria. Specific outlier includes: chloromethane (131%).

The Laboratory Control Sample (LCS) (4/29/10 S) had a(n) MA MCP 8260 List analyte outside of the 70-130% acceptance criteria. Specific outlier includes: chloromethane (131%).

The Laboratory Control Sample Duplicate (LCSD) (4/29/10 S) had a(n) MA MCP 8260 List analyte outside of the 70-130% acceptance criteria. Specific outlier includes: chloromethane (141%).

The percent recoveries for the surrogates in the diluted run are as follows:

INF: 1,2- Dichloroethane-D4 - 112%, Toluene-D8 - 108%, 4-Bromofluorobenzene - 94.8%

Attach QC 8260 4/29/10 "S" - Aqueous
Attach QC 8260 5/3/10 "S" - Aqueous

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ANALYTICAL REPORT

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John Colbert

Project Name.: **HP**
Project No.: **01.0015522.10**

Date Received: **04/21/2010**
Date Reported: **05/06/2010**
Work Order No.: **1004-00187**

Data Authorized By: _____

NELAC certification, as indicated by the NELAC Lab ID Number, is per analyte. For a complete list of NELAC validated analytes, please contact the laboratory.

Abbreviations:
% R = % Recovery
DF = Dilution Factor
DFS = Dilution Factor Solids
CF = Calculation Factor
DO = Diluted Out

Method Key:
Method 8260: The current version of the method is 8260B.
Method 8270: The current version of the method is 8270D.
Method 6010: The current version of the method is 6010B.

Please note that the laboratory signed copy of the chain of custody record is an integral part of the data report.

Soil data is reported on a dry weight basis unless otherwise specified.
Matrix Spike / Matrix Spike Duplicate sets are performed as per method and are reported at the end of the analytical report if assigned on the Chain of Custody.

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Work Order No.: **1004-00187**

Sample ID: **INF** Sample No.: **001**
Sample Date: **04/21/2010**

Test Performed	Method	Results	Reporting Limit	Units	Tech	Analysis Date
Appendix VI Test Package						
VOLATILE ORGANICS	EPA 8260				MQS	05/04/2010
Dichlorodifluoromethane	EPA 8260	<20	20	ug/L	MQS	05/04/2010
Chloromethane	EPA 8260	<20	20	ug/L	MQS	05/04/2010
Vinyl Chloride	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Bromomethane	EPA 8260	<20	20	ug/L	MQS	05/04/2010
Chloroethane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Trichlorofluoromethane	EPA 8260	<20	20	ug/L	MQS	05/04/2010
Diethylether	EPA 8260	<20	20	ug/L	MQS	05/04/2010
Acetone	EPA 8260	<250	250	ug/L	MQS	05/04/2010
1,1-Dichloroethene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Carbon Disulfide	EPA 8260	<20	20	ug/L	MQS	05/04/2010
Dichloromethane	EPA 8260	<25	25	ug/L	MQS	05/04/2010
Methyl tert-butyl ether	EPA 8260	<10	10	ug/L	MQS	05/04/2010
trans-1,2-Dichloroethene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,1-Dichloroethane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Diisopropyl ether (DIPE)	EPA 8260	<20	20	ug/L	MQS	05/04/2010
Ethyl tert-butyl ether ETBE	EPA 8260	<20	20	ug/L	MQS	05/04/2010
2-Butanone (MEK)	EPA 8260	<250	250	ug/L	MQS	05/04/2010
2,2-Dichloropropane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
cis-1,2-Dichloroethene	EPA 8260	14	10	ug/L	MQS	05/04/2010
Chloroform	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Bromochloromethane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Tetrahydrofuran	EPA 8260	<100	100	ug/L	MQS	05/04/2010
1,1,1-Trichloroethane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,1-Dichloropropene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Carbon Tetrachloride	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,2-Dichloroethane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Benzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
tert-Amyl methyl ether TAME	EPA 8260	<20	20	ug/L	MQS	05/04/2010
Trichloroethene	EPA 8260	9600 D	10	ug/L	MQS	04/29/2010
1,4-Dioxane	EPA 8260	<1000	1000	ug/L	MQS	05/04/2010
1,2-Dichloropropane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Bromodichloromethane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Dibromomethane	EPA 8260	<10	10	ug/L	MQS	05/04/2010

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Work Order No.: **1004-00187**

Sample ID: **INF**
Sample No.: **001**
Sample Date: **04/21/2010**

Test Performed	Method	Results	Reporting Limit	Units	Tech	Analysis Date
4-Methyl-2-Pentanone (MIBK)	EPA 8260	<250	250	ug/L	MQS	05/04/2010
cis-1,3-Dichloropropene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Toluene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
trans-1,3-Dichloropropene	EPA 8260	<20	20	ug/L	MQS	05/04/2010
1,1,2-Trichloroethane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
2-Hexanone	EPA 8260	<250	250	ug/L	MQS	05/04/2010
1,3-Dichloropropane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Tetrachloroethene	EPA 8260	54	10	ug/L	MQS	05/04/2010
Dibromochloromethane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,2-Dibromoethane (EDB)	EPA 8260	<20	20	ug/L	MQS	05/04/2010
Chlorobenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,1,1,2-Tetrachloroethane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Ethylbenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
m&p-Xylene	EPA 8260	<20	20	ug/L	MQS	05/04/2010
o-Xylene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Styrene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Bromoform	EPA 8260	<20	20	ug/L	MQS	05/04/2010
Isopropylbenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,1,2,2-Tetrachloroethane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,2,3-Trichloropropane	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Bromobenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
N-Propylbenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
2-Chlorotoluene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,3,5-Trimethylbenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
4-Chlorotoluene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
tert-Butylbenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,2,4-Trimethylbenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
sec-Butylbenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
p-Isopropyltoluene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,3-Dichlorobenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,4-Dichlorobenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
n-Butylbenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,2-Dichlorobenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
1,2-Dibromo-3-Chloropropane	EPA 8260	<20	20	ug/L	MQS	05/04/2010
1,2,4-Trichlorobenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010

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Date Reported: **05/06/2010**
Work Order No.: **1004-00187**

Sample ID: **INF**
Sample No.: **001**
Sample Date: **04/21/2010**

Test Performed	Method	Results	Reporting Limit	Units	Tech	Analysis Date
Hexachlorobutadiene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Naphthalene	EPA 8260	<20	20	ug/L	MQS	05/04/2010
1,2,3-Trichlorobenzene	EPA 8260	<10	10	ug/L	MQS	05/04/2010
Surrogates:	EPA 8260					
***1,2-Dichloroethane-D4	EPA 8260	100	70-130	% R	MQS	05/04/2010
***Toluene-D8	EPA 8260	107	70-130	% R	MQS	05/04/2010
***4-Bromofluorobenzene	EPA 8260	94.1	70-130	% R	MQS	05/04/2010
Preparation	EPA 5030B	10		CF	MQS	05/03/2010
METALS						
Antimony	EPA 6010B	<0.025	0.025	mg/L	LLZ	04/27/2010
Arsenic	EPA 6010B	<0.010	0.010	mg/L	LLZ	04/27/2010
Cadmium	EPA 6010B	<0.0050	0.0050	mg/L	LLZ	04/27/2010
Chromium	EPA 6010B	<0.0050	0.0050	mg/L	LLZ	04/27/2010
Copper	EPA 6010B	0.055	0.015	mg/L	LLZ	04/28/2010
Lead	EPA 6010B	<0.010	0.010	mg/L	LLZ	04/27/2010
Mercury	EPA 7470A	<0.00020	0.00020	mg/L	GDD	04/28/2010
Nickel	EPA 6010B	<0.010	0.010	mg/L	LLZ	04/27/2010
Selenium	EPA 6010B	<0.025	0.025	mg/L	LLZ	04/27/2010
Silver	EPA 6010B	<0.0050	0.0050	mg/L	LLZ	04/28/2010
Zinc	EPA 6010B	0.020	0.010	mg/L	LLZ	04/27/2010
Iron	EPA 6010B	0.15	0.025	mg/L	LLZ	04/27/2010
Hexavalent Chromium	SM 3500CrD	<0.010	0.010	mg/L	LLZ	04/21/2010
Trivalent Chromium	Calculation	<0.010			AJY	05/03/2010
SUBCONTRACTED ANALYTES						
TPH via Method 1664	EPA 1664A	<5	5	mg/L	XXX	04/26/2010
PCB	EPA 608				XXX	
GC-MS SEMIVOLATILES					XXX	
GC-MS SEMIVOLATILES					XXX	

GZA GEOENVIRONMENTAL, INC.
ENVIRONMENTAL CHEMISTRY LABORATORY
106 SOUTH ST, HOPKINTON, MA 01748
MASSACHUSETTS LABORATORY I.D. NO. MA092

EPA METHOD 6010B ANALYSIS
Metals by ICP

QUALITY CONTROL - AQUEOUS

DATE PREPARED: 4/26/2010

QC Sample	Method Blank	Lab Control Sample	LC Duplicate	LC/LCD Diff.
Units	mg/L	% Recovery	% Recovery	RPD
Acceptance Limits	Results	80-120	80-120	<20
Analyte				
Silver (Ag)	<0.0050	95.8	96.1	0.39
Aluminum (Al)	NA	NA	NA	NA
Arsenic (As)	<0.010	103	104	1.04
Boron (B)	NA	NA	NA	NA
Barium (Ba)	NA	NA	NA	NA
Beryllium (Be)	NA	NA	NA	NA
Calcium (Ca)	NA	NA	NA	NA
Cadmium (Cd)	<0.0050	107	107	0.12
Cobalt (Co)	<0.010	105	106	1.07
Chromium (Cr)	<0.0050	102	103	0.27
Copper (Cu)	<0.015	114	115	0.56
Iron (Fe)	<0.025	102	103	0.49
Magnesium (Mg)	NA	NA	NA	NA
Manganese (Mn)	NA	NA	NA	NA
Molybdenum (Mo)	NA	NA	NA	NA
Nickel (Ni)	<0.010	104	104	0.01
Lead (Pb)	<0.010	102	103	1.06
Antimony (Sb)	<0.025	103	105	1.24
Selenium (Se)	<0.025	109	110	0.82
Tin (Sn)	NA	NA	NA	NA
Titanium (Ti)	NA	NA	NA	NA
Thallium (Tl)	NA	NA	NA	NA
Vanadium (V)	NA	NA	NA	NA
Zinc (Zn)	<0.010	110	109	1.21
Zirconium (Zr)	NA	NA	NA	NA

RPD = Relative Percent Difference
NA = Not Applicable
NC = Not Calculated
CRM = Certified Reference Material

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EPA METHOD 7470A ANALYSIS
Mercury by Cold Vapor Atomic Absorption

QUALITY CONTROL - AQUEOUS

Date Prepared : 04/27/10

QC Sample	Method Blank	Lab Control Sample	Lab Control Sample Duplicate	LC/LCD Difference
Units	mg/L	% Recovery	% Recovery	RPD
Acceptance Limits	Results	80-120	80-120	20%
Analyte				
Mercury (Hg)	<0.00020	87.0	88.8	2.05

RPD = Relative Percent Difference
LC concentration = 0.005 mg/L

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EPA Method 8260 / 524.2 Aqueous Method Blank (MB) and Laboratory Control Sample/Duplicate (LCS/LCSD) Data

Method Blank			Laboratory Control Sample				Laboratory Control Sample Duplicate					
Date Analyzed:	4/29/2010		Date Analyzed:	4/29/2010			4/29/2010					
Volatile Organics	Conc. ug/L	Acceptance Limit	Spike Concentration = 20ug/L	% Recovery	Acceptance Limits	Verdict	% Recovery	Acceptance Limits	Verdict	RPD	Limit	Verdict
dichlorodifluoromethane	< 1.0	< 1.0	dichlorodifluoromethane	117	70-130	ok	125	70-130	ok	6.81	<25	ok
chloromethane	< 1.0	< 1.0	chloromethane	131	70-130	out	141	70-130	out	7.46	<25	ok
vinyl chloride	< 0.5	< 0.5	vinyl chloride	119	80-120	ok	128	70-130	ok	7.23	<25	ok
bromomethane	< 1.0	< 1.0	bromomethane	116	70-130	ok	124	70-130	ok	6.74	<25	ok
chloroethane	< 0.5	< 0.5	chloroethane	110	70-130	ok	117	70-130	ok	6.41	<25	ok
trichlorofluoromethane	< 1.0	< 1.0	trichlorofluoromethane	110	70-130	ok	118	70-130	ok	7.23	<25	ok
diethyl ether	< 2.5	< 2.5	diethyl ether	102	70-130	ok	101	70-130	ok	0.43	<25	ok
acetone	< 13	< 13	acetone	101	70-130	ok	108	70-130	ok	6.33	<25	ok
1,1-dichloroethene	< 0.5	< 0.5	1,1-dichloroethene	111	80-120	ok	119	70-130	ok	7.28	<25	ok
carbon disulfide	< 5.0	< 5.0	carbon disulfide	104	70-130	ok	112	70-130	ok	7.33	<25	ok
dichloromethane	< 1.0	< 1.0	dichloromethane	102	70-130	ok	104	70-130	ok	1.43	<25	ok
methyl-tert-butyl-ether	< 0.5	< 0.5	methyl-tert-butyl-ether	89.2	70-130	ok	92.7	70-130	ok	3.93	<25	ok
trans-1,2-dichloroethene	< 0.5	< 0.5	trans-1,2-dichloroethene	109	70-130	ok	109	70-130	ok	0.39	<25	ok
1,1-dichloroethane	< 0.5	< 0.5	1,1-dichloroethane	109	70-130	ok	112	70-130	ok	3.04	<25	ok
di-isopropyl ether (DIPE)	< 1.0	< 1.0	di-isopropyl ether (DIPE)	113	70-130	ok	116	70-130	ok	2.55	<25	ok
ethyl tert-butyl ether (EtBE)	< 1.0	< 1.0	ethyl tert-butyl ether (EtBE)	103	70-130	ok	105	70-130	ok	1.96	<25	ok
2-butanone	< 13	< 13	2-butanone	104	70-130	ok	108	70-130	ok	3.99	<25	ok
2,2-dichloropropane	< 0.5	< 0.5	2,2-dichloropropane	97.0	70-130	ok	104	70-130	ok	7.14	<25	ok
cis-1,2-dichloroethene	< 0.5	< 0.5	cis-1,2-dichloroethene	107	70-130	ok	111	70-130	ok	3.39	<25	ok
chloroform	< 0.5	< 0.5	chloroform	98.8	80-120	ok	103	70-130	ok	3.75	<25	ok
bromochloromethane	< 0.5	< 0.5	bromochloromethane	105	70-130	ok	105	70-130	ok	0.04	<25	ok
tetrahydrofuran	< 5.0	< 5.0	tetrahydrofuran	114	70-130	ok	112	70-130	ok	1.84	<25	ok
1,1,1-trichloroethane	< 0.5	< 0.5	1,1,1-trichloroethane	101	70-130	ok	105	70-130	ok	3.67	<25	ok
1,1-dichloropropene	< 0.5	< 0.5	1,1-dichloropropene	104	70-130	ok	106	70-130	ok	1.60	<25	ok
carbon tetrachloride	< 0.5	< 0.5	carbon tetrachloride	102	70-130	ok	106	70-130	ok	3.38	<25	ok
1,2-dichloroethane	< 0.5	< 0.5	1,2-dichloroethane	101	70-130	ok	106	70-130	ok	5.00	<25	ok
benzene	< 0.5	< 0.5	benzene	105	70-130	ok	109	70-130	ok	3.40	<25	ok
tert-amyl methyl ether (TAME)	< 1.0	< 1.0	tert-amyl methyl ether (TAME)	94.8	70-130	ok	95.5	70-130	ok	0.68	<25	ok
trichloroethene	< 0.5	< 0.5	trichloroethene	105	70-130	ok	109	70-130	ok	3.35	<25	ok
1,2-dichloropropane	< 0.5	< 0.5	1,2-dichloropropane	108	80-120	ok	111	70-130	ok	2.25	<25	ok
bromodichloromethane	< 0.5	< 0.5	bromodichloromethane	96.3	70-130	ok	101	70-130	ok	4.66	<25	ok
1,4-Dioxane	< 50	< 50	1,4-Dioxane	90.0	70-130	ok	99.6	70-130	ok	10.1	<25	ok
dibromomethane	< 0.5	< 0.5	dibromomethane	100.0	70-130	ok	102	70-130	ok	2.00	<25	ok
4-methyl-2-pentanone	< 13	< 13	4-methyl-2-pentanone	107	70-130	ok	112	70-130	ok	4.58	<25	ok
cis-1,3-dichloropropene	< 0.5	< 0.5	cis-1,3-dichloropropene	97.4	70-130	ok	100.0	70-130	ok	2.59	<25	ok
toluene	< 0.5	< 0.5	toluene	103	80-120	ok	108	70-130	ok	4.31	<25	ok
trans-1,3-dichloropropene	< 1.0	< 1.0	trans-1,3-dichloropropene	87.5	70-130	ok	92.7	70-130	ok	5.78	<25	ok
1,1,2-trichloroethane	< 0.5	< 0.5	1,1,2-trichloroethane	105	70-130	ok	104	70-130	ok	1.43	<25	ok
2-hexanone	< 13	< 13	2-hexanone	114	70-130	ok	111	70-130	ok	3.16	<25	ok
1,3-dichloropropane	< 0.5	< 0.5	1,3-dichloropropane	100.0	70-130	ok	95.7	70-130	ok	4.39	<25	ok
tetrachloroethene	< 0.5	< 0.5	tetrachloroethene	108	70-130	ok	105	70-130	ok	2.40	<25	ok
dibromochloromethane	< 0.5	< 0.5	dibromochloromethane	101	70-130	ok	99.3	70-130	ok	1.30	<25	ok
1,2-dibromoethane (EDB)	< 1.0	< 1.0	1,2-dibromoethane (EDB)	107	70-130	ok	103	70-130	ok	3.39	<25	ok
chlorobenzene	< 0.5	< 0.5	chlorobenzene	109	70-130	ok	106	70-130	ok	2.75	<25	ok
1,1,1,2-tetrachloroethane	< 0.5	< 0.5	1,1,1,2-tetrachloroethane	99.3	70-130	ok	96.9	70-130	ok	2.52	<25	ok
ethylbenzene	< 0.5	< 0.5	ethylbenzene	110	80-120	ok	107	70-130	ok	2.50	<25	ok
1,1,2,2-tetrachloroethane	< 0.5	< 0.5	1,1,2,2-tetrachloroethane	101	70-130	ok	101	70-130	ok	0.68	<25	ok
m&p-xylene	< 1.0	< 1.0	m&p-xylene	105	70-130	ok	105	70-130	ok	0.58	<25	ok
o-xylene	< 0.5	< 0.5	o-xylene	101	70-130	ok	103	70-130	ok	1.49	<25	ok
styrene	< 0.5	< 0.5	styrene	107	70-130	ok	104	70-130	ok	2.86	<25	ok
bromoform	< 1.0	< 1.0	bromoform	96.0	70-130	ok	96.1	70-130	ok	0.10	<25	ok
isopropylbenzene	< 0.5	< 0.5	isopropylbenzene	107	70-130	ok	107	70-130	ok	0.45	<25	ok
1,2,3-trichloropropane	< 0.5	< 0.5	1,2,3-trichloropropane	101	70-130	ok	98.1	70-130	ok	2.94	<25	ok
bromobenzene	< 0.5	< 0.5	bromobenzene	101	70-130	ok	98.2	70-130	ok	2.74	<25	ok
n-propylbenzene	< 0.5	< 0.5	n-propylbenzene	108	70-130	ok	108	70-130	ok	0.43	<25	ok
2-chlorotoluene	< 0.5	< 0.5	2-chlorotoluene	102	70-130	ok	101	70-130	ok	1.19	<25	ok
1,3,5-trimethylbenzene	< 0.5	< 0.5	1,3,5-trimethylbenzene	106	70-130	ok	107	70-130	ok	0.87	<25	ok
4-chlorotoluene	< 0.5	< 0.5	4-chlorotoluene	103	70-130	ok	103	70-130	ok	0.78	<25	ok
tert-butyl-benzene	< 0.5	< 0.5	tert-butyl-benzene	104	70-130	ok	103	70-130	ok	1.04	<25	ok
1,2,4-trimethylbenzene	< 0.5	< 0.5	1,2,4-trimethylbenzene	106	70-130	ok	105	70-130	ok	1.02	<25	ok
sec-butyl-benzene	< 0.5	< 0.5	sec-butyl-benzene	111	70-130	ok	111	70-130	ok	0.19	<25	ok
p-isopropyltoluene	< 0.5	< 0.5	p-isopropyltoluene	108	70-130	ok	108	70-130	ok	0.33	<25	ok
1,3-dichlorobenzene	< 0.5	< 0.5	1,3-dichlorobenzene	102	70-130	ok	100	70-130	ok	1.99	<25	ok
1,4-dichlorobenzene	< 0.5	< 0.5	1,4-dichlorobenzene	103	70-130	ok	101	70-130	ok	2.68	<25	ok
n-butylbenzene	< 0.5	< 0.5	n-butylbenzene	112	70-130	ok	111	70-130	ok	0.42	<25	ok
1,2-dichlorobenzene	< 0.5	< 0.5	1,2-dichlorobenzene	101	70-130	ok	98.5	70-130	ok	2.76	<25	ok
1,2-dibromo-3-chloropropane	< 2.5	< 2.5	1,2-dibromo-3-chloropropane	89.2	70-130	ok	86.2	70-130	ok	3.42	<25	ok
1,2,4-trichlorobenzene	< 0.5	< 0.5	1,2,4-trichlorobenzene	100	70-130	ok	102	70-130	ok	1.10	<25	ok
hexachlorobutadiene	< 0.5	< 0.5	hexachlorobutadiene	94.5	70-130	ok	93.9	70-130	ok	0.62	<25	ok
naphthalene	< 1.0	< 1.0	naphthalene	100	70-130	ok	95.6	70-130	ok	4.86	<25	ok
1,2,3-trichlorobenzene	< 0.5	< 0.5	1,2,3-trichlorobenzene	107	70-130	ok	104	70-130	ok	2.11	<25	ok

Surrogates:	Recovery (%)	Acceptance Limits	Surrogates:	Recovery (%)	Acceptance Limits	Verdict	Recovery (%)	Acceptance Limits	Verdict	RPD	Acceptance Limits	Verdict
DIBROMOFLUOROMETHANE	99.7	70-130	DIBROMOFLUOROMETHANE	102	70-130	ok	105	70-130	ok	2.35	<25	ok
1,2-DICHLOROETHANE-D4	107	70-130	1,2-DICHLOROETHANE-D4	99.7	70-130	ok	107	70-130	ok	6.70	<25	ok
TOLUENE-D8	103	70-130	TOLUENE-D8	108	70-130	ok	110	70-130	ok	2.69	<25	ok
4-BROMOFLUOROBENZENE	96.6	70-130	4-BROMOFLUOROBENZENE	100	70-130	ok	94.9	70-130	ok	5.57	<25	ok
1,2-DICHLOROBENZENE-D4	88.7	70-130	1,2-DICHLOROBENZENE-D4	97.0	70-130	ok	93.1	70-130	ok	4.05	<25	ok

Instrument: HP GC/MS "S"

GZA GeoEnvironmental, Inc.
106 South Street
Hopkinton, MA 01748

EPA Method 8260 / 524.2 Aqueous Method Blank (MB) and Laboratory Control Sample/Duplicate (LCS/LCSD) Data

Method Blank			Laboratory Control Sample				Laboratory Control Sample Duplicate					
Date Analyzed:	5/3/2010		Date Analyzed:	5/3/2010			5/3/2010					
Volatile Organics	Conc. ug/L	Acceptance Limit	Spike Concentration = 20ug/L	% Recovery	Acceptance Limits	Verdict	% Recovery	Acceptance Limits	Verdict	RPD	Limit	Verdict
dichlorodifluoromethane	< 1.0	< 1.0	dichlorodifluoromethane	85.3	70-130	ok	83.1	70-130	ok	2.61	<25	ok
chloromethane	< 1.0	< 1.0	chloromethane	115	70-130	ok	111	70-130	ok	3.96	<25	ok
vinyl chloride	< 0.5	< 0.5	vinyl chloride	111	80-120	ok	107	70-130	ok	3.92	<25	ok
bromomethane	< 1.0	< 1.0	bromomethane	116	70-130	ok	110	70-130	ok	5.70	<25	ok
chloroethane	< 0.5	< 0.5	chloroethane	108	70-130	ok	105	70-130	ok	2.89	<25	ok
trichlorofluoromethane	< 1.0	< 1.0	trichlorofluoromethane	111	70-130	ok	108	70-130	ok	3.40	<25	ok
diethyl ether	< 2.5	< 2.5	diethyl ether	98.3	70-130	ok	88.4	70-130	ok	10.6	<25	ok
acetone	< 13	< 13	acetone	99.5	70-130	ok	92.6	70-130	ok	7.14	<25	ok
1,1-dichloroethene	< 0.5	< 0.5	1,1-dichloroethene	109	80-120	ok	108	70-130	ok	0.32	<25	ok
carbon disulfide	< 5.0	< 5.0	carbon disulfide	104	70-130	ok	103	70-130	ok	1.36	<25	ok
dichloromethane	< 1.0	< 1.0	dichloromethane	110	70-130	ok	104	70-130	ok	5.42	<25	ok
methyl-tert-butyl-ether	< 0.5	< 0.5	methyl-tert-butyl-ether	95.1	70-130	ok	91.4	70-130	ok	3.93	<25	ok
trans-1,2-dichloroethene	< 0.5	< 0.5	trans-1,2-dichloroethene	114	70-130	ok	110	70-130	ok	3.43	<25	ok
1,1-dichloroethane	< 0.5	< 0.5	1,1-dichloroethane	112	70-130	ok	111	70-130	ok	1.47	<25	ok
di-isopropyl ether (DIPE)	< 1.0	< 1.0	di-isopropyl ether (DIPE)	112	70-130	ok	111	70-130	ok	1.42	<25	ok
ethyl tert-butyl ether (EtBE)	< 1.0	< 1.0	ethyl tert-butyl ether (EtBE)	103	70-130	ok	101	70-130	ok	2.04	<25	ok
2-butanone	< 13	< 13	2-butanone	97.2	70-130	ok	95.4	70-130	ok	1.90	<25	ok
2,2-dichloropropane	< 0.5	< 0.5	2,2-dichloropropane	87.6	70-130	ok	88.5	70-130	ok	1.03	<25	ok
cis-1,2-dichloroethene	< 0.5	< 0.5	cis-1,2-dichloroethene	111	70-130	ok	110	70-130	ok	0.65	<25	ok
chloroform	< 0.5	< 0.5	chloroform	104	80-120	ok	102	70-130	ok	2.29	<25	ok
bromochloromethane	< 0.5	< 0.5	bromochloromethane	108	70-130	ok	103	70-130	ok	5.03	<25	ok
tetrahydrofuran	< 5.0	< 5.0	tetrahydrofuran	98.8	70-130	ok	97.5	70-130	ok	1.32	<25	ok
1,1,1-trichloroethane	< 0.5	< 0.5	1,1,1-trichloroethane	105	70-130	ok	105	70-130	ok	0.47	<25	ok
1,1-dichloropropene	< 0.5	< 0.5	1,1-dichloropropene	107	70-130	ok	107	70-130	ok	0.76	<25	ok
carbon tetrachloride	< 0.5	< 0.5	carbon tetrachloride	107	70-130	ok	104	70-130	ok	2.94	<25	ok
1,2-dichloroethane	< 0.5	< 0.5	1,2-dichloroethane	102	70-130	ok	103	70-130	ok	0.71	<25	ok
benzene	< 0.5	< 0.5	benzene	112	70-130	ok	110	70-130	ok	1.52	<25	ok
tert-amyl methyl ether (TAME)	< 1.0	< 1.0	tert-amyl methyl ether (TAME)	97.0	70-130	ok	93.2	70-130	ok	3.94	<25	ok
trichloroethene	< 0.5	< 0.5	trichloroethene	114	70-130	ok	112	70-130	ok	1.62	<25	ok
1,2-dichloropropane	< 0.5	< 0.5	1,2-dichloropropane	111	80-120	ok	110	70-130	ok	1.39	<25	ok
bromodichloromethane	< 0.5	< 0.5	bromodichloromethane	101	70-130	ok	97.8	70-130	ok	3.55	<25	ok
1,4-Dioxane	< 50	< 50	1,4-Dioxane	105	70-130	ok	88.8	70-130	ok	16.7	<25	ok
dibromomethane	< 0.5	< 0.5	dibromomethane	107	70-130	ok	103	70-130	ok	4.15	<25	ok
4-methyl-2-pentanone	< 13	< 13	4-methyl-2-pentanone	103	70-130	ok	99.1	70-130	ok	4.07	<25	ok
cis-1,3-dichloropropene	< 0.5	< 0.5	cis-1,3-dichloropropene	97.7	70-130	ok	95.3	70-130	ok	2.54	<25	ok
toluene	< 0.5	< 0.5	toluene	111	80-120	ok	109	70-130	ok	1.23	<25	ok
trans-1,3-dichloropropene	< 1.0	< 1.0	trans-1,3-dichloropropene	88.1	70-130	ok	84.3	70-130	ok	4.41	<25	ok
1,1,2-trichloroethane	< 0.5	< 0.5	1,1,2-trichloroethane	102	70-130	ok	104	70-130	ok	1.84	<25	ok
2-hexanone	< 13	< 13	2-hexanone	99.8	70-130	ok	99.5	70-130	ok	0.26	<25	ok
1,3-dichloropropane	< 0.5	< 0.5	1,3-dichloropropane	96.3	70-130	ok	95.4	70-130	ok	0.93	<25	ok
tetrachloroethene	< 0.5	< 0.5	tetrachloroethene	110	70-130	ok	112	70-130	ok	1.79	<25	ok
dibromochloromethane	< 0.5	< 0.5	dibromochloromethane	97.3	70-130	ok	98.0	70-130	ok	0.70	<25	ok
1,2-dibromoethane (EDB)	< 1.0	< 1.0	1,2-dibromoethane (EDB)	101	70-130	ok	103	70-130	ok	1.34	<25	ok
chlorobenzene	< 0.5	< 0.5	chlorobenzene	110	70-130	ok	112	70-130	ok	1.68	<25	ok
1,1,1,2-tetrachloroethane	< 0.5	< 0.5	1,1,1,2-tetrachloroethane	99.9	70-130	ok	100	70-130	ok	0.61	<25	ok
ethylbenzene	< 0.5	< 0.5	ethylbenzene	111	80-120	ok	112	70-130	ok	1.45	<25	ok
1,1,2,2-tetrachloroethane	< 0.5	< 0.5	1,1,2,2-tetrachloroethane	98.7	70-130	ok	99.6	70-130	ok	0.87	<25	ok
m&p-xylene	< 1.0	< 1.0	m&p-xylene	106	70-130	ok	107	70-130	ok	1.57	<25	ok
o-xylene	< 0.5	< 0.5	o-xylene	105	70-130	ok	103	70-130	ok	1.87	<25	ok
styrene	< 0.5	< 0.5	styrene	111	70-130	ok	108	70-130	ok	3.01	<25	ok
bromoform	< 1.0	< 1.0	bromoform	94.4	70-130	ok	90.7	70-130	ok	3.99	<25	ok
isopropylbenzene	< 0.5	< 0.5	isopropylbenzene	112	70-130	ok	109	70-130	ok	2.57	<25	ok
1,2,3-trichloropropane	< 0.5	< 0.5	1,2,3-trichloropropane	95.6	70-130	ok	91.4	70-130	ok	4.46	<25	ok
bromobenzene	< 0.5	< 0.5	bromobenzene	105	70-130	ok	101	70-130	ok	3.17	<25	ok
n-propylbenzene	< 0.5	< 0.5	n-propylbenzene	110	70-130	ok	110	70-130	ok	0.02	<25	ok
2-chlorotoluene	< 0.5	< 0.5	2-chlorotoluene	104	70-130	ok	103	70-130	ok	0.80	<25	ok
1,3,5-trimethylbenzene	< 0.5	< 0.5	1,3,5-trimethylbenzene	109	70-130	ok	108	70-130	ok	0.82	<25	ok
4-chlorotoluene	< 0.5	< 0.5	4-chlorotoluene	105	70-130	ok	103	70-130	ok	1.18	<25	ok
tert-butyl-benzene	< 0.5	< 0.5	tert-butyl-benzene	107	70-130	ok	106	70-130	ok	1.06	<25	ok
1,2,4-trimethylbenzene	< 0.5	< 0.5	1,2,4-trimethylbenzene	109	70-130	ok	107	70-130	ok	2.03	<25	ok
sec-butyl-benzene	< 0.5	< 0.5	sec-butyl-benzene	114	70-130	ok	113	70-130	ok	1.02	<25	ok
p-isopropyltoluene	< 0.5	< 0.5	p-isopropyltoluene	112	70-130	ok	111	70-130	ok	0.18	<25	ok
1,3-dichlorobenzene	< 0.5	< 0.5	1,3-dichlorobenzene	104	70-130	ok	103	70-130	ok	0.78	<25	ok
1,4-dichlorobenzene	< 0.5	< 0.5	1,4-dichlorobenzene	105	70-130	ok	102	70-130	ok	2.88	<25	ok
n-butylbenzene	< 0.5	< 0.5	n-butylbenzene	112	70-130	ok	111	70-130	ok	1.61	<25	ok
1,2-dichlorobenzene	< 0.5	< 0.5	1,2-dichlorobenzene	102	70-130	ok	99.3	70-130	ok	2.52	<25	ok
1,2-dibromo-3-chloropropane	< 2.5	< 2.5	1,2-dibromo-3-chloropropane	89.2	70-130	ok	82.8	70-130	ok	7.43	<25	ok
1,2,4-trichlorobenzene	< 0.5	< 0.5	1,2,4-trichlorobenzene	104	70-130	ok	102	70-130	ok	1.69	<25	ok
hexachlorobutadiene	< 0.5	< 0.5	hexachlorobutadiene	99.9	70-130	ok	96.8	70-130	ok	3.16	<25	ok
naphthalene	< 1.0	< 1.0	naphthalene	94.9	70-130	ok	95.2	70-130	ok	0.28	<25	ok
1,2,3-trichlorobenzene	< 0.5	< 0.5	1,2,3-trichlorobenzene	107	70-130	ok	104	70-130	ok	2.66	<25	ok

Surrogates:	Recovery (%)	Acceptance Limits	Surrogates:	Recovery (%)	Acceptance Limits	Verdict	Recovery (%)	Acceptance Limits	Verdict	RPD	Acceptance Limits	Verdict
DIBROMOFLUOROMETHANE	108	70-130	DIBROMOFLUOROMETHANE	108	70-130	ok	107	70-130	ok	1.39	<25	ok
1,2-DICHLOROETHANE-D4	107	70-130	1,2-DICHLOROETHANE-D4	99.4	70-130	ok	106	70-130	ok	6.64	<25	ok
TOLUENE-D8	110	70-130	TOLUENE-D8	114	70-130	ok	111	70-130	ok	2.58	<25	ok
4-BROMOFLUOROBENZENE	96.4	70-130	4-BROMOFLUOROBENZENE	102	70-130	ok	100	70-130	ok	1.98	<25	ok
1,2-DICHLOROBENZENE-D4	91.1	70-130	1,2-DICHLOROBENZENE-D4	95.6	70-130	ok	94.0	70-130	ok	1.61	<25	ok

Instrument: HP GC/MS "S"

CHAIN-OF-CUSTODY RECORD

W.O. # 1004-00137 (for lab use only)

Sample I.D.	Date/Time Sampled	Matrix (A=Air, S=Soil, GW=Ground W., SW=Surface W., WW=Waste W., DW=Drinking W., P=Product, Other (specify))	ANALYSIS REQUIRED: pH, Cond.	GC Methane, Ethane, Ethene	EPA 8260	EPA 8260 – 8010 List (Other)	EPA 8260 – 8021 list	EPA 8260 – 8020 List	EPA 524.2 DW VOCs	EPA 624 WW VOCs	601, 602 WW VOCs	EPA 8270 FULL SVOCs	EPA 8270 PAH & PNA	EPA 625 WW SVOCs	EPA 8082-PCBs	EPA 8081-Pest	TPH-GC (Mod. 8100)	TPH-GC w/FING.	EPH (MA DEP)	VPH (MA DEP)	Metals PPM-13 & R-8	8MCP-14 Metals (MA)	Metals (List Below)**	TCLP – Specify Below	SPLP – Specify Below	EPA 300 Cl, SO4	EPA 300 NO2, NO3	PCP via 8270	TPH via 1664	PCBs via 608	Hex. Chrom.	Total # of Cont.	Note #
INF	4/21/10 1338	GW			X							X										X						X	X	X	X	12	1,2,3
PRESERVATIVE (Cl - HCl, M=Methanol, N - HNO3, S - H2SO4, Na - NaOH, O - Other)*					Cl							/										N						/	Cl	–	/		
CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, T-Teflon, O-Other)*					V							G										P						G	G	G	P		

RELINQUISHED BY: (AFFILIATION) DATE/TIME: 4/21/10 — RECEIVED BY: (AFFILIATION) DATE/TIME: 4/21/10 1330

RELINQUISHED BY: (AFFILIATION) DATE/TIME — RECEIVED BY: (AFFILIATION) WATERS

RELINQUISHED BY: (AFFILIATION) DATE/TIME — RECEIVED BY: (AFFILIATION)

NOTES: (Unless otherwise noted, all samples have been refrigerated to 4° C)
*Specify "Other" preservatives and containers types in this space.

(1) Please refer to attached sheet for further instructions.
(2) Hex. Chrom. has 24-hour hold time
(3) Appendix IV Metals per B Davis 4/21 1a

PROJECT MANAGER: John Colbert EXT:

GZA GeoEnvironmental, Inc.
Laboratory Division
106 South Street
Hopkinton, MA 01748
(781) 278-4700
FAX (508) 435-9912

TURNAROUND TIME: Standard (2) Rush___ Days, Approved by _____ (4/21 1a)

LAB USE: TEMP. OF COOLER 4.3 °C — Temp Blank (Cl) Cooler Air___

GZA FILE NO: 01.0015522.04 (10) TASK NO: _____ P.O. NO. _____

4/21/10 1400 (JL)

PROJECT HP Waltham

LOCATION Waltham Ma.

COLLECTOR(S) Bill Davis

SHEET 1 OF 1