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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

AUG 22 2012

Robert Bailey, Manager
Walsh Group
45 Shawmut Road, 3rd Floor
Canton MA 02021

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Spot Pond Water Storage Facility site located at 15 Woodland Road, Stoneham MA 02180, Middlesex County; Authorization # MAG910552

Dear Mr. Bailey:

Based on the review of a Notice of Intent (NOI) submitted on behalf of the Massachusetts Water Resources Authority (MWRA) by the firm OHI Engineering Inc., 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. The checklist also includes other parameters for which your laboratory reports indicated there was insufficient sensitivity to detect these parameters at the minimum levels established in Appendix VI of the RGP.

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

Therefore, the limits for lead of 2. 8 ug/L, and iron of 2, 290 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 general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on 11/30/2014. If for any reason the discharge terminates sooner 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, Manager
Storm Water and Construction
Permits Section

Enclosure

cc: Robert Kubit, MassDEP
Robert E. Grover, Stoneham DPW
James R. Borrebach, OHI Engineering, Inc.

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910551**
Authorization Issued:	August, 2012
Facility/Site Name:	Spot Pond Water Storage Facility
Facility/Site Address:	15 Woodland Road, Stoneham, MA 02180, Middlesex
	Email address of owner: Not Provided
Legal Name of Operator:	Walsh Group
Operator contact name, title, and Address:	Robert Bailey, Manager, 45 Shawmut Road, 3rd Floor, MA 02021
	Email: rbailey@walshgroup.com
Estimated date of Completion:	11/30/2014
Category and Sub-Category:	Category III- Contaminated Construction Dewatering. Sub-category A. General Urban Fill Sites
RGP Termination Date:	September 10, 2015
Receiving Water:	Spot Pond Brook

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 10ug/L
	5. Benzene (B)	5ug/L /50.0 ug/L for hydrostatic testing only/ Me#8260C/ML 2 ug/L
	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
	7. Ethylbenzene (E)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes	100 ug/L/ Me#8260C/ ML 2ug/L

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

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

	Metal parameter	Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]	Minimum level=ML
		Freshwater	
	39. Antimony	5.6/ML 10	

	Metal parameter	Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]		Minimum level=ML	
		Freshwater			
	40. Arsenic **	10/ML20			
	41. Cadmium **	0.2/ML10			
	42. Chromium III (trivalent) **	48.8/ML15			
	43. Chromium VI (hexavalent) **	11.4/ML10			
	44. Copper **	5.2/ML15			
√	45. Lead **	2.98/ML20			
	46. Mercury **	0.9/ML0.2			
	47. Nickel **	29/ML20			
	48. Selenium **	5/ML20			
	49. Silver	1.2/ML10			
	50. Zinc **	66.6/ML15			
√	51. Iron	2,290/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

MAG910552

OHI
OHI Engineering, Inc.
Engineers and Environmental Scientists

44 Wood Avenue
Mansfield, MA 02048
Tel (508) 339 – 3929
Fax (508) 339 - 3140

May 16, 2012

U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912
ATTN: Remediation General Permit NOI Processing

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street, 2nd floor
Worcester, MA 01608

Reference: Spot Pond Water Storage Project, Stoneham, Massachusetts
Notice of Intent for Construction Dewatering Discharge under Massachusetts Remediation General Permit MAG910000

To Whom it May Concern

This letter report provides a summary of the site and groundwater quality information in support of an application for permission from the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) for the temporary discharge of groundwater into an existing catch basin adjacent to Ravine Road, in Stoneham, Massachusetts, during construction at the above referenced project. Refer to **Figure 1** for a Project Plan.

The Spot Pond Storage Facility Project is part of the Massachusetts Water Resources Authority's (MWRA) integrated water supply improvements program. The purpose of this program is to improve the reliability and safety of the MWRA water supply and distribution system. This application applies to the construction of a 20-million gallon water tank and associated infrastructure. Refer to **Figure 2** for plans of exiting conditions and limits of work. The project area is approximately 6.93-acres. Currently, the site is a vacant lot with the exception of a subsurface pumping station in the northeastern corner and various utilities.

Excavation within the 20-million gallon water tank and associated infrastructure will extend to depths ranging from approximately one to 50-feet corresponding to design specifications. Groundwater encountered will be discharged via strategically located submersible pumps to maintain dry excavations. The groundwater encountered across the site is anticipated to be trapped within surficial fill, which is underlain by relatively impermeable glacial till. The glacial till is underlain by bedrock. It is estimated that groundwater discharge during the excavations will be on the order of 25 gallons per minute (GPM).

Groundwater Analytical Results

OHI Engineering, Inc. collected a groundwater sample from groundwater monitoring well MW-3, located approximately in the center of the water storage tank excavation area. The laboratory report is attached as **Appendix A**. A table displaying the results is attached as **Table 1**. Chloride, iron, and lead were detected in the groundwater at 18 mg/L, 0.12 mg/L, and 0.50 ug/L, respectively. In accordance with Appendix III of the NPDES Remediation & Miscellaneous Contaminated Sites General Permit (RGP) the freshwater limit for iron is 1,000 ug/L and lead is 1.3 ug/L. No effluent limit for chloride is noted in Appendix III.

Treatment System Information

In order to maintain the concentrations of lead and iron below Appendix III effluent limits, groundwater will be pumped out of a ¾" crushed stone lined pit, through a silt sack, and overland across newly installed rip-rap prior to entering the existing culvert under Ravine Road and discharging to Spot Pond Brook. Refer to **Figure 3** for a line diagram of the treatment system.

In order to document the effectiveness of the groundwater treatment, samples of discharge water will be obtained and analyzed for lead, iron, and total suspended solids (TSS). Since elevated levels of metals are generally related to high TSS, influent samples of TSS will be obtained and analyzed. Should the results of testing indicate an exceedance of the RCP effluent limits, appropriate treatment steps will be implemented to address the exceedances.

Project Narrative

MWRA's Northern Low (NL) water transmission system extends north to the Gillis Pumping Station located on Spot Pond. The system is fed from the City Tunnel system as well as from surface pipelines. Spot Pond, an open reservoir, was once the northernmost water storage facility for the NL system, but the Pond has been designated an emergency supply because it is not covered. The Gillis Pumping Station is the present terminus of the NL system and it pumps water from the NL to the Northern High (NH) system and from the NH to the Northern Intermediate High (NIH) system.

The NL system currently does not have any storage to help meet peak hourly fluctuations or to supply water in case of an emergency such as a major pipeline break. In addition, the Gillis Pumping Station is the sole pumping station supplying the NIH system. Thus a catastrophic failure of the Gillis Pumping Station such as a major fire could leave the NIH system with inadequate supply and pressure. Accordingly, this project is intended to provide storage in the NL system and a redundant pumping station, replicating the primary functions of the Gillis Pumping Station.

MWRA purchased an approximately rectangular-shaped, 6-arce parcel of land located in Stoneham, Massachusetts from the Gutierrez Company for the project. The land was part of the former New England Medical Center site surrounded by Woodland Road to the west, Ravine Road to the north, and the Massachusetts Department of Conservation and Recreation (Mass

DCR) Middlesex Fells Reservation property to the south and east. The MWRA site, situated behind the New England Medical Center was once used for housing related to the medical center, however the buildings and streets were razed before MWRA purchased the property. The land slopes from a high point of approximately 236-feet above mean sea level in the southwest corner to approximately 160-feet near the northern property line, with an average slope gradient of 10% to 12% between the two elevations.

The full project includes the water storage tank, new pumping station, installation and connection of new water pipes adjacent to and within Ravine Road, fiber optic duck bank within portions of the gravel road known as Pipeline Road and portions of the gravel road known as Reservoir Path, a new communications shelter and antenna adjacent to Fells Reservoir, and an overflow pipe outlet near Spot Pond.

Historic and Archaeological Properties

Historic and archaeological properties exist within the project area including locations near the Gillis Pump Station, Spot Pond, Woodland Road and Ravine Road, which are part of the Middlesex Fells Reservation Parkways and Historic District. The Massachusetts Historic Commission (MHC) has determined that the proposed project will not adversely affect these historic or archaeological properties during the course of construction. Please refer to **Appendix B** for documentation.

Endangered Species Habitat

Based on information obtained from the Natural Heritage and Endangered Species Program (NHESP) Database of Massachusetts, and a determination from the Massachusetts Division of Fisheries and Wildlife (DFW), the proposed project will not adversely impact national heritage areas or endangered species. Pursuant to the NPDES Remediation General Permit requirements documentation received from the NHESP and DFW are provided as **Appendix B**.

Conclusions

Sampling and analysis of the effluent will be carried out in accordance with the terms of the RGP. A dewatering plan and Storm Water Pollution Prevention Plan (SWPPP) have been developed and will be maintained by the on-Site Environmental Compliance Manager. In conclusion, it is our opinion that groundwater at the site is acceptable for discharge into Spot Pond Brook through the existing culvert at Ravine Road under a RGP. Please do not hesitate to contact us if you have any questions or concerns.

Sincerely,

OHI ENGINEERING, INC.

James R. Borrebach, P.E., L.S.P.
Principal

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**: Spot Pond Water Storage Facility			**Facility/site** mailing address:		
Location of **facility/site**: longitude: 42.451370 latitude: -71.087136	Facility SIC code(s): 4941		Street: 15 Woodland Road		
b) Name of **facility/site owner:**			Town: Stoneham		
Email address of facility/site owner: MWRA			State: MA	Zip: 02180	County: Middlesex
Telephone no. of facility/site **owner**: 617-242-6000					
Fax no. of facility/site **owner**:			**Owner** is (check one): 1. Federal ○ 2. State/Tribal ⊙ 3. Private ○ 4. Other ○ if so, describe:		
Address of **owner** (if different from site):					
Street: 100 First Avenue					
Town: Boston	State: MA	Zip: 02129	County: Suffolk		
c) Legal name of **operator**: Walsh Group			**Operator** telephone no: 781-793-9988		
			Operator fax no.: 781-828-3804	**Operator** email: rbailey@walshgroup.com	
Operator contact name and title: Robert Bailey, Manager					
Address of **operator** (if different from owner):	Street: 45 Shawmut Road, 3rd Floor				
Town: Canton	State: MA	Zip: 02021	County: Norfolk		

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: MAR12A050
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:

Excavation dewatering preformed by installed sump(s) within the limits of the excavation to control groundwater and maintain a dry and stable subgrade for construction of a 20-million gallon water storage tank.

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 0.06 Is maximum flow a **design value**? Y ○ N ⊙
Average flow (include units) 0.06 Is average flow a design value or estimate? estimate

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

pt.1: lat	42.452332	long	-71.085826	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 04/30/2012 end 11/30/2014

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

0.06 + 0.0774 / 0.06

DL = 2.29 × 1,000 / 2,290

Lead 2.98 ppb MCL = 20 ug/L

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	SM18-20 254	5 mg/L	ND		ND	
2. Total Residual Chlorine (TRC)		☒	☐	1	grab	SM18-20 450	0.02 mg/L	ND		ND	
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	1	grab	SW-846 8100	0.20 mg/L	ND		ND	
4. Cyanide (CN)	57125	☒	☐	1	grab	SW-846 9014	0.010 mg/L	ND		ND	
5. Benzene (B)	71432	☒	☐	1	grab	EPA 624	1 ug/L	ND		ND	
6. Toluene (T)	108883	☒	☐	1	grab	EPA 624	1 ug/L	ND		ND	
7. Ethylbenzene (E)	100414	☒	☐	1	grab	EPA 624	2 ug/L	ND		ND	
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐	1	grab	EPA 624	2 ug/L	ND		ND	
9. Total BTEX [2]	n/a	☒	☐	1	grab	EPA 624		ND		ND	
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☒	☐	1	grab	EPA 504.1	0.020 ug/L	ND		ND	
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐	1	grab	EPA 624	2 ug/L	ND		ND	
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	1	grab	EPA 624	20 ug/L	ND		ND	

* 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	EPA 624	0.50 ug/L	ND		ND	
14. Naphthalene	91203	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
15. Carbon Tetrachloride	56235	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	
18a. Total dichlorobenzene		☒	☐	1	grab			ND		ND	
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	
22. cis-1,2 Dichloroethene (DCE)	156592	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	
23. Methylene Chloride	75092	☒	☐	1	grab	EPA 624	5.0 ug/L	ND		ND	
24. Tetrachloroethene (PCE)	127184	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	
27. Trichloroethene (TCE)	79016	☒	☐	1	grab	EPA 624	2.0 ug/L	ND		ND	

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	EPA 624	2.0 ug/L	ND		ND	
29. Acetone	67641	☒	☐	1	grab	EPA 624	50 ug/L	ND		ND	
30. 1,4 Dioxane	123911	☒	☐	1	grab	EPA 624	50 ug/L	ND		ND	
31. Total Phenols	108952	☒	☐	1	grab	EPA 625	10 ug/L	ND		ND	
32. Pentachlorophenol (PCP)	87865	☒	☐	1	grab	EPA 625	10 ug/L	ND		ND	
33. Total Phthalates (Phthalate esters) [4]		☒	☐	1	grab	EPA 625	?	ND		ND	
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	1	grab	EPA 625	10 ug/L	ND		ND	
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	1	grab	EPA 625		ND		ND	
a. Benzo(a) Anthracene	56553	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
b. Benzo(a) Pyrene	50328	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
c. Benzo(b)Fluoranthene	205992	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
d. Benzo(k)Fluoranthene	207089	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
e. Chrysene	21801	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
f. Dibenzo(a,h)anthracene	53703	☒	☐	1	grab	EPA 625	5.4 ug/L	ND		ND	
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	1	grab	EPA 625		ND		ND	

[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	EPA 625	5.0 ug/L	ND		ND	
i. Acenaphthylene	208968	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
j. Anthracene	120127	☒	☑	1	grab	EPA 625	6.0 ug/L	ND		ND	
k. Benzo(ghi) Perylene	191242	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
l. Fluoranthene	206440	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
m. Fluorene	86737	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
n. Naphthalene	91203	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
o. Phenanthrene	85018	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
p. Pyrene	129000	☒	☐	1	grab	EPA 625	5.0 ug/L	ND		ND	
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	1	grab	EPA 625		ND		ND	
38. Chloride	16887006	☐	☒	1	grab	SM18-20 4500 CL B	1.0 mg/L	18,000	2.45	18,000	2.45
39. Antimony	7440360	☒	☐	1	grab	EPA 200.8	1.0 ug/L	ND		ND	
40. Arsenic	7440382	☒	☐	1	grab	EPA 200.8	1.0 ug/L	ND		ND	
41. Cadmium	7440439	☒	☐	1	grab	EPA 200.8	0.20 ug/L	ND		ND	
42. Chromium III (trivalent)	16065831	☒	☐	1	grab	EPA 200.8	10 ug/L	ND		ND	
43. Chromium VI (hexavalent)	18540299	☒	☐	1	grab	SM18-20 350	0.0040 mg/L	ND		ND	
44. Copper	7440508	☒	☐	1	grab	EPA 200.8	1 ug/L	ND		ND	
45. Lead	7439921	☐	☒	1	grab	EPA 200.8	0.50 ug/L	0.50	0.00006	ND	0.00006
46. Mercury	7439976	☒	☐	1	grab	EPA 245.1	0.00010 mg/L	ND		ND	
47. Nickel	7440020	☒	☐	1	grab	EPA 200.8	5.0 ug/L	ND		ND	
48. Selenium	7782492	☒	☐	1	grab	EPA 200.8	5.0 ug/L	ND		ND	
49. Silver	7440224	☒	☐	1	grab	EPA 200.8	0.20 ug/L	ND		ND	
50. Zinc	7440666	☒	☐	1	grab	EPA 200.8	20 ug/L	ND		ND	
51. Iron	7439896	☐	☒	1	grab	EPA 200.7	0.050 mg/L	120	0.016	120	0.016
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?
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: DF: Metal: DF: Metal: DF: Metal: DF: Etc.	Look up the limit calculated at the corresponding dilution factor in **Appendix IV.** Do any of the metals in the **influent** have the potential to exceed the corresponding **effluent** limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y ○ N ○ If Y, list which metals:

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

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

In order to maintain the concentrations of lead and iron below Appendix III effluent limits, groundwater will be pumped out of a ¾" crushed stone lined pit, a silt sack, and overland across newly installed rip-rap prior to entering the existing culvert under Ravine Road and discharging to Spot Pond Brook.

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 25 gpm Maximum flow rate of treatment system 25 gpm
Design flow rate of treatment system _____ gpm

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

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

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

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:
Treated groundwater will travel over land through rip-rap before entering the existing culvert under Ravine Road and discharging to Spot Pond Brook.

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

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

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 0.0774 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.

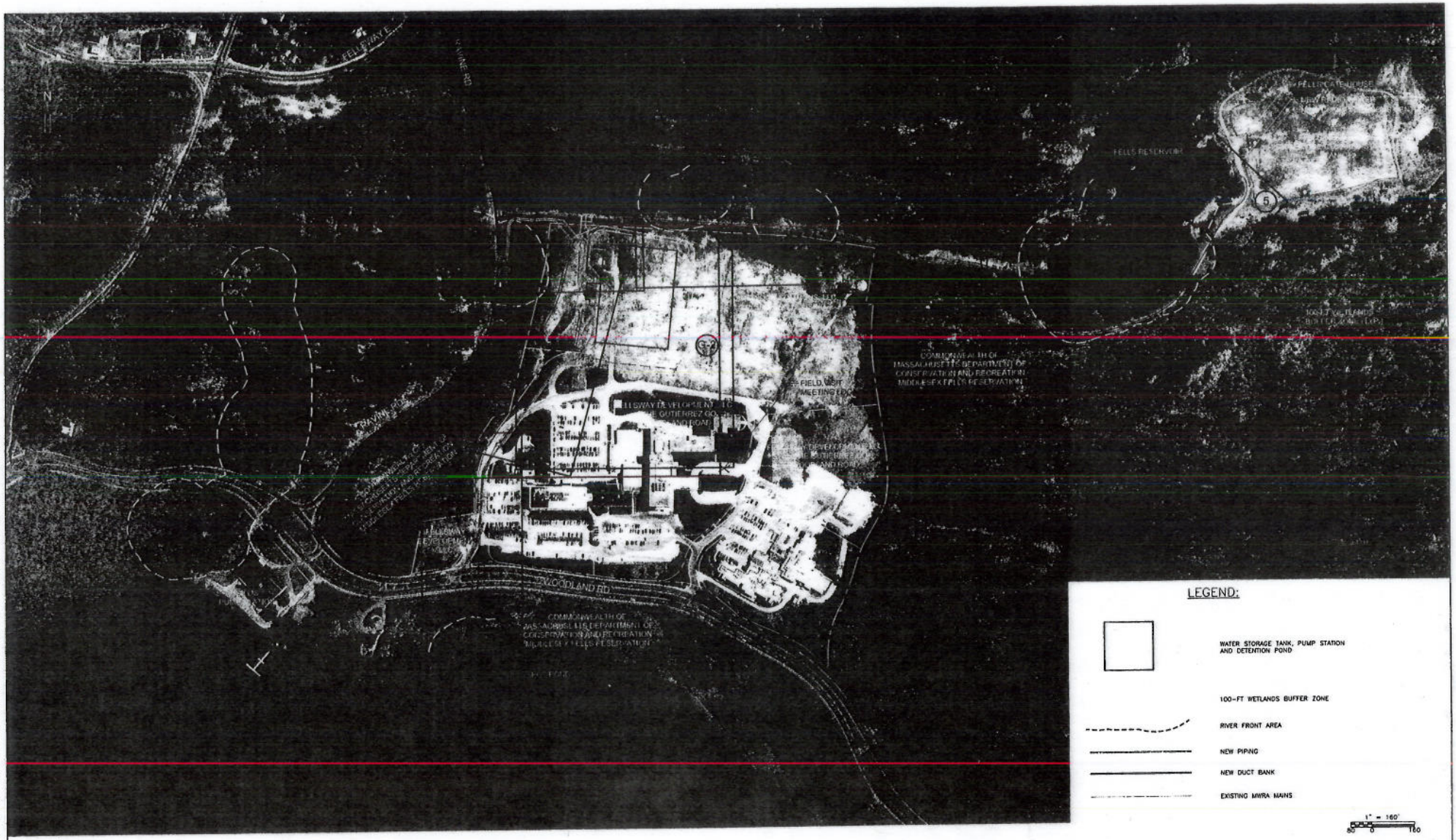
Please see the attached letter

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:	MWRA Spot Pond Water Storage Tank Construction Site
Operator signature:	
Printed Name &Title:	Robert Bailey, Manager
Date:	

Figure 1



NOT FOR CONSTRUCTION

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. :	6457	CAD FILE NO. :	CDCPLOD1
ACCESSION NO. :		SECTION NO. :	
DATE:	JUNE 2011	DESIGNED BY:	J. PESCATORE
		DRAWN BY:	T. PETRUKHIN
		CHECKED BY:	J. PESCATORE
SCALE:		APPROVED BY:	X

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY:

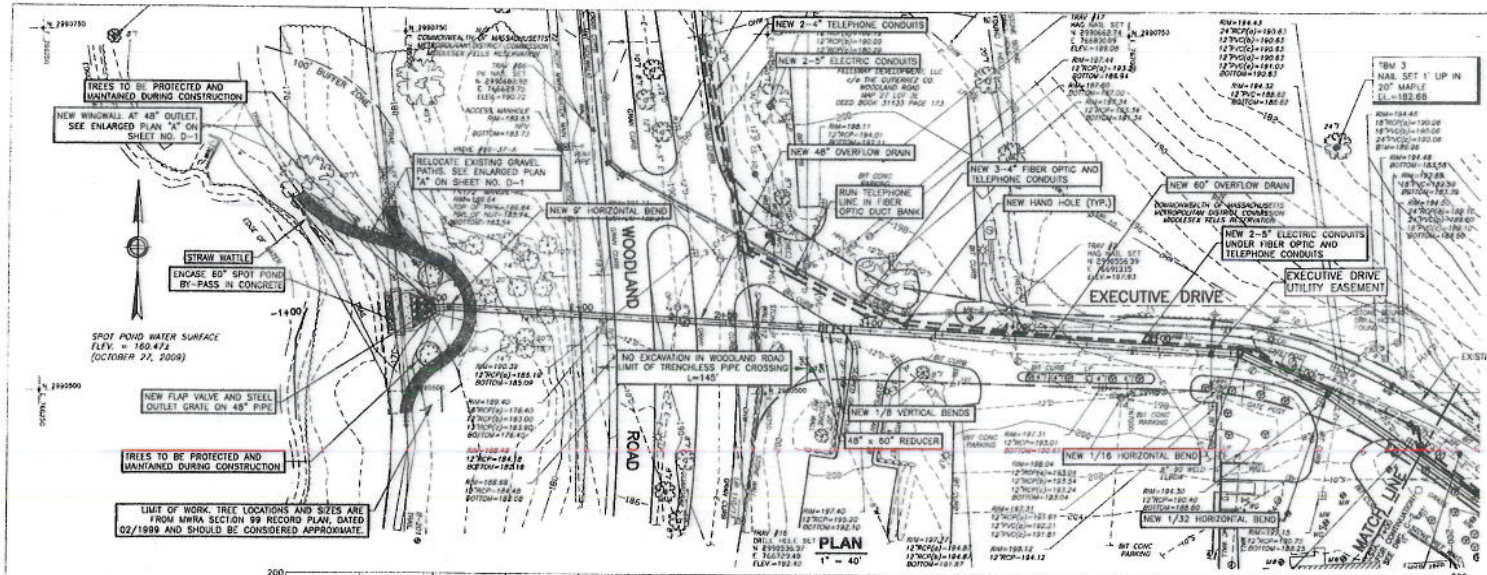
CDM

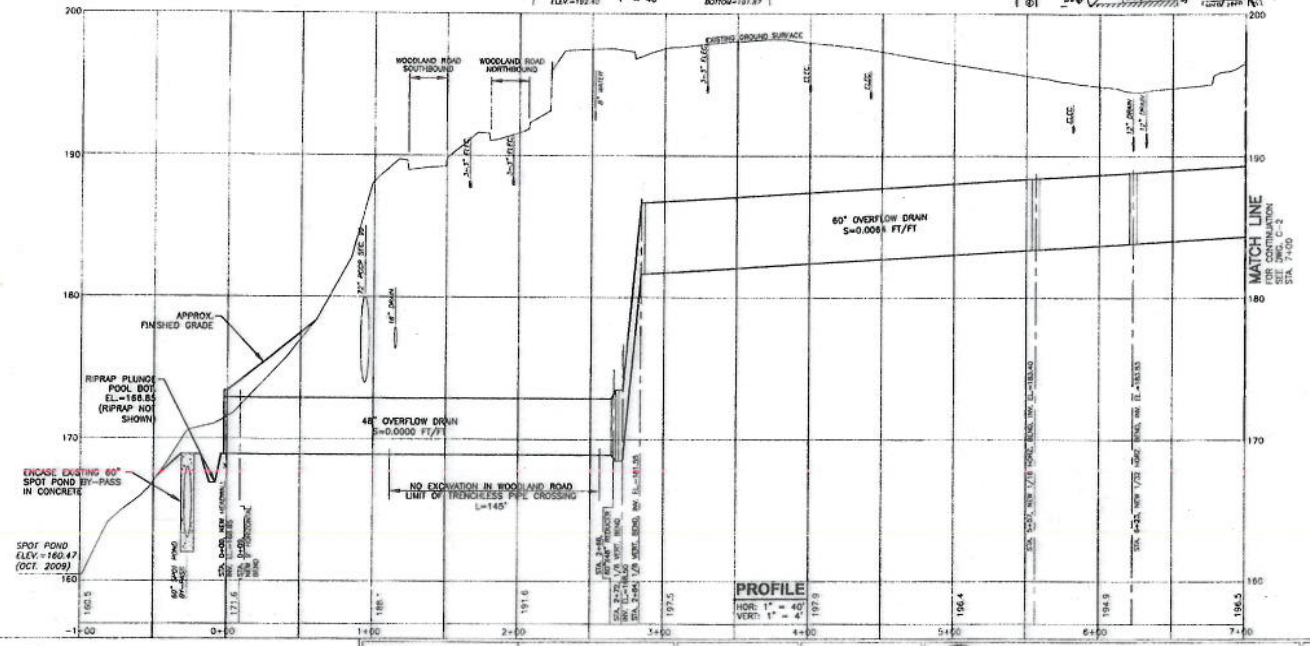
Camp Dresser & McKee Inc.
One Cambridge Place, 50 Hampshire Street
Cambridge, MA 02139
Tel: (617) 452-6000
consulting • engineering • construction • operations

SPOT POND WATER STORAGE FACILITY
DESIGN BUILD PROJECT

BUFFER ZONES AND KEY PLAN

DRAWING NO.
AA
OF





CONSTRUCTION NOTES:

1. LOCATION OF WATTLE MAY BE ADJUSTED TO AVOID CUTTING TREES GREATER THAN 2" DBH.

NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO.: 6457 | CAD FILE NO.: -
ACCESSION NO.: | SECTION NO.: -
DATE: MAY, 2011 | DESIGNED BY: TJR | DRAWN BY: TJR | CHECKED BY: AMS | APPROVED BY: MRP
SCALE: AS NOTED

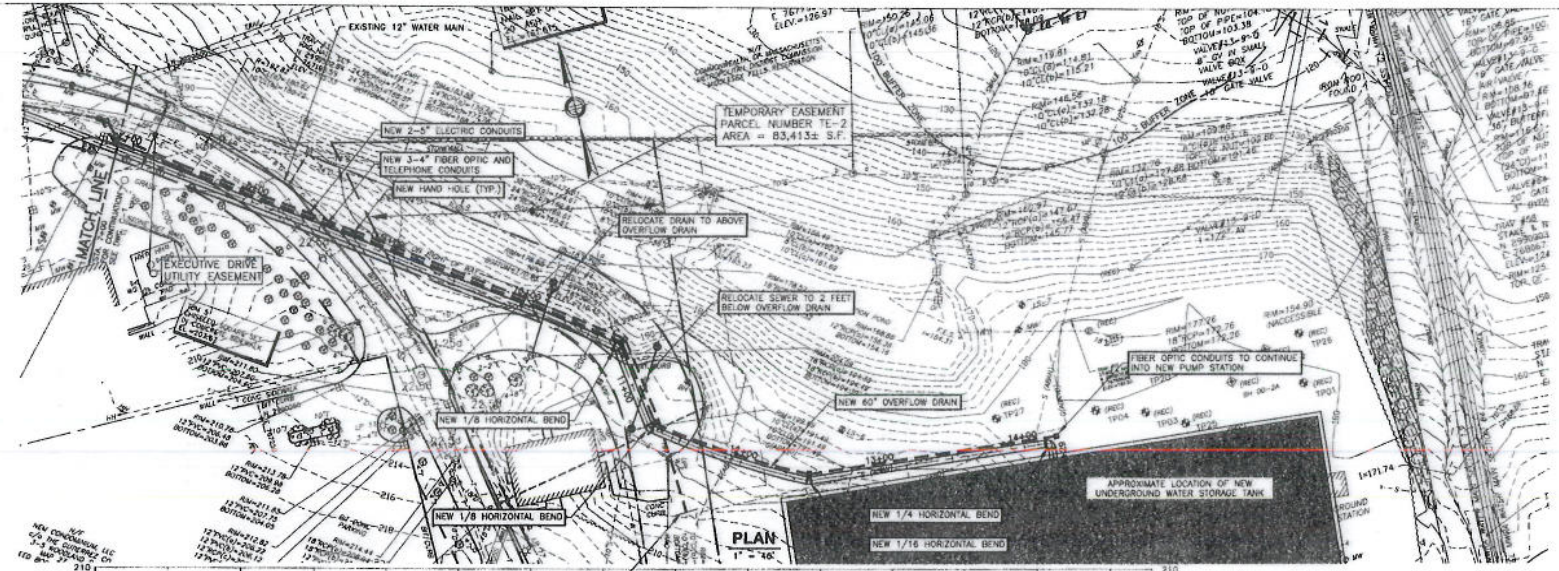
MASSACHUSETTS WATER RESOURCES AUTHORITY

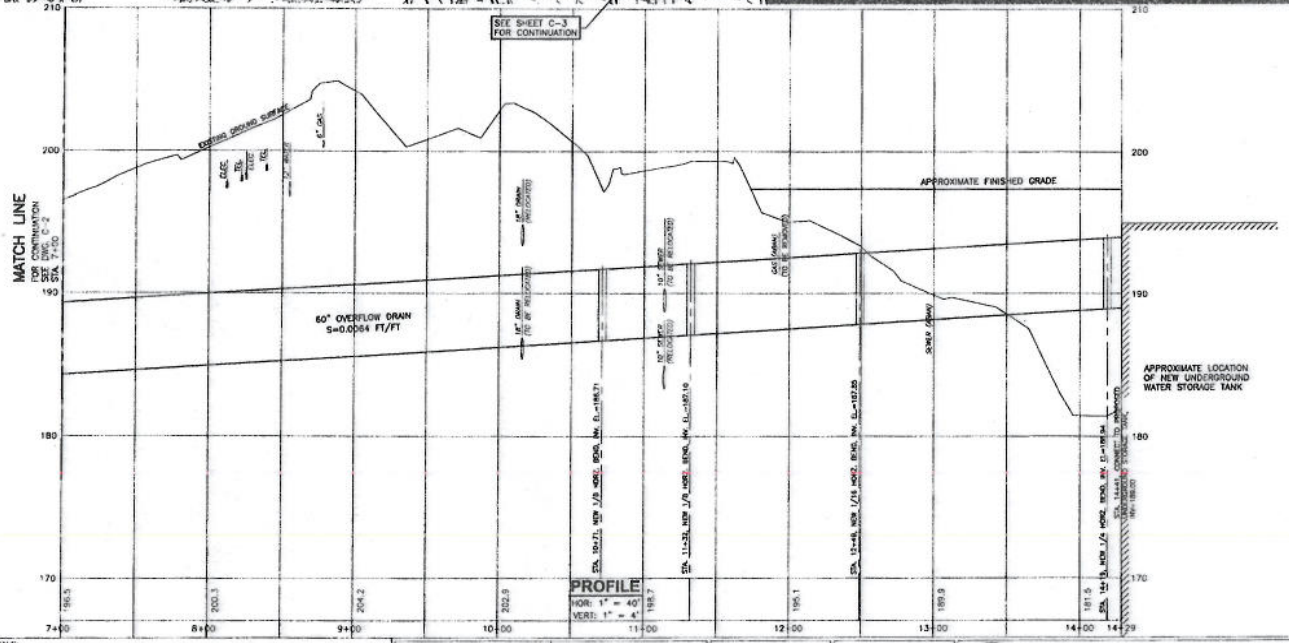
PREPARED BY: GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL & STRUCTURAL ENGINEERS
239 LITTLETON ROAD, SUITE 3
WESTFORD, MASSACHUSETTS

SPOT POND WATER STORAGE FACILITY
DESIGN BUILD PROJECT

OVERFLOW DRAIN PLAN & PROFILE
STA. 0+00 TO STA. 7+00

DRAWING NO. C-1 OF





NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE: 20 0 20 40 60 120
1" = 40'
VERTICAL SCALE: 4 0 2 4 8 12
1" = 4'

NO.	DATE	BY	CHKD	REVISION

CONTRACT NO. : 6457	CAD FILE NO. : -
ADDESSION NO.	SECTION NO. : -
DATE: MAY, 2011	DESIGNED BY: TJR
SCALE: AS NOTED	DRAWN BY: TJR
	CHECKED BY: AMS
	APPROVED BY: MRP

MASSACHUSETTS WATER RESOURCES AUTHORITY

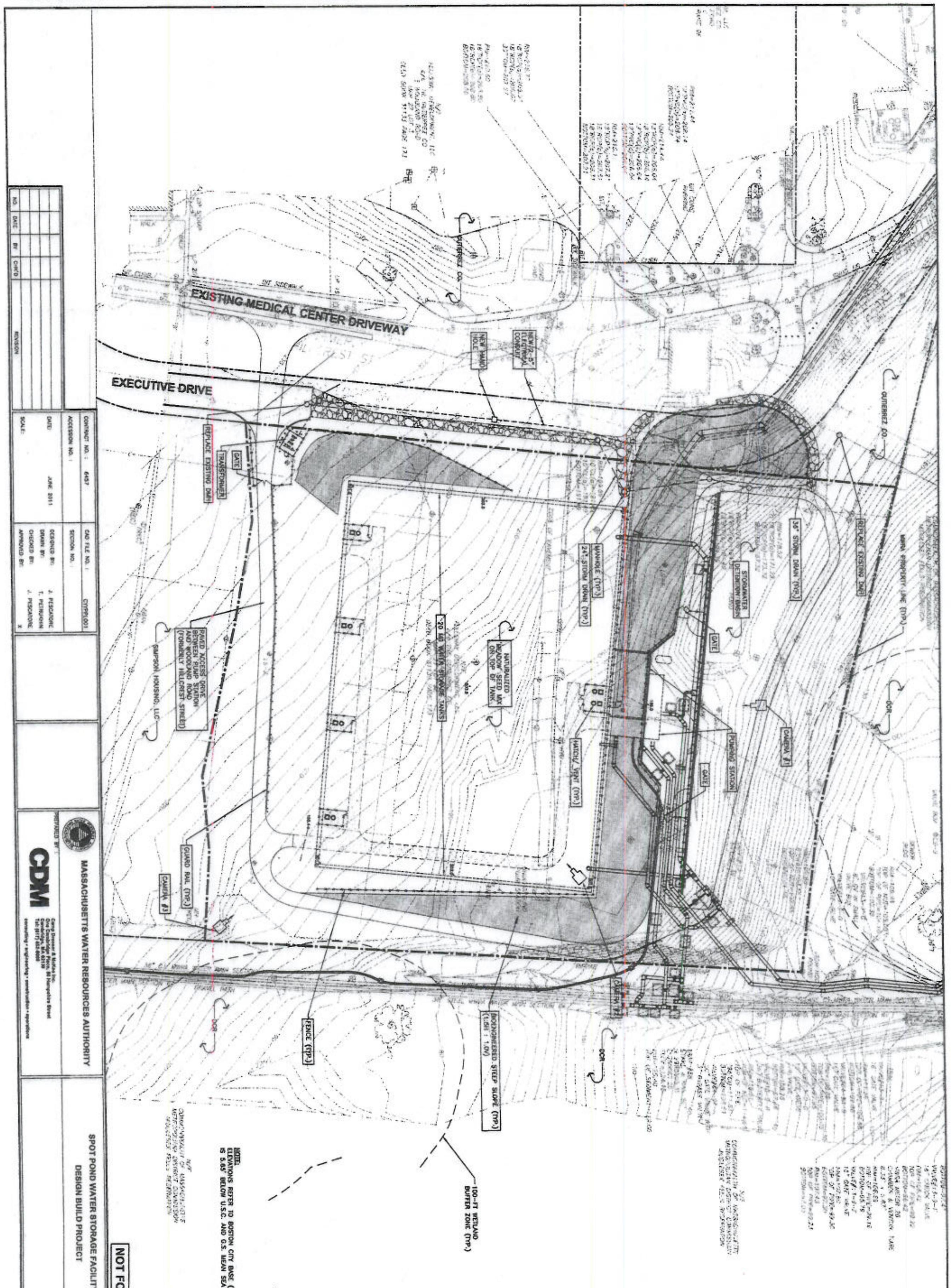
PREPARED BY
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL & STRUCTURAL ENGINEERS
239 LITTLETON ROAD, SUITE 3
WESTFORD, MASSACHUSETTS

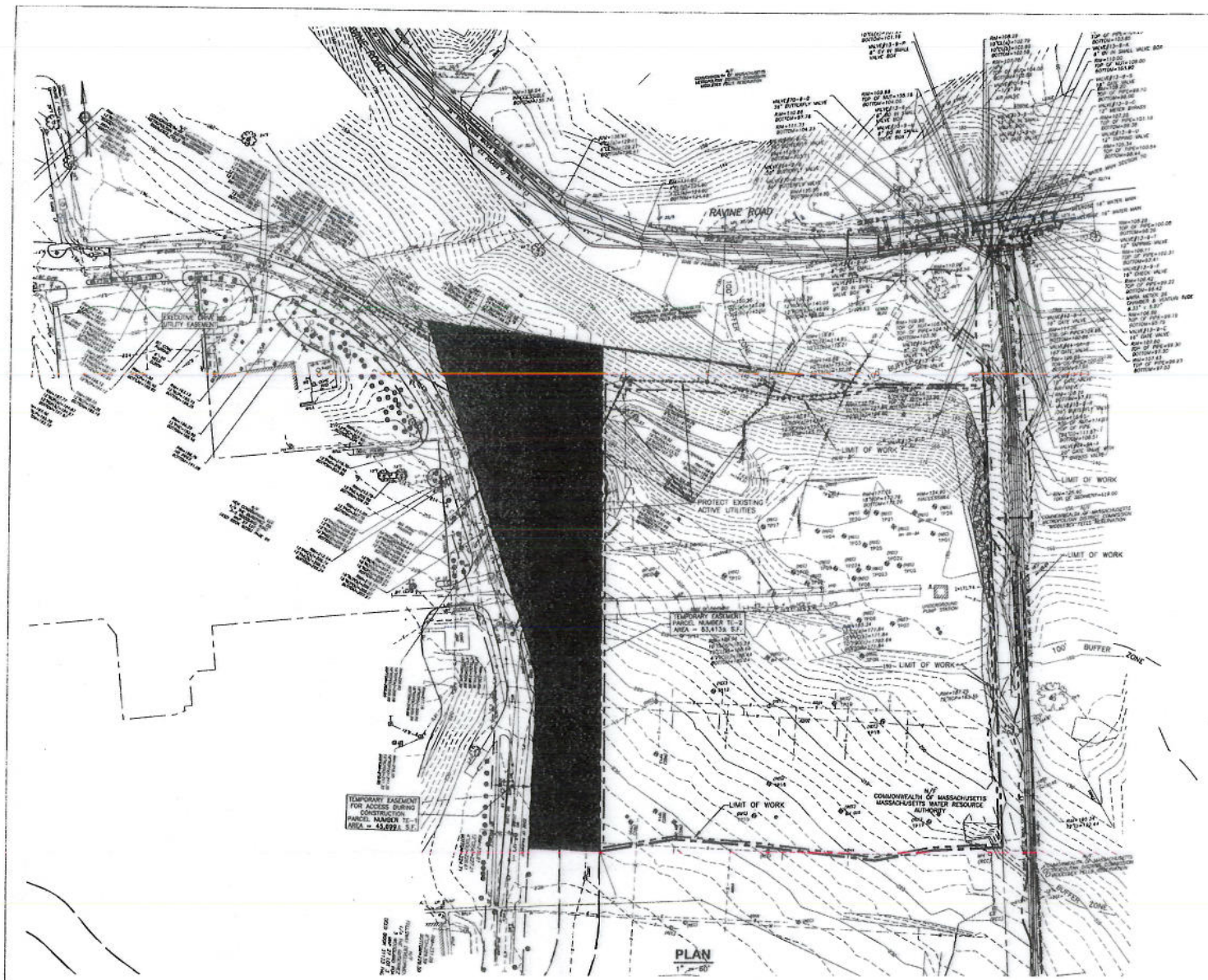
SPOT POND WATER STORAGE FACILITY DESIGN BUILD PROJECT

OVERFLOW DRAIN PLAN & PROFILE STA. 7+00 TO STA. 14+29

DRAWING NO. C-2

Plot Stamp - ProjectWise Project: Fill in 0176-76427 - MWRA - File: C:\CDMXM\PETRUKHINTM\DC250874\CBSPL000.DWG Saved by: PETRUKHINTM On: 3-Jun-11





LEGEND (PROPOSED)

- LIMIT OF WORK
- PROPERTY LINE
- EASEMENT
- ACTIVE UTILITY TO BE PROTECTED

NOT FOR CONSTRUCTION

HORIZONTAL GRAPHIC SCALE:
60 0 30 60 120 180
1" = 60'

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 6457	CAD FILE NO. : -
ACCESSION NO. :	SECTION NO. : -
DATE: MAY, 2011	DESIGNED BY: AGF
	DRAWN BY: AGF/TJR
SCALE: AS NOTED	CHECKED BY: AMS
	APPROVED BY: MRP

MASSACHUSETTS WATER RESOURCES AUTHORITY

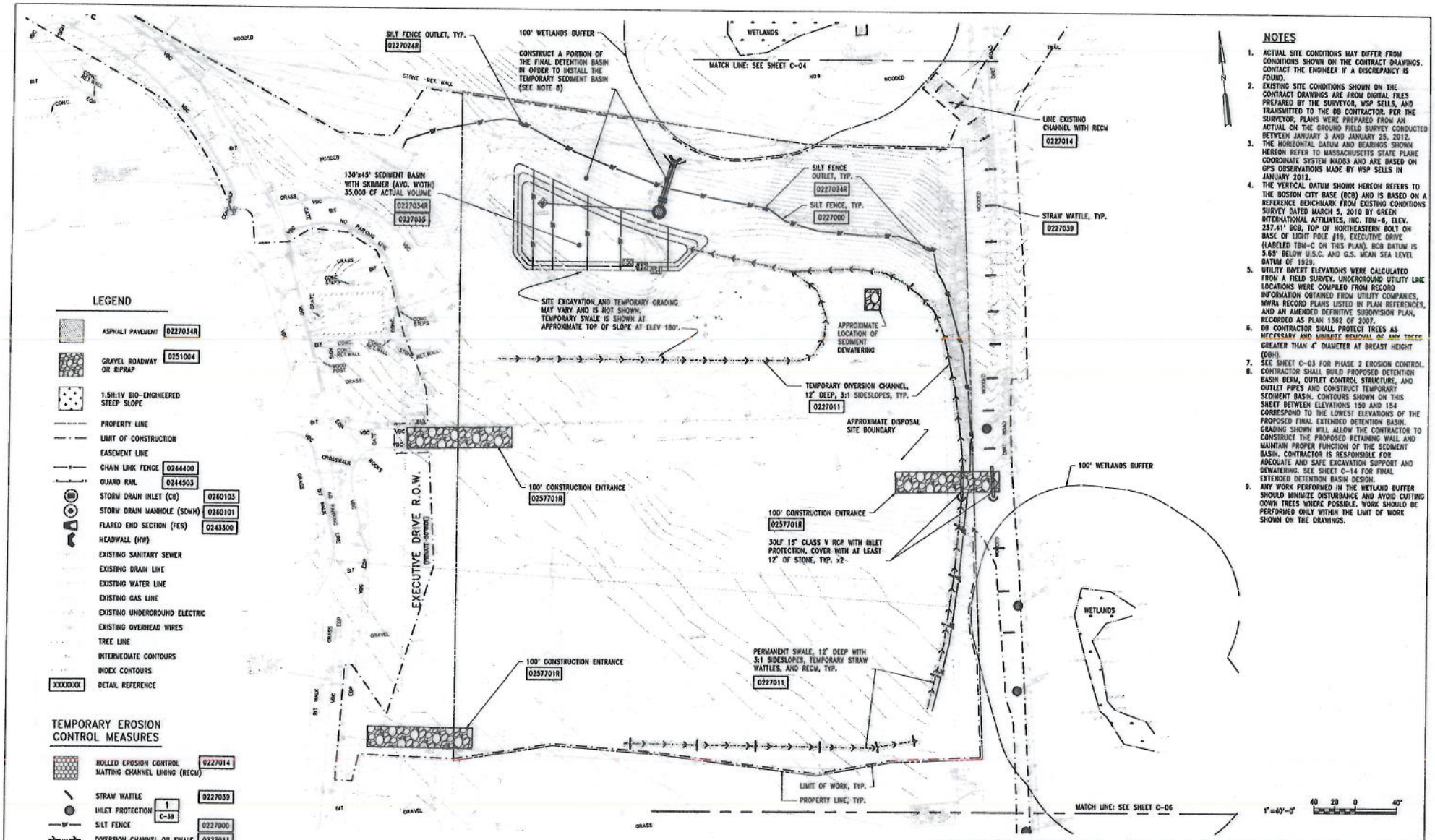
PREPARED BY: GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL & STRUCTURAL ENGINEERS
239 LITTLETON ROAD, SUITE 3
WESTFORD, MASSACHUSETTS

SPOT POND WATER STORAGE FACILITY
DESIGN BUILD PROJECT

EXISTING CONDITIONS PLAN

DRAWING NO.
G-2
OF

Figure 2



LEGEND

- ASPHALT PAVEMENT 0227034R
- GRAVEL ROADWAY OR RIPRAP 0251004
- 1.5H:1V BIO-ENGINEERED STEEP SLOPE
- PROPERTY LINE
- LIMIT OF CONSTRUCTION
- EASEMENT LINE
- CHAIN LINK FENCE 0244400
- GUARD RAIL 0244503
- STORM DRAIN INLET (CB) 0260103
- STORM DRAIN MANHOLE (SDMH) 0260101
- FLARED END SECTION (FES) 0243300
- HEADWALL (HW)
- EXISTING SANITARY SEWER
- EXISTING DRAIN LINE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD WIRES
- TREE LINE
- INTERMEDIATE CONTOURS
- INDEX CONTOURS
- XXXXXX DETAIL REFERENCE

TEMPORARY EROSION CONTROL MEASURES

- ROLLED EROSION CONTROL MATTING CHANNEL LINING (RECM) 0227014
- STRAW WATTLE 0227039
- INLET PROTECTION 1 C-38
- SILT FENCE 0227000
- DIVERSION CHANNEL OR SWALE 0227011
- TREE PROTECTION FENCE 0227035R
- SILT FENCE OUTLET 0227024R

NOTES

1. ACTUAL SITE CONDITIONS MAY DIFFER FROM CONDITIONS SHOWN ON THE CONTRACT DRAWINGS. CONTACT THE ENGINEER IF A DISCREPANCY IS FOUND.
2. EXISTING SITE CONDITIONS SHOWN ON THE CONTRACT DRAWINGS ARE FROM DIGITAL FILES PREPARED BY THE SURVEYOR, WSP SELLS, AND TRANSMITTED TO THE DB CONTRACTOR. PER THE SURVEYOR, PLANS WERE PREPARED FROM AN ACTUAL ON THE GROUND FIELD SURVEY CONDUCTED BETWEEN JANUARY 3 AND JANUARY 25, 2012.
3. THE HORIZONTAL DATUM AND BEARINGS SHOWN HEREON REFER TO MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NAD83 AND ARE BASED ON GPS OBSERVATIONS MADE BY WSP SELLS IN JANUARY 2012.
4. THE VERTICAL DATUM SHOWN HEREON REFERS TO THE BOSTON CITY BASE (BCB) AND IS BASED ON A REFERENCE BENCHMARK FROM EXISTING CONDITIONS SURVEY DATED MARCH 5, 2010 BY GREEN INTERNATIONAL AFFILIATES, INC. TBM-6, ELEV. 237.41' BCB, TOP OF NORTHEASTERN BOLT ON BASE OF LIGHT POLE #18, EXECUTIVE DRIVE, (LABELED TBM-C ON THIS PLAN). BCB DATUM IS 5.65' BELOW U.S.C. AND G.S. MEAN SEA LEVEL DATUM OF 1929.
5. UTILITY INVERT ELEVATIONS WERE CALCULATED FROM A FIELD SURVEY. UNDERGROUND UTILITY LINE LOCATIONS WERE COMPILED FROM RECORD INFORMATION OBTAINED FROM UTILITY COMPANIES, MWRA RECORD PLANS LISTED IN PLAN REFERENCES, AND AN AMENDED DEFINITIVE SUBDIVISION PLAN, RECORDED AS PLAN 1362 OF 2007.
6. DB CONTRACTOR SHALL PROTECT TREES AS NECESSARY AND MINIMIZE REMOVAL OF ANY TREES GREATER THAN 4" DIAMETER AT BREAST HEIGHT (DBH).
7. SEE SHEET C-03 FOR PHASE 2 EROSION CONTROL.
8. CONTRACTOR SHALL BUILD PROPOSED DETENTION BASIN BERM, OUTLET CONTROL STRUCTURE, AND OUTLET PIPES AND CONSTRUCT TEMPORARY SEDIMENT BASIN. CONTOURS SHOWN ON THIS SHEET BETWEEN ELEVATIONS 150 AND 154 CORRESPOND TO THE LOWEST ELEVATIONS OF THE PROPOSED FINAL EXTENDED DETENTION BASIN. GRADING SHOWN WILL ALLOW THE CONTRACTOR TO CONSTRUCT THE PROPOSED RETAINING WALL AND MAINTAIN PROPER FUNCTION OF THE SEDIMENT BASIN. CONTRACTOR IS RESPONSIBLE FOR ADEQUATE AND SAFE EXCAVATION SUPPORT AND DEWATERING. SEE SHEET C-14 FOR FINAL EXTENDED DETENTION BASIN DESIGN.
9. ANY WORK PERFORMED IN THE WETLAND BUFFER SHOULD MINIMIZE DISTURBANCE AND AVOID CUTTING DOWN TREES WHERE POSSIBLE. WORK SHOULD BE PERFORMED ONLY WITHIN THE LIMIT OF WORK SHOWN ON THE DRAWINGS.

NOT FOR CONSTRUCTION

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 8436	CAD FILE NO. :
ACCESSION NO. :	SECTION NO. :
DATE: NOVEMBER 2011	DESIGNED BY: BFT DRAWN BY: BFT CHECKED BY: APPROVED BY: MTV
SCALE: AS NOTED	

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY : HAZEN AND SAWYER, Environmental Engineers & Scientists, 24 Federal Street, 5th Floor, Boston, Massachusetts 02110

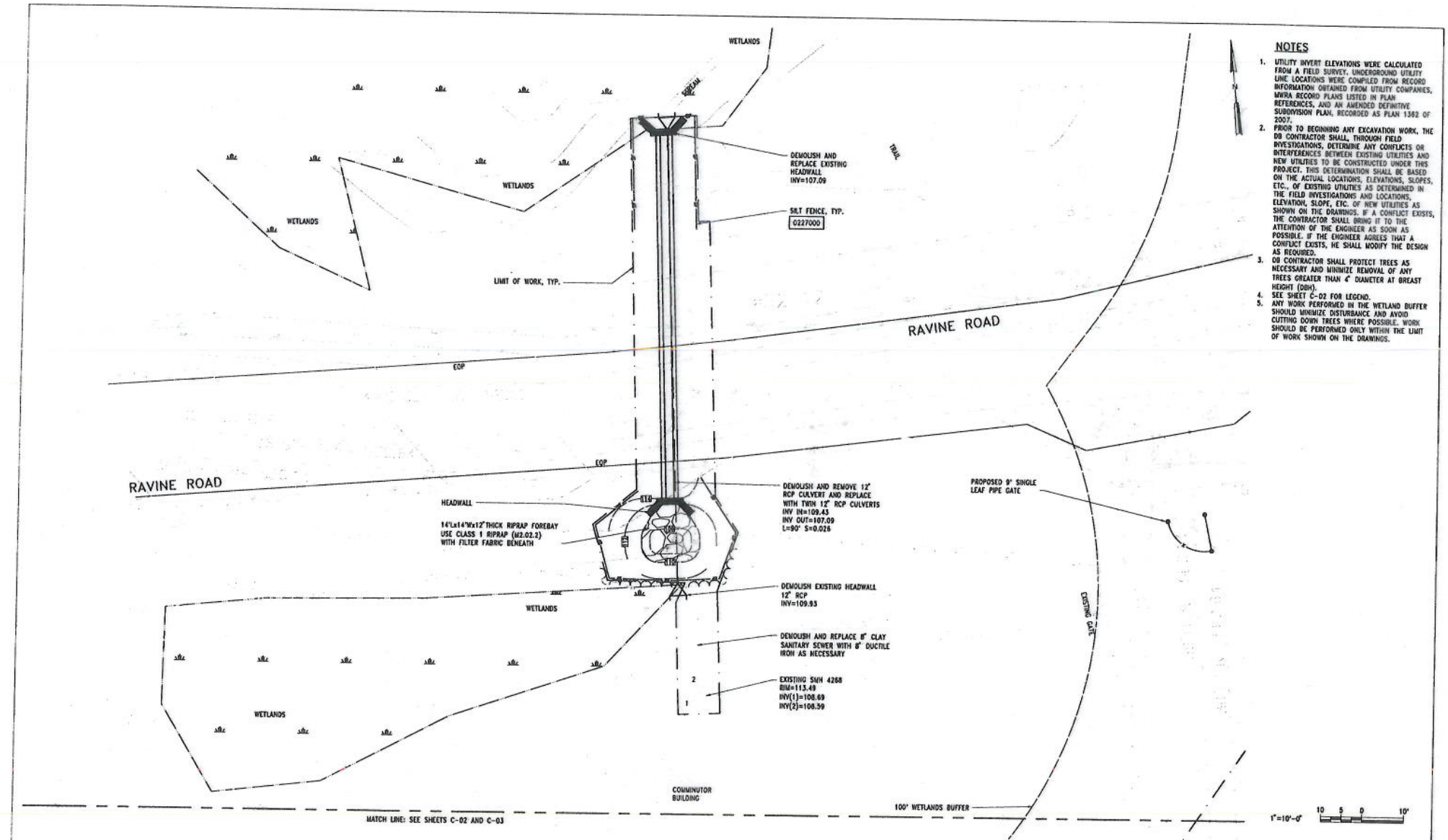
WALSH Walsh Construction

SPOT POND WATER STORAGE FACILITY
DESIGN BUILD PROJECT

CIVIL
EROSION CONTROL PLAN SHEET 1 PHASE 1

DRAWING NO. C-02

1 OF 200



NOTES

1. UTILITY INVERT ELEVATIONS WERE CALCULATED FROM A FIELD SURVEY. UNDERGROUND UTILITY LINE LOCATIONS WERE COMPILED FROM RECORD INFORMATION OBTAINED FROM UTILITY COMPANIES, MWRA RECORD PLANS LISTED IN PLAN REFERENCES, AND AN AMENDED DEFINITIVE SUBDIVISION PLAN, RECORDED AS PLAN 1382 OF 2007.
2. PRIOR TO BEGINNING ANY EXCAVATION WORK, THE DB CONTRACTOR SHALL, THROUGH FIELD INVESTIGATIONS, DETERMINE ANY CONFLICTS OR INTERFERENCES BETWEEN EXISTING UTILITIES AND NEW UTILITIES TO BE CONSTRUCTED UNDER THIS PROJECT. THIS DETERMINATION SHALL BE BASED ON THE ACTUAL LOCATIONS, ELEVATIONS, SLOPES, ETC., OF EXISTING UTILITIES AS DETERMINED IN THE FIELD INVESTIGATIONS AND LOCATIONS, ELEVATION, SLOPE, ETC. OF NEW UTILITIES AS SHOWN ON THE DRAWINGS. IF A CONFLICT EXISTS, THE CONTRACTOR SHALL BRING IT TO THE ATTENTION OF THE ENGINEER AS SOON AS POSSIBLE. IF THE ENGINEER AGREES THAT A CONFLICT EXISTS, HE SHALL MODIFY THE DESIGN AS REQUIRED.
3. DB CONTRACTOR SHALL PROTECT TREES AS NECESSARY AND MINIMIZE REMOVAL OF ANY TREES GREATER THAN 4" DIAMETER AT BREAST HEIGHT (DBH).
4. SEE SHEET C-02 FOR LEGEND.
5. ANY WORK PERFORMED IN THE WETLAND BUFFER SHOULD MINIMIZE DISTURBANCE AND AVOID CUTTING DOWN TREES WHERE POSSIBLE. WORK SHOULD BE PERFORMED ONLY WITHIN THE LIMIT OF WORK SHOWN ON THE DRAWINGS.

NOT FOR CONSTRUCTION

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 6435	CAD FILE NO. :
ACCESSION NO. :	SECTION NO. :
DATE: NOVEMBER 2011	DESIGNED BY: BFT DRAWN BY: BFT CHECKED BY: APPROVED BY: MTV
SCALE: AS NOTED	

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY :
HAZEN AND SAWYER
Environmental Engineers & Scientists
24 Federal Street, 5th Floor
Boston, Massachusetts 02110

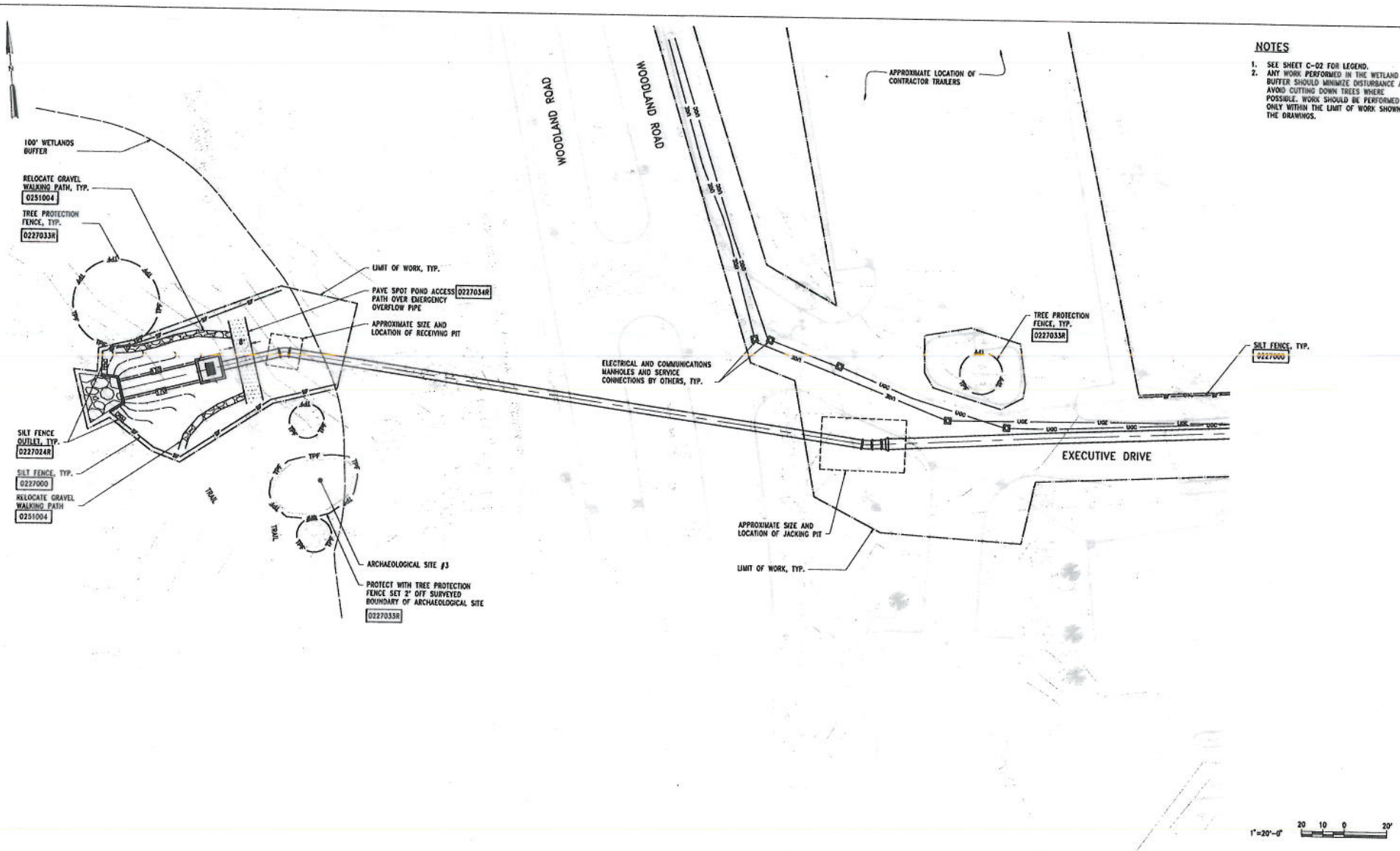
Walsh Construction

SPOT POND WATER STORAGE FACILITY
DESIGN BUILD PROJECT

CIVIL
EROSION CONTROL PLAN SHEET 2

DRAWING NO.
C-04

1 OF 200



NOTES

1. SEE SHEET C-02 FOR LEGEND.
2. ANY WORK PERFORMED IN THE WETLAND BUFFER SHOULD MINIMIZE DISTURBANCE AND AVOID CUTTING DOWN TREES WHERE POSSIBLE. WORK SHOULD BE PERFORMED ONLY WITHIN THE LIMIT OF WORK SHOWN ON THE DRAWINGS.

1"=20'-0" 20 10 0 20'

NOT FOR CONSTRUCTION

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 6435	CAD FILE NO. :
ACCESSION NO. :	SECTION NO. :
DATE: NOVEMBER 2011	DESIGNED BY: BFT DRAWN BY: BFT CHECKED BY: APPROVED BY: MTV
SCALE: AS NOTED	

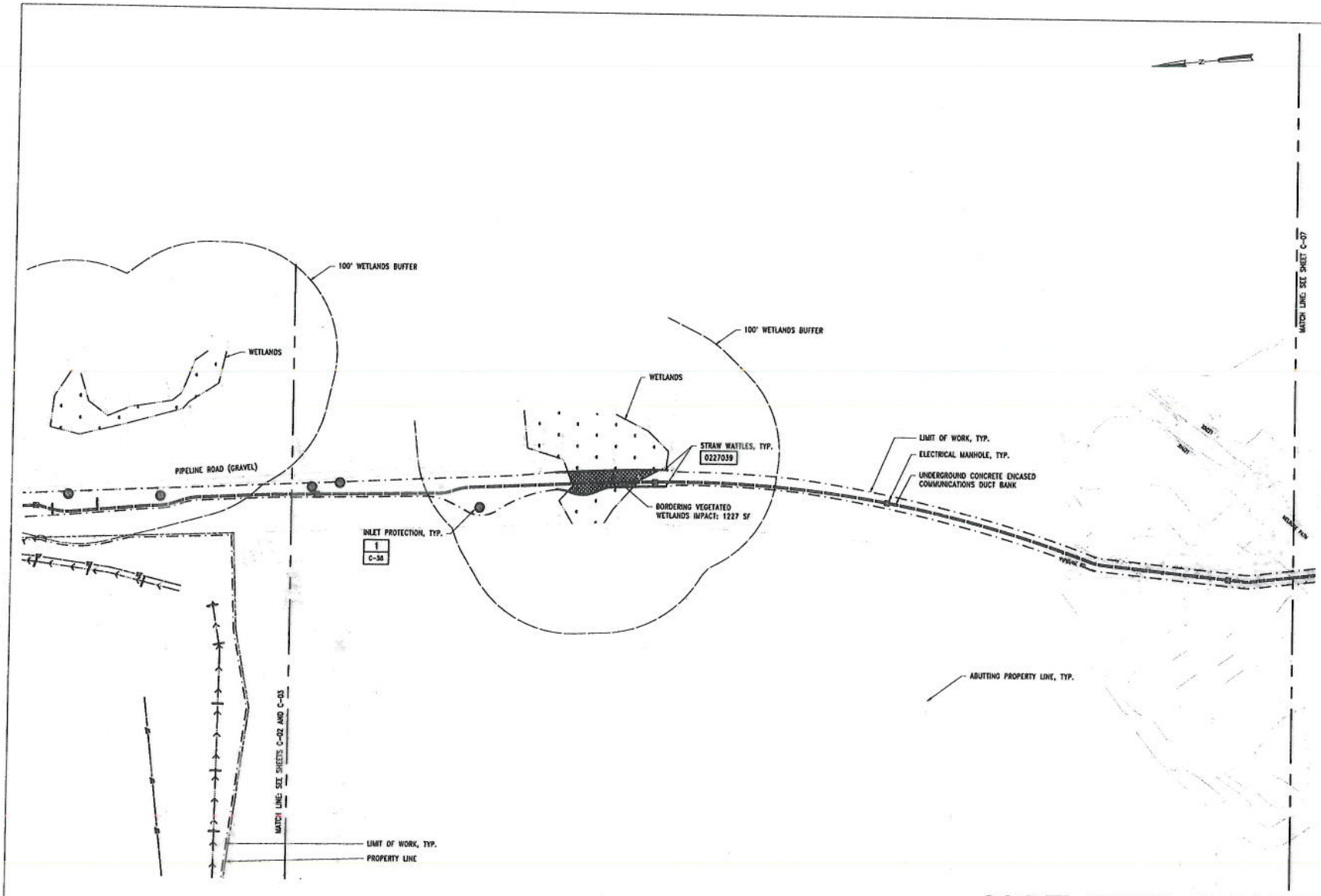
MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY :
HAZEN AND SAWYER
Environmental Engineers & Scientists
Walsh Construction

SPOT POND WATER STORAGE FACILITY
DESIGN BUILD PROJECT

CIVIL
EROSION CONTROL PLAN SHEET 3

DRAWING NO.
C-05
1 OF 200



NOTES

1. SEE SHEET C-02 FOR LEGEND.
2. ANY WORK PERFORMED IN THE WETLAND BUFFER SHOULD MINIMIZE DISTURBANCE AND AVOID CUTTING DOWN TREES WHERE POSSIBLE. WORK SHOULD BE PERFORMED ONLY WITHIN THE LIMIT OF WORK SHOWN ON THE DRAWINGS.

NOTES PER STONEHAM CONSERVATION COMMISSION:

THE FOLLOWING SEQUENCE OF CONSTRUCTION AND SUBSEQUENT RESTORATION OF THE WETLAND WILL BE PERFORMED:

1. INSTALL SEDIMENT CONTROLS, STRAW WATTLES, AS INDICATED ON THE PLANS.
2. CLEAR WOODY DEBRIS WITHIN THE GRAVEL ROAD AND AREAS ADJACENT TO THE GRAVEL ROAD THAT WILL BE UTILIZED FOR THE CONSTRUCTION ACTIVITY. NOTE, ALTHOUGH A LIMIT OF WORK/IMPACT AREA HAS BEEN PROVIDED, MINIMIZATION OF THE ACTUAL WORK AREA IS RECOMMENDED.
3. EXCAVATE THE UPPER SIX INCHES OF THE GRAVEL ROAD WITHIN THE WETLAND IMPACT AND THE UPPER SIX INCHES OF TOPSOIL ADJACENT TO THE GRAVEL ROAD THAT WILL BE WITHIN THE ACTIVE CONSTRUCTION AREA.
4. STOCKPILE SEPARATELY THE EXCAVATED GRAVEL ROAD MATERIAL AND WETLAND TOPSOIL OUTSIDE OF THE 100-FOOT BUFFER ZONE AND COVER WITH TARPS.
5. INSTALL FIBER OPTIC DUCT BANK.
6. REPLACE EXCAVATED MATERIALS IN CORRESPONDING AREAS AND SEED WITH ANNUAL RYE GRASS (SECALE CEREALE).
7. PLACE WOODEN MATS OVER THE RESTORED GRAVEL ROAD AND LIMIT CONSTRUCTION TRAFFIC TO THE WOODEN MATS.
8. REMOVE WOODEN MATS ONLY AFTER ALL CONSTRUCTION RELATED ACTIVITIES THROUGH THE AREA CEASES.
9. ALLOW SEED AND ROOT STOCK WITHIN REPLACED MATERIALS TO GERMINATE.

1"=40'-0" 40 20 0 40'

NOT FOR CONSTRUCTION

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 8435	CAD FILE NO. :
ACCESSION NO. :	SECTION NO. :
DATE: NOVEMBER 2011	DESIGNED BY: BFT
	DRAWN BY: BFT
SCALE: AS NOTED	CHECKED BY:
	APPROVED BY: MTV

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY :
HAZEN AND SAWYER
Environmental Engineers & Scientists
24 Federal Street, 5th Floor
Boston, Massachusetts 02110

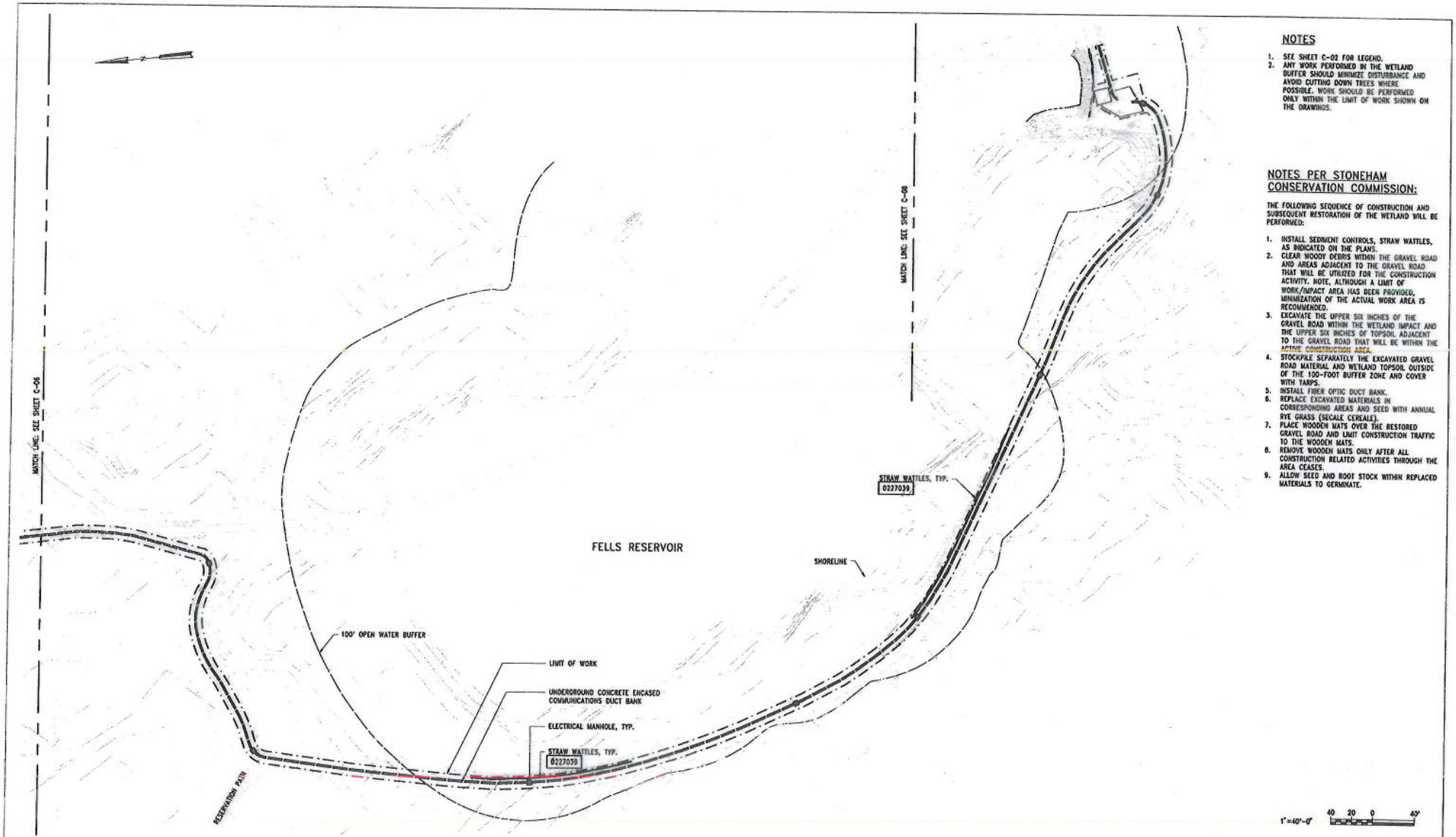
WALSH
Walsh Construction

SPOT POND WATER STORAGE FACILITY
DESIGN BUILD PROJECT

CIVIL
EROSION CONTROL PLAN SHEET 4

DRAWING NO.
C-06

1 OF 200



NOTES

1. SEE SHEET C-02 FOR LEGEND.
2. ANY WORK PERFORMED IN THE WETLAND BUFFER SHOULD MINIMIZE DISTURBANCE AND AVOID CUTTING DOWN TREES WHERE POSSIBLE. WORK SHOULD BE PERFORMED ONLY WITHIN THE LIMIT OF WORK SHOWN ON THE DRAWINGS.

NOTES PER STONEHAM CONSERVATION COMMISSION:

THE FOLLOWING SEQUENCE OF CONSTRUCTION AND SUBSEQUENT RESTORATION OF THE WETLAND WILL BE PERFORMED:

1. INSTALL SEDIMENT CONTROLS, STRAW WATTLES, AS INDICATED ON THE PLANS.
2. CLEAR WOODY DEBRIS WITHIN THE GRAVEL ROAD AND AREAS ADJACENT TO THE GRAVEL ROAD THAT WILL BE UTILIZED FOR THE CONSTRUCTION ACTIVITY. NOTE, ALTHOUGH A LIMIT OF WORK/IMPACT AREA HAS BEEN PROVIDED, MINIMIZATION OF THE ACTUAL WORK AREA IS RECOMMENDED.
3. EXCAVATE THE UPPER SIX INCHES OF THE GRAVEL ROAD WITHIN THE WETLAND IMPACT AND THE UPPER SIX INCHES OF TOPSOIL ADJACENT TO THE GRAVEL ROAD THAT WILL BE WITHIN THE ACTIVE CONSTRUCTION AREA.
4. STOCKPILE SEPARATELY THE EXCAVATED GRAVEL ROAD MATERIAL AND WETLAND TOPSOIL OUTSIDE OF THE 100-FOOT BUFFER ZONE AND COVER WITH TARPS.
5. INSTALL FIBER OPTIC DUCT BANK.
6. REPLACE EXCAVATED MATERIALS IN CORRESPONDING AREAS AND SEED WITH ANNUAL RYE GRASS (SECALE CEREALE).
7. PLACE WOODEN MATS OVER THE RESTORED GRAVEL ROAD AND LIMIT CONSTRUCTION TRAFFIC TO THE WOODEN MATS.
8. REMOVE WOODEN MATS ONLY AFTER ALL CONSTRUCTION RELATED ACTIVITIES THROUGH THE AREA CEASES.
9. ALLOW SEED AND ROOT STOCK WITHIN REPLACED MATERIALS TO GERMINATE.

NOT FOR CONSTRUCTION

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 6435	CAD FILE NO. :
ACCESSION NO. :	SECTION NO. :
DATE: NOVEMBER 2011	DESIGNED BY: BFT DRAWN BY: BFT CHECKED BY: APPROVED BY: MW
SCALE: AS NOTED	

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY :
HAZEN AND SAWYER
Environmental Engineers & Scientists
WALSH
Walsh Construction

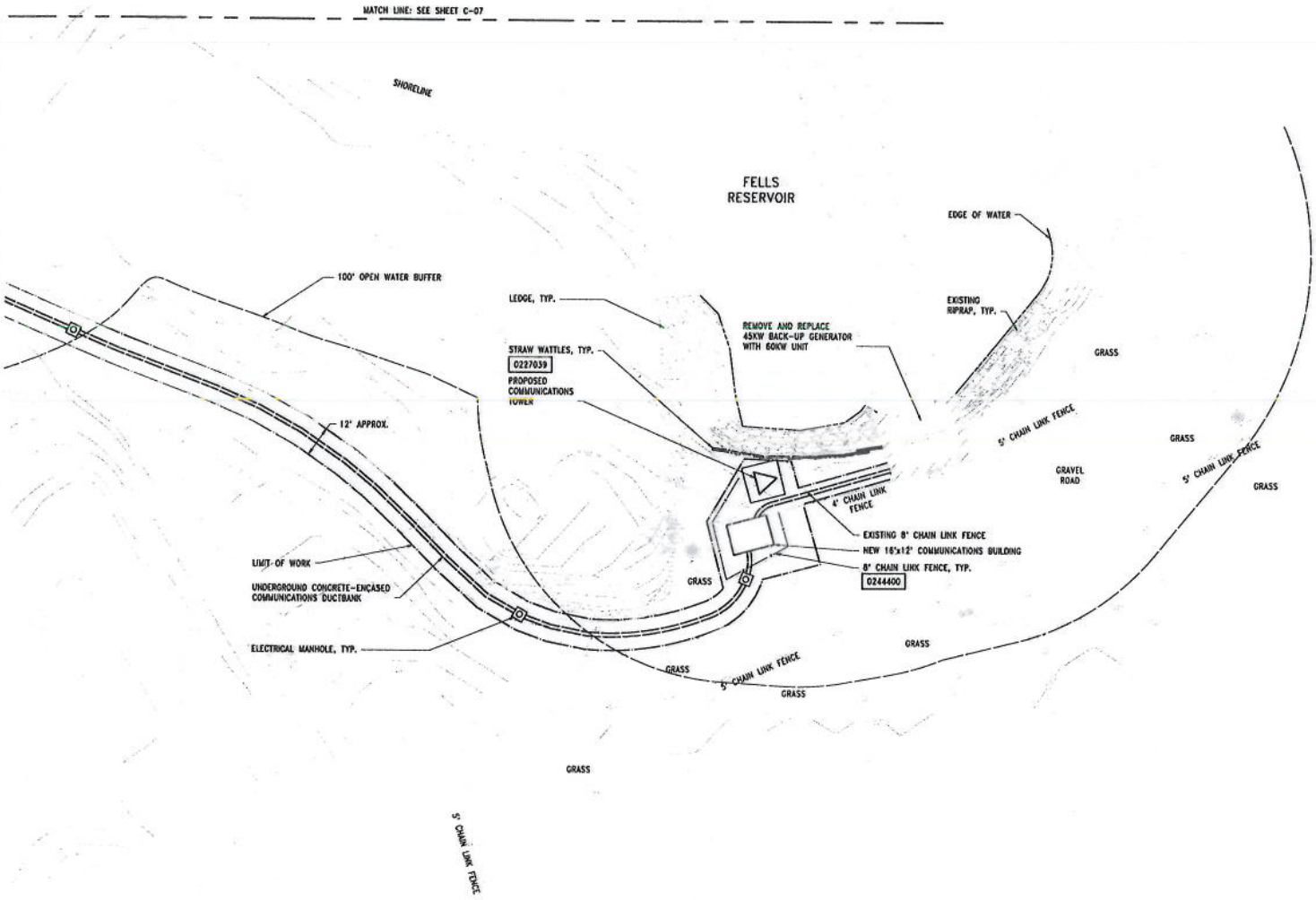
SPOT POND WATER STORAGE FACILITY
DESIGN BUILD PROJECT

CIVIL

EROSION CONTROL PLAN SHEET 5

DRAWING NO.
C-07

1 OF 200



NOTES

1. ACTUAL SITE CONDITIONS MAY DIFFER FROM CONDITIONS SHOWN ON THE CONTRACT DRAWINGS. CONTACT THE ENGINEER IF A DISCREPANCY IS FOUND.
2. DB CONTRACTOR SHALL PROTECT TREES AS NECESSARY AND MINIMIZE REMOVAL OF ANY TREES GREATER THAN 4" DIAMETER AT BREAST HEIGHT (DBH).
3. SOME TOPOGRAPHIC INFORMATION SHOWN NEAR FELLS RESERVOIR IS FROM A PLAN TITLED "EXISTING CONDITIONS SHEET 3" FOR THE FELLS RESERVOIR COVERED STORAGE FACILITY PROJECT, PREPARED BY KLEIN AND HOFFMAN, INC., CHICAGO, ILLINOIS, AND BRYANT ASSOCIATES, INC., BOSTON, MASSACHUSETTS., DATED OCTOBER 1998, AND NUMBERED G-4.
4. SEE SHEET C-02 FOR LEGEND.
5. ANY WORK PERFORMED IN THE WETLAND BUFFER SHOULD MINIMIZE DISTURBANCE AND AVOID CUTTING DOWN TREES WHERE POSSIBLE. WORK SHOULD BE PERFORMED ONLY WITHIN THE LIMIT OF WORK SHOWN ON THE DRAWINGS.

1"=20'-0" 20 10 0 20'

NOT FOR CONSTRUCTION

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 6435	CAD FILE NO. :		
ACCESSION NO. :	SECTION NO. :		
DATE: NOVEMBER 2011	DESIGNED BY: BFT DRAWN BY: BFT CHECKED BY: APPROVED BY: MTV		
SCALE: AS NOTED			

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY : HAZEN AND SAWYER, Environmental Engineers & Scientists, 24 Federal Street, 5th Floor, Boston, Massachusetts 02110

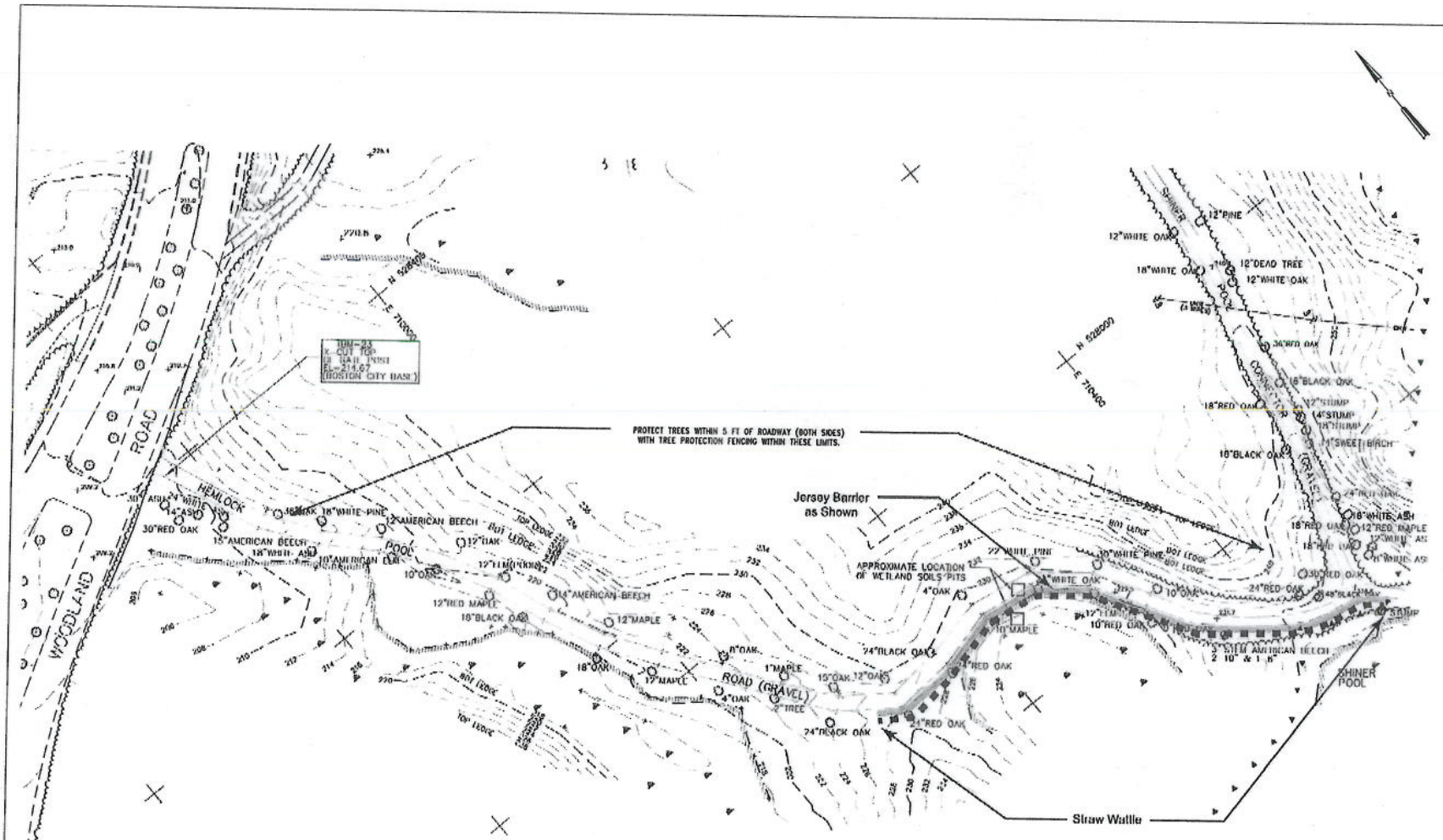
Walsh Construction

SPOT POND WATER STORAGE FACILITY
DESIGN BUILD PROJECT

CIVIL
EROSION CONTROL PLAN SHEET 6

DRAWING NO. C-08

1 OF 200



NOTES

1. INFORMATION SHOWN ON THIS SHEET IS COPIED DIRECTLY FROM SHEET G-3: HEMLOCK ROAD/VERNAL POOL PROTECTION, ADDENDUM 13 ATTACHMENT B, SPOT POND WATER STORAGE FACILITY DESIGN BUILD PROJECT, AUGUST 2011, 1"=40', BY CAMP DRESSER & McKEE INC., PREPARED FOR THE MASSACHUSETTS WATER RESOURCES AUTHORITY.
2. THE CONDITIONS SHOWN ON THE CONTRACT DRAWINGS MAY BE DIFFERENT FROM THE CONDITIONS IN THE FIELD. NOTIFY THE ENGINEER IF DISCREPANCIES ARE FOUND.
3. HEMLOCK ROAD IS A GRAVEL ROADWAY THAT WILL PROVIDE ACCESS TO THE COMMUNICATIONS TOWER AT FELLS RESERVOIR AND A PORTION OF THE COMMUNICATIONS CONDUIT INSTALLATION WORK IN PIPELINE ALLEY (AKA PIPELINE ROAD). THE GRAVEL ROADWAY ABUTS A KNOWN VERNAL POOL; CERTAIN MINIMUM PROTECTIVE MEASURES TO PROTECT THE POOL ARE SHOWN ON THE CONTRACT DRAWINGS. AS IT RELATES TO THIS PROJECT, THE DB CONTRACTOR SHALL NOT USE HEMLOCK ROAD FOR PURPOSES OTHER THAN THE CONSTRUCTION OF COMMUNICATIONS IMPROVEMENTS CITED HEREIN.
4. THE DB CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE, AND REMOVAL OF THE HEMLOCK ROAD / VERNAL POOL ROADWAY PROTECTION MEASURES.

1"=40'-0" 40 20 0 40'

NOT FOR CONSTRUCTION

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 6433 | CAD FILE NO. :
ACCESSION NO. : | SECTION NO. :
DATE: NOVEMBER 2011 | DESIGNED BY: ---
DRAWN BY: ---
CHECKED BY:
SCALE: AS NOTED | APPROVED BY: MTV

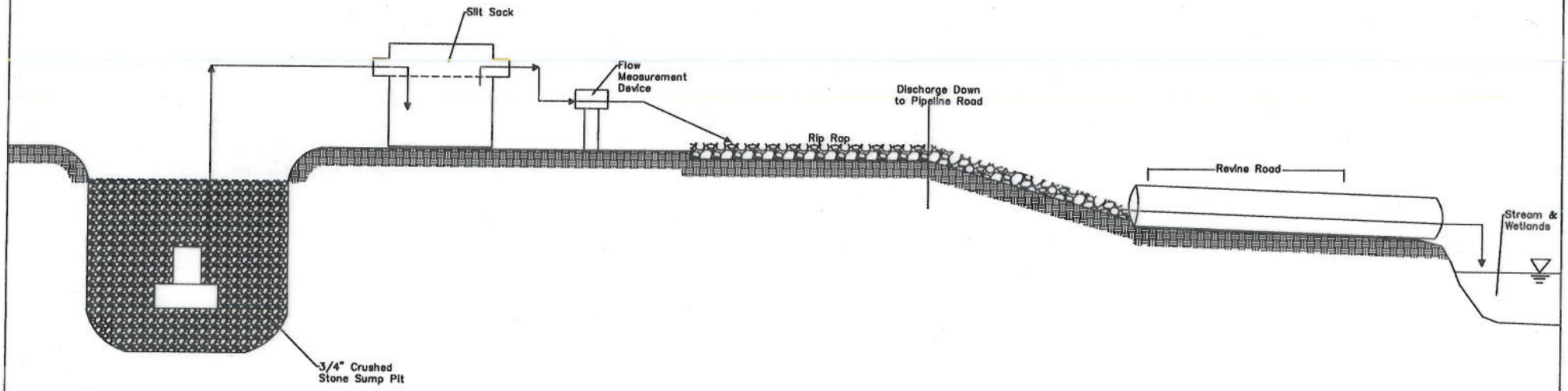
MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY :
HAZEN AND SAWYER
Environmental Engineers & Scientists
Walsh Construction

SPOT POND WATER STORAGE FACILITY
DESIGN BUILD PROJECT

CIVIL
EROSION CONTROL PLAN SHEET 7

DRAWING NO. C-09
1 of 200



Schematic of Water Flow

NOT TO SCALE

NO. DATE CHKD REMARKS	DESIGNED BY: CLARK DRAWN BY: CLARK SHEET CHK'D BY: CROSS CHK'D BY: APPROVED BY: DATE: 4/5/2012	WALSH Walsh Construction	Schematic of Water Flow	Job Number: 211150 Spot Pond SHEET #: 1 — 1 of 1

Tables

Table 1
Spot Pond Water Storage Construction Site
Stoneham, MA

Parameter	Reportable Concentrations (RCs)		MCP - Method 1 Cleanup Standards				SAMPLING LOCATION
	RCGW-1	RCGW-2	GW-1	GW-2	GW-3	UCL	
Sampling Date							MW-3
Sample Depth							1/ 2/2012 1:00:00 PM
EPA 1664A (mg/L)							
Oil & Grease (HEM)	"	"	"	"	"	"	ND (1.4)
EPA 200.7 (mg/L) Metals Digestion							
Iron	"	"	"	"	"	"	0.12
EPA 200.8 (µg/L) Metals Digestion							
ANTIMONY	6	8000	6	"	8000	80000	ND (1.0)
Arsenic	10	900	10	"	900	9000	ND (1.0)
Cadmium	4	4	5	"	4	50	ND (0.20)
Chromium	100	300	100	"	300	3000	ND (10)
COPPER	10000	100000	"	"	"	"	ND (1.0)
LEAD	10	10	15	"	10	150	0.50
Nickel	100	200	100	"	200	2000	ND (5.0)
Selenium	50	100	50	"	100	1000	ND (5.0)
Silver	7	7	100	"	7	1000	ND (0.20)
Zinc	900	900	5000	"	900	50000	ND (20)
EPA 245.1 (mg/L) Metals Digestion							
Mercury	0.002	0.02	0.002	"	0.02	0.2	ND (0.00020)
EPA 504.1 (µg/L)							
EDB	"	"	"	"	"	"	ND (0.020)
EPA 608 (µg/L)							
Aldrin	0.5	2	0.5	2	20	200	ND (0.050)
ALPHA-BHC	500	5000	"	"	"	"	ND (0.050)
BETA-BHC	100	1000	"	"	"	"	ND (0.050)
DELTA-BHC	100	1000	"	"	"	"	ND (0.050)
GAMMA-BHC (LINDANE)	0.2	4	0.2	200	4	"	ND (0.030)
CHLORDANE	2	2	2	"	2	20	ND (0.20)
4,4'-DDD	0.2	50	0.2	"	50	500	ND (0.080)
4,4'-DDE	0.05	400	0.05	"	400	4000	ND (0.045)
4,4'-DDT	0.3	1	0.3	"	1	10	ND (0.080)
Dieldrin	0.1	0.5	0.1	8	0.5	80	ND (0.014)
Endosulfan I	2	2	10	"	2	100	ND (0.050)
Endosulfan II	2	2	10	"	2	100	ND (0.080)
Endosulfan Sulfate	"	"	"	"	"	"	ND (0.080)
Endrin	2	5	2	"	5	50	ND (0.080)
Endrin Aldehyde	100	1000	"	"	"	"	ND (0.080)
ENDRIN KETONE	"	"	"	"	"	"	ND (0.080)
Heptachlor	0.4	1	0.4	2	1	20	ND (0.050)
Heptachlor Epoxide	0.2	2	0.2	7	2	70	ND (0.050)
Methoxychlor	10	10	40	"	10	400	ND (0.50)
Toxaphene	100	1000	"	"	"	"	ND (1.0)
PCB 1016	0.5	5	0.5	5	10	100	ND (0.20)
PCB 1221	0.5	5	0.5	5	10	100	ND (0.20)
PCB 1232	0.5	5	"	5	10	100	ND (0.20)
PCB 1242	0.5	5	0.5	5	10	100	ND (0.20)
PCB 1248	0.5	5	0.5	5	10	100	ND (0.20)
PCB 1254	0.5	5	0.5	5	10	100	ND (0.20)
PCB 1260	0.5	5	0.5	5	10	100	ND (0.20)
EPA 624 (µg/L)							
ACETONE	6300	50000	6300	50000	50000	100000	ND (50)
TERT-AMYL METHYL ETHER	"	"	"	"	"	"	ND (0.50)
BENZENE	5	2000	5	2000	10000	100000	ND (1.0)
BROMODICHLOROMETHANE	3	6	3	6	50000	100000	ND (2.0)
BROMOFORM	4	700	4	700	50000	100000	ND (2.0)
BROMOMETHANE	7	7	10	7	800	8000	ND (2.0)
TERT-BUTYL ALCOHOL	1000	10000	"	"	"	"	ND (20)
CARBON TETRACHLORIDE	2	2	5	2	5000	50000	ND (2.0)
CHLOROBENZENE	100	200	100	200	1000	10000	ND (2.0)
CHLORODIBROMOMETHANE	2	20	2	20	50000	"	ND (2.0)
CHLOROETHANE	1000	10000	"	"	"	"	ND (2.0)
2-CHLOROETHYLVINYLETHER	5000	50000	"	"	"	"	ND (10)
CHLOROFORM	50	50	70	50	20000	100000	ND (2.0)
CHLOROMETHANE	1000	10000	"	"	"	"	ND (2.0)
1,2-DICHLOROBENZENE	600	2000	600	2000	2000	20000	ND (2.0)
1,3-DICHLOROBENZENE	40	2000	40	2000	50000	100000	ND (2.0)
1,4-DICHLOROBENZENE	5	200	5	200	8000	80000	ND (2.0)
1,2-DICHLOROETHANE	5	5	5	5	20000	100000	ND (2.0)
1,1-DICHLOROETHANE	70	1000	70	1000	20000	100000	ND (2.0)
1,1-DICHLOROETHYLENE	7	80	7	80	30000	100000	ND (2.0)
TRANS-1,2-DICHLOROETHYLENE	90	90	100	90	50000	100000	ND (2.0)
1,2-DICHLOROPROPANE	3	3	5	3	90000	100000	ND (2.0)
CIS-1,3-DICHLOROPROPENE	0.5	5	0.4	10	200	2000	ND (2.0) *
1,4-DIOXANE	3	6000	3	6000	50000	100000	ND (50) *
TRANS-1,3-DICHLOROPROPENE	0.5	5	0.4	10	200	2000	ND (2.0) *
ETHYLBENZENE	700	5000	700	20000	5000	100000	ND (2.0)
MTBE	70	5000	70	50000	50000	100000	ND (2.0)
METHYLENE CHLORIDE	5	10000	5	10000	50000	100000	ND (5.0)
1,1,2,2-TETRACHLOROETHANE	2	4	2	9	50000	100000	ND (2.0)
TETRACHLOROETHYLENE	5	50	5	50	30000	100000	ND (2.0)
TOLUENE	1000	40000	1000	50000	40000	100000	ND (1.0)
1,1,1-TRICHLOROETHANE	200	4000	200	4000	20000	100000	ND (2.0)
1,1,2-TRICHLOROETHANE	5	900	5	900	50000	100000	ND (2.0)
TRICHLOROETHYLENE	5	30	5	30	5000	50000	ND (2.0)
TRICHLOROFLUOROMETHANE	10000	100000	"	"	"	"	ND (2.0)
VINYL CHLORIDE	2	2	2	2	50000	100000	ND (2.0)
M/P-XYLENE	5000	5000	10000	9000	5000	100000	ND (2.0)
O-XYLENE	5000	5000	10000	9000	5000	100000	ND (2.0)
EPA 625 (µg/L)							
ACENAPHTHENE	20	6000	20	"	6000	60000	ND (5.0)
ACENAPHTHYLENE	30	40	30	10000	60	100000	ND (5.0)
ANTHRACENE	30	30	60	"	30	600	ND (5.0)
BENZIDINE	100	1000	"	"	"	"	ND (10)
BENZO(A)ANTHRACENE	1	1000	1	"	1000	10000	ND (5.0) *
BENZO(A)PYRENE	0.2	500	0.2	"	500	5000	ND (5.0) *
BENZO(B)FLUORANTHENE	1	400	1	"	400	4000	ND (5.0) *
BENZO(G,H,I)PERYLENE	20	20	50	"	20	500	ND (5.0)
BENZO(K)FLUORANTHENE	1	100	1	"	100	1000	ND (5.0) *
4-BROMOPHENYL PHENYL ETHER	1000	10000	"	"	"	"	ND (10)
BUTYLBENZYLPHTHALATE	1000	10000	"	"	"	"	ND (10)
4-CHLORO-3-METHYLPHENOL	10000	100000	"	"	"	"	ND (10)
BIS(2-CHLOROETHOXY)METHANE	5000	50000	"	"	"	"	ND (10)
BIS(2-CHLOROETHYL)ETHER	30	30	30	30	50000	100000	ND (10)
BIS(2-CHLOROISOPROPYL)ETHER	30	200	30	100	50000	100000	ND (10)
2-CHLORONAPHTHALENE	10000	100000	"	"	"	"	ND (10)
2-CHLOROPHENOL	10	7000	10	20000	7000	100000	ND (10)
4-CHLOROPHENYLPHENYL ETHER	10000	100000	"	"	"	"	ND (10)
CHRYSENE	2	70	2	"	70	700	ND (5.0) *
DIBENZ(A,H)ANTHRACENE	0.5	40	0.5	"	40	400	ND (5.4) *
DI-N-BUTYLPHTHALATE	500	5000	"	"	"	"	ND (10)
1,3-DICHLOROBENZENE	40	2000	40	2000	50000	100000	ND (5.0)
1,4-DICHLOROBENZENE	5	200	5	200	8000	80000	ND (5.0)
1,2-DICHLOROBENZENE	600	2000	600	2000	2000	20000	ND (5.0)
3,3'-DICHLOROBENZIDINE	80	2000	80	"	2000	20000	ND (10)
2,4-DICHLOROPHENOL	10	2000	10	30000	2000	100000	ND (10)
DIETHYLPHTHALATE	2000	9000	2000	50000	9000	100000	ND (10)
2,4-DIMETHYLPHENOL	60	40000	60	40000	50000	100000	ND (10)
DIMETHYLPHTHALATE	30000	50000	30000	50000	50000	100000	ND (10)
4,6-DINITRO-2-METHYLPHENOL	500	5000	"	"	"	"	ND (10)
2,4-DINITROPHENOL	200	20000	200	50000	20000	100000	ND (10)
2,4-DINITROTOLUENE	30	20000	30	20000	50000	100000	ND (10)
2,6-DINITROTOLUENE	1000	10000	"	"	"	"	ND (10)
DI-N-OCTYLPHTHALATE	10000	100000	"	"	"	"	ND (10)
1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	500	5000	"	"	"	"	ND (10)
BIS(2-ETHYLHEXYL)PHTHALATE	6	50000	6	"	50000	100000	ND (10) *
FLUORANTHENE	90	200	90	"	200	2000	ND (5.0)
FLUORENE	30	40	30	"	40	400	ND (5.0)
HEXACHLOROBENZENE	1	1	1	1	6000	60000	ND (10) *
HEXACHLOROBUTADIENE	0.6	1	0.6	1	3000	30000	ND (10) *
HEXACHLOROCYCLOPENTADIENE	500	5000	"	"	"	"	ND (10)
HEXACHLOROETHANE	8	100	8	200	50000	100000	ND (10) *
INDENO(1,2,3-CD)PYRENE	0.5	100	0.5	"	100	1000	ND (5.0) *
ISOPHORONE	1000	10000	"	"	"	"	ND (10)
NAPHTHALENE	140	1000	140	1000	20000	100000	ND (5.0)
NITROBENZENE	2000	50000	"	"	"	"	ND (10)
2-NITROPHENOL	1000	10000	"	"	"	"	ND (10)
4-NITROPHENOL	1000	10000	"	"	"	"	ND (10)
N-NITROSODIMETHYLAMINE	500	5000	"	"	"	"	ND (5.0)
N-NITROSODIPHENYLAMINE	1000	10000	"	"	"	"	ND (10)
N-NITROSO-DI-N-PROPYLAMINE	500	5000	"	"	"	"	ND (10)
PENTACHLOROPHENOL	1	200	1	"	200	2000	ND (10) *
PHENANTHRENE	40	10000	40	"	10000	100000	ND (5.0)
PHENOL	1000	2000	1000	50000	2000	100000	ND (10)
PYRENE	20	20	80	"	20	800	ND (5.0)
1,2,4-TRICHLOROBENZENE	70	2000	70	2000	50000	100000	ND (5.0)
2,4,6-TRICHLOROPHENOL	10	500	10	5000	500	50000	ND (10)
SM18-20 2540D (mg/L)							
Total Suspended Solids	"	"	"	"	"	"	ND (5.0)
SM18-20 3500-Cr D (mg/L)							
Chromium +6	0.1	0.3	0.1	"	0.3	3	ND (0.0040)
SM18-20 4500-Cl..B (mg/L)							
Chloride	"	"	"	"	"	"	18
SM18-20 4500-Cl..G (mg/L)							
Chlorine	"	"	"	"	"	"	ND (0.020)
SW-846 8100 Modified (mg/L)							
TPH-DRO	"	"	"	"	"	50	ND (0.20)
SW-846 9014 (mg/L)							
CYANIDE	0.03	0.03	0.2	"	0.03	2	ND (0.010)
7/1 Chlorine Calc. (mg/L) Metals Digestion							
Zinc	0.9	0.9	5	"	0.9	50	0.0

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. " = No Method 1 Standard or UCL available
5. Shaded values exceed the MCP Reportable Concentrations (RCs).
6. Bolded values exceed the Method 1 Cleanup Standards.

7. Con-Test Laboratory is not responsible for the regulatory content, data comparisons with regulations, or decisions made based on data comparisons shown in this deliverable. Please notify us should you be aware of any regulatory information that may not be correct or that has changed.

Appendix A Laboratory Report

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ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

April 5, 2012

Tim Maguire
OHI Engineering, Inc.
44 Wood Avenue
Mansfield, MA 02048

Project Location: Spot Pond, Stoneham, MA
Client Job Number:
Project Number: 11-1387
Laboratory Work Order Number: 12C0711

Enclosed are results of analyses for samples received by the laboratory on March 22, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Charles W. Balicki
Project Manager

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ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

OHI Engineering, Inc.
44 Wood Avenue
Mansfield, MA 02048
ATTN: Tim Maguire

REPORT DATE: 4/5/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 11-1387

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12C0711

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Spot Pond, Stoneham, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-3	12C0711-01	Ground Water		EPA 1664A	
				EPA 200.7	
				EPA 200.8	
				EPA 245.1	
				EPA 504.1	
				EPA 608	
				EPA 624	
				EPA 625	
				SM18-20 2540D	
				SM18-20 3500 Cr D	
				SM18-20 4500 CL B	
				SM18-20 4500 CL G	
				SW-846 8100 Modified	
				SW-846 9014	
				Tri Chrome Calc.	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT: 04/05/12: Client is requesting that Acetone, TBA, TAME, 1,4 Dioxane be reported for 12C0711-01.

EPA 625

Qualifications:

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

N-Nitrosodimethylamine

12C0711-01[MW-3], B048601-BLK1, B048601-BS1, B048601-BSD1

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Di-n-octylphthalate

B048601-BSD1

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:

Bis(2-chloroisopropyl)ether

12C0711-01[MW-3], B048601-BLK1, B048601-BS1, B048601-BSD1

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

N-Nitrosodimethylamine

12C0711-01[MW-3], B048601-BLK1, B048601-BS1, B048601-BSD1

SW-846 8100 Modified

TPH (C9-C36) is quantitated against a calibration made with a diesel standard.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Michael A. Erickson
Laboratory Director

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ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Spot Pond, Stoneham, MA
Sample Description:
Work Order: 12C0711

Date Received: 3/22/2012

Field Sample #: MW-3

Sample ID: 12C0711-01
Start Date/Time: 3/22/2012 12:45:00PM

Sample Matrix: Ground Water
Stop Date/Time: 3/22/2012 1:00:00PM

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	TJR
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	TJR
Benzene	ND	1.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Bromodichloromethane	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Bromoform	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Bromomethane	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	TJR
Carbon Tetrachloride	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Chlorobenzene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Chlorodibromomethane	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Chloroethane	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
2-Chloroethyl Vinyl Ether	ND	10	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Chloroform	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Chloromethane	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
1,2-Dichlorobenzene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
1,3-Dichlorobenzene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
1,4-Dichlorobenzene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
1,2-Dichloroethane	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
1,1-Dichloroethane	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
1,1-Dichloroethylene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
trans-1,2-Dichloroethylene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
1,2-Dichloropropane	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
cis-1,3-Dichloropropene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
1,4-Dioxane	ND	50	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	TJR
trans-1,3-Dichloropropene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Ethylbenzene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Methylene Chloride	ND	5.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Tetrachloroethylene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Toluene	ND	1.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
1,1,1-Trichloroethane	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
1,1,2-Trichloroethane	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Trichloroethylene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
Vinyl Chloride	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
m+p Xylene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF
o-Xylene	ND	2.0	µg/L	1		EPA 624	3/26/12	3/27/12 10:47	MFF

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	106	70-130		3/27/12 10:47
Toluene-d8	98.9	70-130		3/27/12 10:47
4-Bromofluorobenzene	94.9	70-130		3/27/12 10:47

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Spot Pond, Stoneham, MA
Sample Description:
Work Order: 12C0711

Date Received: 3/22/2012

Field Sample #: MW-3

Sample ID: 12C0711-01
Start Date/Time: 3/22/2012 12:45:00PM

Sample Matrix: Ground Water
Stop Date/Time: 3/22/2012 1:00:00PM

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Acenaphthylene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Anthracene	ND	6.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Benzidine	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Benzo(a)anthracene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Benzo(a)pyrene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Benzo(b)fluoranthene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Benzo(g,h,i)perylene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Benzo(k)fluoranthene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
4-Bromophenylphenylether	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Butylbenzylphthalate	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
4-Chloro-3-methylphenol	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Bis(2-chloroethoxy)methane	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Bis(2-chloroethyl)ether	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1	V-04	EPA 625	3/27/12	3/28/12 18:04	CDT
2-Chloronaphthalene	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
2-Chlorophenol	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
4-Chlorophenylphenylether	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Chrysene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Dibenz(a,h)anthracene	ND	5.4	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Di-n-butylphthalate	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
1,3-Dichlorobenzene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
1,4-Dichlorobenzene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
1,2-Dichlorobenzene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
3,3-Dichlorobenzidine	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
2,4-Dichlorophenol	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Diethylphthalate	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
2,4-Dimethylphenol	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Dimethylphthalate	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
2,4-Dinitrophenol	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
2,4-Dinitrotoluene	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
2,6-Dinitrotoluene	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Di-n-octylphthalate	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Fluoranthene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Fluorene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Hexachlorobenzene	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Hexachlorobutadiene	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Hexachlorocyclopentadiene	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Hexachloroethane	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Isophorone	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Spot Pond, Stoneham, MA | Sample Description: | Work Order: 12C0711

Date Received: 3/22/2012

Field Sample #: MW-3

Sample ID: 12C0711-01 | Start Date/Time: 3/22/2012 12:45:00PM

Sample Matrix: Ground Water | Stop Date/Time: 3/22/2012 1:00:00PM

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Naphthalene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Nitrobenzene	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
2-Nitrophenol	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
4-Nitrophenol	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
N-Nitrosodimethylamine	ND	5.0	µg/L	1	L-04, V-05	EPA 625	3/27/12	3/28/12 18:04	CDT
N-Nitrosodiphenylamine	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
N-Nitrosodi-n-propylamine	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Pentachlorophenol	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Phenanthrene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Phenol	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
Pyrene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT
2,4,6-Trichlorophenol	ND	10	µg/L	1		EPA 625	3/27/12	3/28/12 18:04	CDT

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	33.1	15-110		3/28/12 18:04
Phenol-d6	21.0	15-110		3/28/12 18:04
Nitrobenzene-d5	58.9	30-130		3/28/12 18:04
2-Fluorobiphenyl	55.9	30-130		3/28/12 18:04
2,4,6-Tribromophenol	58.1	15-110		3/28/12 18:04
Terphenyl-d14	66.1	30-130		3/28/12 18:04

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Spot Pond, Stoneham, MA
Sample Description:
Work Order: 12C0711

Date Received: 3/22/2012

Field Sample #: MW-3

Sample ID: 12C0711-01
Start Date/Time: 3/22/2012 12:45:00PM

Sample Matrix: Ground Water
Stop Date/Time: 3/22/2012 1:00:00PM

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.050	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
alpha-BHC [1]	ND	0.050	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
beta-BHC [1]	ND	0.050	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
delta-BHC [1]	ND	0.050	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
gamma-BHC (Lindane) [1]	ND	0.030	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Chlordane [1]	ND	0.20	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
4,4'-DDD [1]	ND	0.080	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
4,4'-DDE [1]	ND	0.040	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
4,4'-DDT [1]	ND	0.080	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Dieldrin [1]	ND	0.014	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Endosulfan I [1]	ND	0.050	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Endosulfan II [1]	ND	0.080	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Endosulfan sulfate [1]	ND	0.080	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Endrin [1]	ND	0.080	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Endrin aldehyde [1]	ND	0.080	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Endrin ketone [1]	ND	0.080	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Heptachlor [1]	ND	0.050	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Heptachlor epoxide [1]	ND	0.050	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Methoxychlor [1]	ND	0.50	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB
Toxaphene [1]	ND	1.0	µg/L	1		EPA 608	3/27/12	3/28/12 14:33	JMB

Surrogates	% Recovery	Recovery Limits	Flag	
Decachlorobiphenyl [1]	57.6	30-150		3/28/12 14:33
Decachlorobiphenyl [2]	58.9	30-150		3/28/12 14:33
Tetrachloro-m-xylene [1]	77.1	30-150		3/28/12 14:33
Tetrachloro-m-xylene [2]	78.4	30-150		3/28/12 14:33

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Project Location: Spot Pond, Stoneham, MA
Sample Description:
Work Order: 12C0711

Date Received: 3/22/2012

Field Sample #: MW-3

Sample ID: 12C0711-01
Start Date/Time: 3/22/2012 12:45:00PM

Sample Matrix: Ground Water
Stop Date/Time: 3/22/2012 1:00:00PM

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		EPA 608	3/27/12	3/28/12 14:34	PJG
Aroclor-1221 [1]	ND	0.20	µg/L	1		EPA 608	3/27/12	3/28/12 14:34	PJG
Aroclor-1232 [1]	ND	0.20	µg/L	1		EPA 608	3/27/12	3/28/12 14:34	PJG
Aroclor-1242 [1]	ND	0.20	µg/L	1		EPA 608	3/27/12	3/28/12 14:34	PJG
Aroclor-1248 [1]	ND	0.20	µg/L	1		EPA 608	3/27/12	3/28/12 14:34	PJG
Aroclor-1254 [1]	ND	0.20	µg/L	1		EPA 608	3/27/12	3/28/12 14:34	PJG
Aroclor-1260 [1]	ND	0.20	µg/L	1		EPA 608	3/27/12	3/28/12 14:34	PJG

Surrogates	% Recovery	Recovery Limits	Flag	
Decachlorobiphenyl [1]	55.8	30-150		3/28/12 14:34
Decachlorobiphenyl [2]	58.9	30-150		3/28/12 14:34
Tetrachloro-m-xylene [1]	74.4	30-150		3/28/12 14:34
Tetrachloro-m-xylene [2]	81.9	30-150		3/28/12 14:34

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Spot Pond, Stoneham, MA
Sample Description:
Work Order: 12C0711

Date Received: 3/22/2012

Field Sample #: MW-3

Sample ID: 12C0711-01
Start Date/Time: 3/22/2012 12:45:00PM

Sample Matrix: Ground Water
Stop Date/Time: 3/22/2012 1:00:00PM

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH C9-C36 Hydrocarbons as Diesel	ND	0.20	mg/L	1		SW-846 8100 Modified	3/23/12	3/26/12 16:25	SCS

Surrogates	% Recovery	Recovery Limits	Flag		
o-Terphenyl	84.3	40-140			3/26/12 16:25

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Project Location: Spot Pond, Stoneham, MA
Sample Description:
Work Order: 12C0711

Date Received: 3/22/2012

Field Sample #: MW-3

Sample ID: 12C0711-01
Start Date/Time: 3/22/2012 12:45:00PM

Sample Matrix: Ground Water
Stop Date/Time: 3/22/2012 1:00:00PM

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		EPA 200.8	3/28/12	3/29/12 12:22	KSH
Arsenic	ND	1.0	µg/L	1		EPA 200.8	3/28/12	3/29/12 12:22	KSH
Cadmium	ND	0.20	µg/L	1		EPA 200.8	3/28/12	3/29/12 12:22	KSH
Chromium	ND	10	µg/L	1		EPA 200.8	3/28/12	3/29/12 12:22	KSH
Chromium, Trivalent	0.0	?	mg/L	1		Tri Chrome Calc.	3/28/12	4/2/12 16:03	OP
Copper	ND	1.0	µg/L	1		EPA 200.8	3/28/12	3/29/12 12:22	KSH
Iron	0.12	0.050	mg/L	1		EPA 200.7	3/27/12	3/28/12 17:53	OP
Lead	0.50	0.50	µg/L	1		EPA 200.8	3/28/12	3/29/12 12:22	KSH
Mercury	ND	0.00010	mg/L	1		EPA 245.1	3/29/12	3/30/12 11:31	AMR
Nickel	ND	5.0	µg/L	1		EPA 200.8	3/28/12	3/29/12 12:22	KSH
Selenium	ND	5.0	µg/L	1		EPA 200.8	3/28/12	3/29/12 12:22	KSH
Silver	ND	0.20	µg/L	1		EPA 200.8	3/28/12	3/29/12 12:22	KSH
Zinc	ND	20	µg/L	1		EPA 200.8	3/28/12	3/29/12 12:22	KSH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Spot Pond, Stoneham, MA
Sample Description:
Work Order: 12C0711

Date Received: 3/22/2012

Field Sample #: MW-3

Sample ID: 12C0711-01

Start Date/Time: 3/22/2012 12:45:00PM

Sample Matrix: Ground Water

Stop Date/Time: 3/22/2012 1:00:00PM

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Chloride	18	1.0	mg/L	1		SM18-20 4500 CL B	3/28/12	3/28/12 14:30	AED
Chlorine, Residual	ND	0.020	mg/L	1		SM18-20 4500 CL G	3/23/12	3/23/12 11:15	AED
Cyanide	ND	0.010	mg/L	1		SW-846 9014	3/28/12	3/28/12 12:45	VAK
Hexavalent Chromium	4.0 ND	0.0040 ✓	mg/L	1		SM18-20 3500 Cr D	3/23/12	3/23/12 11:00	AED
Total Suspended Solids	ND	5.0	mg/L	1		SM18-20 2540D	3/23/12	3/23/12 12:25	LL
Oil & Grease (HEM)	ND	1.4	mg/L	1		EPA 1664A	3/28/12	3/28/12 13:00	LL

OC

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Project Location: Spot Pond, Stoneham, MA
Sample Description:
Work Order: 12C0711

Date Received: 3/22/2012

Field Sample #: MW-3

Sample ID: 12C0711-01
Start Date/Time: 3/22/2012 12:45:00PM

Sample Matrix: Ground Water
Stop Date/Time: 3/22/2012 1:00:00PM

Drinking Water Organics EPA 504.1

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.020	µg/L	1		EPA 504.1	3/30/12	3/30/12 20:23	PJG

Surrogates	% Recovery	Recovery Limits	Flag	
1,3-Dibromopropane (1)	84.1	70-130		3/30/12 20:23
1,3-Dibromopropane (2)	83.0	70-130		3/30/12 20:23

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Sample Extraction Data

EPA 1664A

Lab Number [Field ID]	Batch	Initial [mL]	Date
12C0711-01 [MW-3]	B048712	1000	03/28/12

Prep Method: EPA 200.7-EPA 200.7

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048658	50.0	50.0	03/27/12

Prep Method: EPA 200.8-EPA 200.8

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048745	50.0	50.0	03/28/12

Prep Method: EPA 245.1-EPA 245.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048775	6.00	6.00	03/29/12

Prep Method: EPA 504 water-EPA 504.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048873	35.0	35.0	03/30/12

Prep Method: SW-846 3510C-EPA 608

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048625	1000	10.0	03/27/12

Prep Method: SW-846 3510C-EPA 608

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048626	1000	10.0	03/27/12

Prep Method: SW-846 5030B-EPA 624

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048558	5	5.00	03/26/12

Prep Method: SW-846 3510C-EPA 625

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048601	1000	1.00	03/27/12

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Sample Extraction Data

SM18-20 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Date
12C0711-01 [MW-3]	B048467	100	03/23/12

SM18-20 3500 Cr D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048443	50.0	50.0	03/23/12

SM18-20 4500 CL B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048711	100	100	03/28/12

SM18-20 4500 CL G

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048444	100	100	03/23/12

Prep Method: SW-846 3510C-SW-846 8100 Modified

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048425	1000	1.00	03/23/12

SW-846 9014

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048727	50.0	50.0	03/28/12

Prep Method: SW-846 3005A-Tri Chrome Calc.

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12C0711-01 [MW-3]	B048629	1.00	1.00	03/28/12

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B048558 - SW-846 5030B										
Blank (B048558-BLK1)				Prepared & Analyzed: 03/26/12						
Acetone	ND	50	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromodichloromethane	ND	2.0	µg/L							
Bromoform	ND	2.0	µg/L							
Bromomethane	ND	2.0	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
Carbon Tetrachloride	ND	2.0	µg/L							
Chlorobenzene	ND	2.0	µg/L							
Chlorodibromomethane	ND	2.0	µg/L							
Chloroethane	ND	2.0	µg/L							
2-Chloroethyl Vinyl Ether	ND	10	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
1,2-Dichlorobenzene	ND	2.0	µg/L							
1,3-Dichlorobenzene	ND	2.0	µg/L							
1,4-Dichlorobenzene	ND	2.0	µg/L							
1,2-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethylene	ND	2.0	µg/L							
trans-1,2-Dichloroethylene	ND	2.0	µg/L							
1,2-Dichloropropane	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	2.0	µg/L							
1,4-Dioxane	ND	50	µg/L							
trans-1,3-Dichloropropene	ND	2.0	µg/L							
Ethylbenzene	ND	2.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L							
Tetrachloroethylene	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	2.0	µg/L							
1,1,2-Trichloroethane	ND	2.0	µg/L							
Trichloroethylene	ND	2.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	2.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	*26.0*		µg/L	25.0		104	70-130			
Surrogate: Toluene-d8	*24.9*		µg/L	25.0		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	*24.4*		µg/L	25.0		97.5	70-130			
LCS (B048558-BS1)				Prepared & Analyzed: 03/26/12						
Acetone	81.9	50	µg/L	100		81.9	70-160			†
tert-Amyl Methyl Ether (TAME)	9.95	0.50	µg/L	10.0		99.5	70-130			
Benzene	10.6	1.0	µg/L	10.0		106	37-151			
Bromodichloromethane	10.2	2.0	µg/L	10.0		102	35-155			
Bromoform	8.50	2.0	µg/L	10.0		85.0	45-169			
Bromomethane	8.91	2.0	µg/L	10.0		89.1	20-242			
tert-Butyl Alcohol (TBA)	77.5	20	µg/L	100		77.5	40-160			†
Carbon Tetrachloride	10.7	2.0	µg/L	10.0		107	70-140			
Chlorobenzene	11.1	2.0	µg/L	10.0		111	37-160			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B048558 - SW-846 5030B										
LCS (B048558-BS1)				Prepared & Analyzed: 03/26/12						
Chlorodibromomethane	8.14	2.0	µg/L	10.0		81.4	53-149			
Chloroethane	9.14	2.0	µg/L	10.0		91.4	70-130			
2-Chloroethyl Vinyl Ether	106	10	µg/L	100		106	10-305			
Chloroform	10.8	2.0	µg/L	10.0		108	51-138			
Chloromethane	14.2	2.0	µg/L	10.0		142	20-273			
1,2-Dichlorobenzene	11.1	2.0	µg/L	10.0		111	18-190			
1,3-Dichlorobenzene	11.1	2.0	µg/L	10.0		111	59-156			
1,4-Dichlorobenzene	10.3	2.0	µg/L	10.0		103	18-190			
1,2-Dichloroethane	10.4	2.0	µg/L	10.0		104	49-155			
cis-1,2-Dichloroethylene	9.87	1.0	µg/L	10.0		98.7	70-130			
1,1-Dichloroethane	10.6	2.0	µg/L	10.0		106	59-155			
1,1-Dichloroethylene	10.0	2.0	µg/L	10.0		100	20-234			
trans-1,2-Dichloroethylene	10.8	2.0	µg/L	10.0		108	54-156			
1,2-Dichloropropane	10.4	2.0	µg/L	10.0		104	20-210			
cis-1,3-Dichloropropene	9.35	2.0	µg/L	10.0		93.5	20-227			
1,4-Dioxane	84.5	50	µg/L	100		84.5	40-130			†
trans-1,3-Dichloropropene	11.2	2.0	µg/L	10.0		112	17-183			
Ethylbenzene	10.3	2.0	µg/L	10.0		103	37-162			
Methyl tert-Butyl Ether (MTBE)	10.7	2.0	µg/L	10.0		107	70-130			
Methylene Chloride	10.9	5.0	µg/L	10.0		109	50-221			
1,1,2,2-Tetrachloroethane	9.96	2.0	µg/L	10.0		99.6	46-157			
Tetrachloroethylene	10.6	2.0	µg/L	10.0		106	64-148			
Toluene	10.3	1.0	µg/L	10.0		103	47-150			
1,1,1-Trichloroethane	10.7	2.0	µg/L	10.0		107	52-162			
1,1,2-Trichloroethane	10.1	2.0	µg/L	10.0		101	52-150			
Trichloroethylene	10.4	2.0	µg/L	10.0		104	71-157			
Trichlorofluoromethane (Freon 11)	10.4	2.0	µg/L	10.0		104	17-181			
Vinyl Chloride	10.3	2.0	µg/L	10.0		103	20-251			
m+p Xylene	21.8	2.0	µg/L	20.0		109	70-130			
o-Xylene	11.1	2.0	µg/L	10.0		111	70-130			
Surrogate: 1,2-Dichloroethane-d4	*25.7*		µg/L	25.0		103	70-130			
Surrogate: Toluene-d8	*25.0*		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	*24.7*		µg/L	25.0		98.8	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B048601 - SW-846 3510C										
Blank (B048601-BLK1)				Prepared: 03/27/12 Analyzed: 03/28/12						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Anthracene	ND	6.0	µg/L							
Benzidine	ND	10	µg/L							
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							V-04
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.4	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							
N-Nitrosodimethylamine	ND	5.0	µg/L							L-04, V-05
N-Nitrosodiphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B048601 - SW-846 3510C										
Blank (B048601-BLK1)				Prepared: 03/27/12 Analyzed: 03/28/12						
Phenanthrene	ND	5.0	µg/L							
Phenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	*55.4*		µg/L	200		27.7	15-110			
Surrogate: Phenol-d6	*49.5*		µg/L	200		24.7	15-110			
Surrogate: Nitrobenzene-d5	*67.8*		µg/L	100		67.8	30-130			
Surrogate: 2-Fluorobiphenyl	*63.7*		µg/L	100		63.7	30-130			
Surrogate: 2,4,6-Tribromophenol	*115*		µg/L	200		57.6	15-110			
Surrogate: Terphenyl-d14	*71.4*		µg/L	100		71.4	30-130			
LCS (B048601-BS1)				Prepared: 03/27/12 Analyzed: 03/28/12						
Acenaphthene	70.2	5.0	µg/L	100		70.2	47-145			
Acenaphthylene	69.9	5.0	µg/L	100		69.9	33-145			
Anthracene	73.1	6.0	µg/L	100		73.1	27-133			
Benzidine	43.8	10	µg/L	100		43.8	40-140			
Benzo(a)anthracene	73.3	5.0	µg/L	100		73.3	33-143			
Benzo(a)pyrene	79.4	5.0	µg/L	100		79.4	17-163			
Benzo(b)fluoranthene	77.6	5.0	µg/L	100		77.6	24-159			
Benzo(g,h,i)perylene	64.3	5.0	µg/L	100		64.3	1-219			
Benzo(k)fluoranthene	91.9	5.0	µg/L	100		91.9	11-162			
4-Bromophenylphenylether	72.4	10	µg/L	100		72.4	53-127			
Butylbenzylphthalate	81.0	10	µg/L	100		81.0	1-152			
4-Chloro-3-methylphenol	83.9	10	µg/L	100		83.9	22-147			
Bis(2-chloroethoxy)methane	97.5	10	µg/L	100		97.5	33-184			
Bis(2-chloroethyl)ether	71.2	10	µg/L	100		71.2	12-158			
Bis(2-chloroisopropyl)ether	64.1	10	µg/L	100		64.1	36-166			V-04
2-Chloronaphthalene	92.6	10	µg/L	100		92.6	60-118			
2-Chlorophenol	64.5	10	µg/L	100		64.5	23-134			
4-Chlorophenylphenylether	72.9	10	µg/L	100		72.9	25-158			
Chrysene	68.3	5.0	µg/L	100		68.3	17-168			
Dibenz(a,h)anthracene	61.3	5.4	µg/L	100		61.3	1-227			
Di-n-butylphthalate	76.8	10	µg/L	100		76.8	1-118			
1,3-Dichlorobenzene	47.3	5.0	µg/L	100		47.3	1-172			
1,4-Dichlorobenzene	48.4	5.0	µg/L	100		48.4	20-124			
1,2-Dichlorobenzene	50.9	5.0	µg/L	100		50.9	32-129			
3,3-Dichlorobenzidine	62.7	10	µg/L	100		62.7	1-262			
2,4-Dichlorophenol	74.1	10	µg/L	100		74.1	39-135			
Diethylphthalate	82.3	10	µg/L	100		82.3	1-114			
2,4-Dimethylphenol	70.3	10	µg/L	100		70.3	32-119			
Dimethylphthalate	80.1	10	µg/L	100		80.1	1-112			
4,6-Dinitro-2-methylphenol	82.1	10	µg/L	100		82.1	1-181			
2,4-Dinitrophenol	78.7	10	µg/L	100		78.7	1-191			
2,4-Dinitrotoluene	80.0	10	µg/L	100		80.0	39-139			
2,6-Dinitrotoluene	81.0	10	µg/L	100		81.0	50-158			
Di-n-octylphthalate	142	10	µg/L	100		142	4-146			
1,2-Diphenylhydrazine (as Azobenzene)	72.3	10	µg/L	100		72.3	40-140			
Bis(2-Ethylhexyl)phthalate	77.0	10	µg/L	100		77.0	8-158			
Fluoranthene	73.4	5.0	µg/L	100		73.4	26-137			
Fluorene	74.0	5.0	µg/L	100		74.0	59-121			
Hexachlorobenzene	70.7	10	µg/L	100		70.7	1-152			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B048601 - SW-846 3510C											
LCS (B048601-BS1)				Prepared: 03/27/12 Analyzed: 03/28/12							
Hexachlorobutadiene	55.8	10	µg/L	100		55.8		24-116			
Hexachlorocyclopentadiene	43.1	10	µg/L	100		43.1		40-140			
Hexachloroethane	45.9	10	µg/L	100		45.9		40-113			
Indeno(1,2,3-cd)pyrene	61.7	5.0	µg/L	100		61.7		1-171			
Isophorone	74.3	10	µg/L	100		74.3		21-196			
Naphthalene	62.4	5.0	µg/L	100		62.4		21-133			
Nitrobenzene	63.4	10	µg/L	100		63.4		35-180			
2-Nitrophenol	67.6	10	µg/L	100		67.6		29-182			
4-Nitrophenol	33.0	10	µg/L	100		33.0		1-132			
N-Nitrosodimethylamine	17.2	5.0	µg/L	100		**17.2**	*	40-140			L-04, V-05
N-Nitrosodiphenylamine	111	10	µg/L	100		111		40-140			
N-Nitrosodi-n-propylamine	65.9	10	µg/L	100		65.9		1-230			
Pentachlorophenol	73.9	10	µg/L	100		73.9		14-176			
Phenanthrene	66.1	5.0	µg/L	100		66.1		54-120			
Phenol	31.7	10	µg/L	100		31.7		5-112			
Pyrene	80.4	5.0	µg/L	100		80.4		52-115			
1,2,4-Trichlorobenzene	62.7	5.0	µg/L	100		62.7		44-142			
2,4,6-Trichlorophenol	74.7	10	µg/L	100		74.7		37-144			
Surrogate: 2-Fluorophenol	*73.5*		µg/L	200		36.8		15-110			
Surrogate: Phenol-d6	*48.6*		µg/L	200		24.3		15-110			
Surrogate: Nitrobenzene-d5	*67.9*		µg/L	100		67.9		30-130			
Surrogate: 2-Fluorobiphenyl	*64.8*		µg/L	100		64.8		30-130			
Surrogate: 2,4,6-Tribromophenol	*139*		µg/L	200		69.3		15-110			
Surrogate: Terphenyl-d14	*81.6*		µg/L	100		81.6		30-130			
LCS Dup (B048601-BSD1)				Prepared: 03/27/12 Analyzed: 03/28/12							
Acenaphthene	73.8	5.0	µg/L	100		73.8		47-145	5.07		
Acenaphthylene	72.6	5.0	µg/L	100		72.6		33-145	3.76		
Anthracene	67.2	6.0	µg/L	100		67.2		27-133	8.34		
Benzidine	55.2	10	µg/L	100		55.2		40-140	23.0		
Benzo(a)anthracene	82.7	5.0	µg/L	100		82.7		33-143	12.0		
Benzo(a)pyrene	81.9	5.0	µg/L	100		81.9		17-163	3.06		
Benzo(b)fluoranthene	107	5.0	µg/L	100		107		24-159	32.1		
Benzo(g,h,i)perylene	71.1	5.0	µg/L	100		71.1		1-219	10.0		
Benzo(k)fluoranthene	90.2	5.0	µg/L	100		90.2		11-162	1.81		
4-Bromophenylphenylether	71.5	10	µg/L	100		71.5		53-127	1.28		
Butylbenzylphthalate	89.6	10	µg/L	100		89.6		1-152	10.2		
4-Chloro-3-methylphenol	84.0	10	µg/L	100		84.0		22-147	0.119		
Bis(2-chloroethoxy)methane	99.6	10	µg/L	100		99.6		33-184	2.13		
Bis(2-chloroethyl)ether	72.0	10	µg/L	100		72.0		12-158	1.07		
Bis(2-chloroisopropyl)ether	62.5	10	µg/L	100		62.5		36-166	2.50		V-04
2-Chloronaphthalene	97.0	10	µg/L	100		97.0		60-118	4.55		
2-Chlorophenol	61.2	10	µg/L	100		61.2		23-134	5.30		
4-Chlorophenylphenylether	73.6	10	µg/L	100		73.6		25-158	0.942		
Chrysene	67.8	5.0	µg/L	100		67.8		17-168	0.676		
Dibenz(a,h)anthracene	66.2	5.4	µg/L	100		66.2		1-227	7.61		
Di-n-butylphthalate	77.7	10	µg/L	100		77.7		1-118	1.20		
1,3-Dichlorobenzene	50.5	5.0	µg/L	100		50.5		1-172	6.54		
1,4-Dichlorobenzene	51.5	5.0	µg/L	100		51.5		20-124	6.11		
1,2-Dichlorobenzene	52.8	5.0	µg/L	100		52.8		32-129	3.72		
3,3-Dichlorobenzidine	67.2	10	µg/L	100		67.2		1-262	6.89		
2,4-Dichlorophenol	74.4	10	µg/L	100		74.4		39-135	0.431		

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B048601 - SW-846 3510C											
LCS Dup (B048601-BSD1)				Prepared: 03/27/12 Analyzed: 03/28/12							
Diethylphthalate	76.4	10	µg/L	100		76.4		1-114	7.36		
2,4-Dimethylphenol	71.4	10	µg/L	100		71.4		32-119	1.54		
Dimethylphthalate	83.2	10	µg/L	100		83.2		1-112	3.83		
4,6-Dinitro-2-methylphenol	75.0	10	µg/L	100		75.0		1-181	8.95		
2,4-Dinitrophenol	79.5	10	µg/L	100		79.5		1-191	1.10		
2,4-Dinitrotoluene	72.4	10	µg/L	100		72.4		39-139	10.0		
2,6-Dinitrotoluene	70.8	10	µg/L	100		70.8		50-158	13.5		
Di-n-octylphthalate	161	10	µg/L	100		**161**	*	4-146	12.6		L-07
1,2-Diphenylhydrazine (as Azobenzene)	70.7	10	µg/L	100		70.7		40-140	2.31		
Bis(2-Ethylhexyl)phthalate	86.9	10	µg/L	100		86.9		8-158	12.1		
Fluoranthene	70.7	5.0	µg/L	100		70.7		26-137	3.84		
Fluorene	77.3	5.0	µg/L	100		77.3		59-121	4.28		
Hexachlorobenzene	72.0	10	µg/L	100		72.0		1-152	1.86		
Hexachlorobutadiene	58.9	10	µg/L	100		58.9		24-116	5.37		
Hexachlorocyclopentadiene	53.3	10	µg/L	100		53.3		40-140	21.3		
Hexachloroethane	47.6	10	µg/L	100		47.6		40-113	3.72		
Indeno(1,2,3-cd)pyrene	130	5.0	µg/L	100		130		1-171	71.0		
Isophorone	53.3	10	µg/L	100		53.3		21-196	33.0		
Naphthalene	63.6	5.0	µg/L	100		63.6		21-133	1.98		
Nitrobenzene	66.1	10	µg/L	100		66.1		35-180	4.19		
2-Nitrophenol	71.1	10	µg/L	100		71.1		29-182	5.08		
4-Nitrophenol	32.2	10	µg/L	100		32.2		1-132	2.39		
N-Nitrosodimethylamine	33.1	5.0	µg/L	100		**33.1**	*	40-140	63.2		L-04, V-05
N-Nitrosodiphenylamine	98.5	10	µg/L	100		98.5		40-140	11.5		
N-Nitrosodi-n-propylamine	62.0	10	µg/L	100		62.0		1-230	6.10		
Pentachlorophenol	66.1	10	µg/L	100		66.1		14-176	11.1		
Phenanthrene	65.0	5.0	µg/L	100		65.0		54-120	1.69		
Phenol	31.8	10	µg/L	100		31.8		5-112	0.441		
Pyrene	78.9	5.0	µg/L	100		78.9		52-115	1.88		
1,2,4-Trichlorobenzene	64.6	5.0	µg/L	100		64.6		44-142	3.10		
2,4,6-Trichlorophenol	90.5	10	µg/L	100		90.5		37-144	19.1		
Surrogate: 2-Fluorophenol	*71.1*		µg/L	200		35.5		15-110			
Surrogate: Phenol-d6	*46.2*		µg/L	200		23.1		15-110			
Surrogate: Nitrobenzene-d5	*68.4*		µg/L	100		68.4		30-130			
Surrogate: 2-Fluorobiphenyl	*67.3*		µg/L	100		67.3		30-130			
Surrogate: 2,4,6-Tribromophenol	*124*		µg/L	200		62.0		15-110			
Surrogate: Terphenyl-d14	*83.9*		µg/L	100		83.9		30-130			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B048626 - SW-846 3510C										
Blank (B048626-BLK1)				Prepared: 03/27/12 Analyzed: 03/28/12						
Aldrin	ND	0.050	µg/L							
Aldrin [2C]	ND	0.050	µg/L							
alpha-BHC	ND	0.050	µg/L							
alpha-BHC [2C]	ND	0.050	µg/L							
beta-BHC	ND	0.050	µg/L							
beta-BHC [2C]	ND	0.050	µg/L							
delta-BHC	ND	0.050	µg/L							
delta-BHC [2C]	ND	0.050	µg/L							
gamma-BHC (Lindane)	ND	0.030	µg/L							
gamma-BHC (Lindane) [2C]	ND	0.030	µg/L							
Chlordane	ND	0.20	µg/L							
Chlordane [2C]	ND	0.20	µg/L							
4,4'-DDD	ND	0.080	µg/L							
4,4'-DDD [2C]	ND	0.080	µg/L							
4,4'-DDE	ND	0.040	µg/L							
4,4'-DDE [2C]	ND	0.040	µg/L							
4,4'-DDT	ND	0.080	µg/L							
4,4'-DDT [2C]	ND	0.080	µg/L							
Dieldrin	ND	0.014	µg/L							
Dieldrin [2C]	ND	0.014	µg/L							
Endosulfan I	ND	0.050	µg/L							
Endosulfan I [2C]	ND	0.050	µg/L							
Endosulfan II	ND	0.080	µg/L							
Endosulfan II [2C]	ND	0.080	µg/L							
Endosulfan Sulfate	ND	0.080	µg/L							
Endosulfan Sulfate [2C]	ND	0.080	µg/L							
Endrin	ND	0.080	µg/L							
Endrin [2C]	ND	0.080	µg/L							
Endrin Aldehyde	ND	0.080	µg/L							
Endrin Aldehyde [2C]	ND	0.080	µg/L							
Endrin Ketone	ND	0.080	µg/L							
Endrin Ketone [2C]	ND	0.080	µg/L							
Heptachlor	ND	0.050	µg/L							
Heptachlor [2C]	ND	0.050	µg/L							
Heptachlor Epoxide	ND	0.050	µg/L							
Heptachlor Epoxide [2C]	ND	0.050	µg/L							
Methoxychlor	ND	0.50	µg/L							
Methoxychlor [2C]	ND	0.50	µg/L							
Toxaphene	ND	1.0	µg/L							
Toxaphene [2C]	ND	1.0	µg/L							
Surrogate: Decachlorobiphenyl	*1.17*		µg/L	2.00		58.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.19*		µg/L	2.00		59.3	30-150			
Surrogate: Tetrachloro-m-xylene	*1.76*		µg/L	2.00		88.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.79*		µg/L	2.00		89.6	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B048626 - SW-846 3510C										
LCS (B048626-BS1)				Prepared: 03/27/12 Analyzed: 03/28/12						
Aldrin	0.17	0.050	µg/L	0.200		85.0	42-122			
Aldrin [2C]	0.17	0.050	µg/L	0.200		87.4	42-122			
alpha-BHC	0.19	0.050	µg/L	0.200		95.6	37-134			
alpha-BHC [2C]	0.20	0.050	µg/L	0.200		98.1	37-134			
beta-BHC	0.20	0.050	µg/L	0.200		99.4	17-147			
beta-BHC [2C]	0.20	0.050	µg/L	0.200		101	17-147			
delta-BHC	0.19	0.050	µg/L	0.200		95.5	19-140			
delta-BHC [2C]	0.19	0.050	µg/L	0.200		97.4	19-140			
gamma-BHC (Lindane)	0.19	0.030	µg/L	0.200		94.7	32-127			
gamma-BHC (Lindane) [2C]	0.20	0.030	µg/L	0.200		98.5	32-127			
4,4'-DDD	0.20	0.080	µg/L	0.200		102	31-141			
4,4'-DDD [2C]	0.21	0.080	µg/L	0.200		103	31-141			
4,4'-DDE	0.20	0.040	µg/L	0.200		97.6	30-145			
4,4'-DDE [2C]	0.20	0.040	µg/L	0.200		101	30-145			
4,4'-DDT	0.20	0.080	µg/L	0.200		100	25-160			
4,4'-DDT [2C]	0.19	0.080	µg/L	0.200		96.5	25-160			
Dieldrin	0.21	0.014	µg/L	0.200		107	36-146			
Dieldrin [2C]	0.21	0.014	µg/L	0.200		106	36-146			
Endosulfan I	0.20	0.050	µg/L	0.200		102	45-153			
Endosulfan I [2C]	0.21	0.050	µg/L	0.200		104	45-153			
Endosulfan II	0.20	0.080	µg/L	0.200		102	10-202			
Endosulfan II [2C]	0.22	0.080	µg/L	0.200		108	10-202			
Endosulfan Sulfate	0.20	0.080	µg/L	0.200		102	26-144			
Endosulfan Sulfate [2C]	0.21	0.080	µg/L	0.200		103	26-144			
Endrin	0.21	0.080	µg/L	0.200		103	30-147			
Endrin [2C]	0.21	0.080	µg/L	0.200		105	30-147			
Endrin Aldehyde	0.13	0.080	µg/L	0.200		66.5	40-140			
Endrin Aldehyde [2C]	0.16	0.080	µg/L	0.200		79.2	40-140			
Endrin Ketone	0.20	0.080	µg/L	0.200		99.8	40-140			
Endrin Ketone [2C]	0.20	0.080	µg/L	0.200		98.6	40-140			
Heptachlor	0.18	0.050	µg/L	0.200		89.5	31-111			
Heptachlor [2C]	0.18	0.050	µg/L	0.200		92.0	31-111			
Heptachlor Epoxide	0.21	0.050	µg/L	0.200		103	37-142			
Heptachlor Epoxide [2C]	0.21	0.050	µg/L	0.200		105	37-142			
Methoxychlor	0.21	0.50	µg/L	0.200		104	40-140			
Methoxychlor [2C]	0.19	0.50	µg/L	0.200		94.4	40-140			
Surrogate: Decachlorobiphenyl	*1.07*		µg/L	2.00		53.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.09*		µg/L	2.00		54.5	30-150			
Surrogate: Tetrachloro-m-xylene	*1.64*		µg/L	2.00		81.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.70*		µg/L	2.00		85.0	30-150			
LCS Dup (B048626-BSD1)				Prepared: 03/27/12 Analyzed: 03/28/12						
Aldrin	0.17	0.050	µg/L	0.200		85.7	42-122	0.873		
Aldrin [2C]	0.18	0.050	µg/L	0.200		88.2	42-122	0.940		
alpha-BHC	0.19	0.050	µg/L	0.200		96.7	37-134	1.17		
alpha-BHC [2C]	0.20	0.050	µg/L	0.200		98.9	37-134	0.842		
beta-BHC	0.20	0.050	µg/L	0.200		99.6	17-147	0.231		
beta-BHC [2C]	0.20	0.050	µg/L	0.200		101	17-147	0.351		
delta-BHC	0.19	0.050	µg/L	0.200		95.8	19-140	0.319		
delta-BHC [2C]	0.20	0.050	µg/L	0.200		98.3	19-140	0.945		
gamma-BHC (Lindane)	0.19	0.030	µg/L	0.200		95.9	32-127	1.33		
gamma-BHC (Lindane) [2C]	0.20	0.030	µg/L	0.200		99.3	32-127	0.869		

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B048626 - SW-846 3510C										
LCS Dup (B048626-BSD1)				Prepared: 03/27/12 Analyzed: 03/28/12						
4,4'-DDD	0.20	0.080	µg/L	0.200		100	31-141	1.80		
4,4'-DDD [2C]	0.20	0.080	µg/L	0.200		101	31-141	1.58		
4,4'-DDE	0.19	0.040	µg/L	0.200		94.3	30-145	3.51		
4,4'-DDE [2C]	0.19	0.040	µg/L	0.200		96.7	30-145	4.03		
4,4'-DDT	0.19	0.080	µg/L	0.200		96.3	25-160	3.83		
4,4'-DDT [2C]	0.19	0.080	µg/L	0.200		94.7	25-160	1.92		
Dieldrin	0.21	0.014	µg/L	0.200		106	36-146	0.836		
Dieldrin [2C]	0.21	0.014	µg/L	0.200		106	36-146	0.326		
Endosulfan I	0.20	0.050	µg/L	0.200		101	45-153	0.693		
Endosulfan I [2C]	0.21	0.050	µg/L	0.200		104	45-153	0.323		
Endosulfan II	0.20	0.080	µg/L	0.200		102	10-202	0.122		
Endosulfan II [2C]	0.21	0.080	µg/L	0.200		106	10-202	1.66		
Endosulfan Sulfate	0.20	0.080	µg/L	0.200		102	26-144	0.0635		
Endosulfan Sulfate [2C]	0.21	0.080	µg/L	0.200		103	26-144	0.179		
Endrin	0.21	0.080	µg/L	0.200		104	30-147	0.420		
Endrin [2C]	0.21	0.080	µg/L	0.200		104	30-147	0.905		
Endrin Aldehyde	0.13	0.080	µg/L	0.200		63.3	40-140	4.99		
Endrin Aldehyde [2C]	0.16	0.080	µg/L	0.200		78.6	40-140	0.830		
Endrin Ketone	0.20	0.080	µg/L	0.200		98.1	40-140	1.68		
Endrin Ketone [2C]	0.20	0.080	µg/L	0.200		98.1	40-140	0.473		
Heptachlor	0.18	0.050	µg/L	0.200		92.3	31-111	3.14		
Heptachlor [2C]	0.19	0.050	µg/L	0.200		94.9	31-111	3.05		
Heptachlor Epoxide	0.20	0.050	µg/L	0.200		102	37-142	1.10		
Heptachlor Epoxide [2C]	0.21	0.050	µg/L	0.200		104	37-142	1.42		
Methoxychlor	0.21	0.50	µg/L	0.200		103	40-140	0.753		
Methoxychlor [2C]	0.19	0.50	µg/L	0.200		95.0	40-140	0.623		
Surrogate: Decachlorobiphenyl	*0.931*		µg/L	2.00		46.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.951*		µg/L	2.00		47.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.62*		µg/L	2.00		81.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.67*		µg/L	2.00		83.4	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B048625 - SW-846 3510C										
Blank (B048625-BLK1)				Prepared: 03/27/12 Analyzed: 03/28/12						
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	*1.19*		µg/L	2.00		59.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.26*		µg/L	2.00		63.1	30-150			
Surrogate: Tetrachloro-m-xylene	*1.86*		µg/L	2.00		93.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.08*		µg/L	2.00		104	30-150			
LCS (B048625-BS1)				Prepared: 03/27/12 Analyzed: 03/28/12						
Aroclor-1016	0.57	0.20	µg/L	0.500		113	50-114			
Aroclor-1016 [2C]	0.57	0.20	µg/L	0.500		113	50-114			
Aroclor-1260	0.56	0.20	µg/L	0.500		112	8-127			
Aroclor-1260 [2C]	0.58	0.20	µg/L	0.500		116	8-127			
Surrogate: Decachlorobiphenyl	*1.19*		µg/L	2.00		59.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.25*		µg/L	2.00		62.5	30-150			
Surrogate: Tetrachloro-m-xylene	*1.88*		µg/L	2.00		94.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.11*		µg/L	2.00		105	30-150			
LCS Dup (B048625-BSD1)				Prepared: 03/27/12 Analyzed: 03/28/12						
Aroclor-1016	0.51	0.20	µg/L	0.500		102	50-114	11.0		
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		102	50-114	11.0		
Aroclor-1260	0.52	0.20	µg/L	0.500		104	8-127	7.59		
Aroclor-1260 [2C]	0.54	0.20	µg/L	0.500		108	8-127	6.90		
Surrogate: Decachlorobiphenyl	*0.980*		µg/L	2.00		49.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.02*		µg/L	2.00		50.8	30-150			
Surrogate: Tetrachloro-m-xylene	*1.56*		µg/L	2.00		78.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.72*		µg/L	2.00		86.1	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B048425 - SW-846 3510C										
Blank (B048425-BLK1)				Prepared: 03/23/12 Analyzed: 03/24/12						
TPH C9-C36 Hydrocarbons as Diesel	ND	0.20	mg/L							
Surrogate: o-Terphenyl	*0.0767*		mg/L	0.100		76.7	40-140			
LCS (B048425-BS1)				Prepared: 03/23/12 Analyzed: 03/24/12						
TPH C9-C36 Hydrocarbons as Diesel	0.797	0.20	mg/L	1.00		79.7	40-140			
Surrogate: o-Terphenyl	*0.0777*		mg/L	0.100		77.7	40-140			
LCS Dup (B048425-BSD1)				Prepared: 03/23/12 Analyzed: 03/24/12						
TPH C9-C36 Hydrocarbons as Diesel	0.812	0.20	mg/L	1.00		81.2	40-140	1.84	30	
Surrogate: o-Terphenyl	*0.0783*		mg/L	0.100		78.3	40-140			

Appendix B

Historic and Archaeological Property
&
Endangered Species Habitat Documentation

File 17 - Permits
Contract 6457
14-6457-17

The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

December 9, 2011

Marianne Connolly
Program Manager
Regulatory Compliance
Massachusetts Water Resources Authority
100 First Avenue, Building 39
Boston, MA 02129

RE: MWRA Spot Pond Covered Storage Facility, Stoneham. MHC #RC.47736.

Dear Ms. Connolly:

Staff of the Massachusetts Historical Commission (MHC), the office of the Massachusetts State Historic Preservation Officer, have reviewed the information submitted for the project referenced above, received by the MHC on November 10, 2011, and the letter memorandum that summarizes the results of the archaeological testing and recommendations, received on December 8, 2011.

Historic and archaeological properties within the project area of potential effect include the Metropolitan District Commission Pumping House (Gillis Pumping Station), Spot Pond Reservoir, Woodland Road and Ravine Road that are part of the Middlesex Fells Reservation Parkways, and the Middlesex Fells Reservoirs Historic District, all listed in the State and National Registers of Historic Places; and, three archaeological sites—Spot Pond I, II, and III Sites a/k/a 19-MD-698, -699, & -700—that were found to meet the Criteria of Eligibility for listing in the National Register of Historic Places.

After review of the information submitted, it is the opinion of the MHC that the project as proposed will have no adverse effect (36 CFR 800.5(b); 950 CMR 71.07(2)(b)(2)) on the historic and archaeological properties in the project area of potential effect, provided that the MHC is provided the plans and specifications for the new equipment shelter for review and comment, and as always, if there are any substantial project changes, that the information is provided for MHC review and comment.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800) and M.G.L. c. 9, ss. 26-27C (950 CMR 71). Please contact Edward L. Bell if you have any questions.

Sincerely,

Brona Simon

Brona Simon
State Historic Preservation Officer
Executive Director
State Archaeologist
Massachusetts Historical Commission

xc:
John Felix, DEP, Attn. BRP (SRF)
Patrice Kish, DCR
Ellen P. Berkland, DCR
Stoneham Historical Commission
Friends of Middlesex Fells

220 Morrissey Boulevard, Boston, Massachusetts 02125
(617) 727-8470 • Fax: (617) 727-5128
www.sec.state.ma.us/mhc

Commonwealth of Massachusetts
Division of Fisheries & Wildlife
MassWildlife

Wayne F. MacCallum, *Director*

October 04, 2011

Jae Kim
Massachusetts Water Resources Authority
Chelsea Facility
2 Griffin Way
Chelsea MA 02150

RE: Project Location: Pipeline Road and Reservoir Path, Spot Pond water storage facility
Project Description: Installation of a Fiber Optic Communication Duct Bank
NHESP File No.: 11-29817

Dear Applicant:

Thank you for submitting the MESA Project Review Checklist, site plans (dated 6/22/2011) and other required materials to the Natural Heritage and Endangered Species Program (NHESP) of the MA Division of Fisheries & Wildlife for review pursuant to the Massachusetts Endangered Species Act (MESA) (MGL c.131A) and its implementing regulations (321 CMR 10.00).

Based on a review of the information that was provided and the information that is currently contained in our database, the NHESP has determined that this project, as currently proposed, will not result in a prohibited "take" of state-listed rare species. This determination is a final decision of the Division of Fisheries & Wildlife pursuant to 321 CMR 10.18. Any changes to the proposed project or any additional work beyond that shown on the site plans may require an additional filing with the NHESP pursuant to the MESA. This project may be subject to further review if no physical work is commenced within five years from the date of issuance of this determination, or if there is a change to the project.

Please note that this determination addresses only the matter of state-listed species and their habitats. If you have any questions regarding this letter please contact Lauren Glorioso, Endangered Species Review Assistant, at (508) 389-6361.

Sincerely,

Thomas W. French

Thomas W. French, Ph.D.
Assistant Director

cc: James Pescatore, Camp Dresser & McKee, Inc.