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June 15, 2009 GeoInsight Project 2491-001

Alex Sherrin
On-Scene Coordinator
Office of Site Remediation and Restoration
U.S. Environmental Protection Agency
One Congress Street, Suite 1100-HBR
Boston, Massachusetts 02114-2023

RE: Fifty-Eighth Progress Report
Administrative Order on Consent for Removal Action
Wells G&H Superfund Site
Olympia Nominee Trust Property
60 Olympia Avenue
Woburn, Massachusetts
CERCLA Docket # 01-2004-0059

Dear Mr. Sherrin:

GeoInsight, Inc. (GeoInsight) prepared this progress report to describe activities completed at 60 Olympia Avenue in Woburn, Massachusetts (the Site) during the fifty-eighth progress report period (May 15 to June 15, 2009). This report was prepared in accordance with the June 21, 2004 United States Environmental Protection Agency (USEPA) Administrative Order on Consent for Removal Action (CERCLA Docket No. 01-2004-0059; the "Order"). The report was prepared by GeoInsight at the request of Olympia Nominee Trust, current owner of the 60 Olympia Avenue property.

Injection Activities

Sodium permanganate injection activities were performed at the Site between May 19 and May 22, 2009. Approximately 4,775 gallons of two to three percent sodium permanganate solution were injected inside of the treatment cell. Approximately 86 percent of the sodium permanganate solution (4,125 gallons) was delivered to the subsurface via direct push injection methods using a geoprobe. The remaining 14 percent (approximately 650 gallons) were injected via gravity methods into existing trenches.

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Ground Water Monitoring

A focused ground water sampling event of monitoring well MW-216S was performed on May 7, 2009 and summarized in the fifty-seventh progress report. Laboratory analytical data for the May 7, 2009 sampling event are summarized in the attached table, and the laboratory analytical report is attached.

Permanganate Monitoring

As described in the fifty-seventh progress report, monitoring wells inside and outside the treatment cell were monitored for the presence of permanganate (i.e., purple color) on May 7, 2009. During the May 2009 permanganate monitoring event, permanganate was observed in shallow and deep MW-200 series monitoring wells inside the treatment cell with the exception of monitoring wells MW-203S, MW-203D, and MW-211S. Permanganate was also observed in wells TEST-1, GEO-4, OL-2, OL-3, and OL-3M. Permanganate was observed in monitoring wells MW-215S, MW-216S, and MW-217M outside of the treatment cell.

Reporting

The fifty-ninth progress report will be submitted on September 15, 2009. The September report will include a summary of injection activities performed in the Spring of 2009 and a summary of performance monitoring data and observations.

Please contact us at 978-692-1114 if you have questions regarding the content of this progress report.

Sincerely,
GEOINSIGHT, INC.

Renée S. Egerton
FOR
Christene A. Binger
Senior Hydrogeologist

Michael J. Webster, P.G., L.S.P.
Senior Associate

cc: Chub Whitten, Olympia Nominee Trust
David P. Rosenblatt, Esq., Burns & Levinson LLP

Attachments:
Work Plan Implemenation Schedule
Table 1 – Summary of Ground Water Analytical Data – Primary VOCs
Laboratory Analytical Reports

WORK PLAN IMPLEMENTATION SCHEDULE
60 OLYMPIA AVENUE
WOBURN, MASSACHUSETTS

TASK DESCRIPTION	SCHEDULE
Permits	
Submit permit application to Massachusetts Water Resources Authority (MWRA) to drive sheet pile and continue construction activities.	Completed October 2004
MWRA Approval	October 26, 2004
Site Preparation	
Bridge Enhancements for Sheet Pile Crane Brush Clearing	Completed November 2004
Sheet Pile Installation	Completed January 2005
Injection Well and Trench Installation	
Trenching Horizontal Wells (5 days) Drilling Vertical Injection Wells (10 days)	Completed January 2005
Monitoring Well Installation	Completed February 2005
Additional Injection Wells	
F-5, F-6, F-7	Completed August 2005
K-Series	Completed May 2007
Installation of Liquid Permanganate Delivery System	
Staging Area for Permanganate Storage	Completed May 2005
Delivery of Permanganate (70 drums total)	May 11 and June 10, 2005
Delivery of Permanganate (70 drums total)	October 7 and 28, 2005
Delivery of Permanganate (21 drums total)	December 2, 2005
Delivery of Permanganate (4 drums total)	September 5, 2007
Delivery of Permanganate (8 drums total)	May 19, 2008
Delivery of Permanganate (5 drums total)	October 13, 2008
Delivery of Permanganate (4 drums total)	November 10, 2008
Delivery of Permanganate (4 drums total)	December 8, 2008
Delivery of Permanganate (4 drums total)	April 20, 2009
Delivery of Permanganate (4 drums total)	May 18, 2009

WORK PLAN IMPLEMENTATION SCHEDULE
60 OLYMPIA AVENUE
WOBURN, MASSACHUSETTS

TASK DESCRIPTION	SCHEDULE
Up to 20 Injection Events - Dependent on Site Monitoring (1,000 gallons of 40 percent $NaMnO_4$ per event)	1st Injection: September 1, 2005 (Trenches) 2nd Injection: September 15, 2005(Trenches) 3rd Injection: September 29, 2005 (Wells) 4th Injection: October 13, 2005 (Trenches) 5th Injection: November 3, 2005 (Wells) 6th Injection: November 10, 2005 (Trenches) 7th Injection: November 22, 2005 (Wells) 8th Injection: December 16, 2005 (Wells/Trenches)
Focused Injection Events (580 gallons of 10 to 20 percent $NaMnO_4$)	9th Injection: September 6, 2007 (Wells)
(3,200 gallons of 5 percent $NaMnO_4$)	10th Injection: May 20 to 22, 2008 (Direct-push/Wells/Trenches)
(3,700 gallons of 2 to 4 percent $NaMnO_4$)	11th Injection: October 14 to 17, 2008 (East Side, Direct-push/Trenches)
(4,900 gallons of 2 to 3 percent $NaMnO_4$)	12th Injection: November 10 to 14, 2008 (Direct-push/Trenches)
(4,400 gallons of 2 to 3 percent $NaMnO_4$)	13th Injection: December 8 to 11, 2008 (Direct-push/Trenches)
(4,150 gallons of 2 to 3 percent $NaMnO_4$)	14th Injection: April 20 to 23, 2009 (Direct-push/Trenches)
(4,775 gallons of 2 to 3 percent $NaMnO_4$)	15th Injection: May 19 to 22, 2009 (Direct-push/Trenches)
Ground Water Monitoring 2005 Baseline Comprehensive Sampling Event Focused Sampling Events	April 13 and 14, 2005 September 13, 2005 January 11, 2006 February 9, 2006 March 10, 2006

WORK PLAN IMPLEMENTATION SCHEDULE
60 OLYMPIA AVENUE
WOBURN, MASSACHUSETTS

TASK DESCRIPTION	SCHEDULE
Ground Water Monitoring (continued)	
2006 Comprehensive Sampling Event	April 24, 25, and 26, 2006
Focused Sampling Events	July 19, 2006 August 31, 2006 September 28, 2006 October 30, 2006 December 14, 2006 March 28, 2007
2007 Comprehensive Sampling Event	April 24, 25, and 26, 2007
Focused Sampling Event	November 5, 2007
2008 Comprehensive Sampling Event	April 22, 23, and 24, 2008
Focused Sampling Events	August 6, 2008 November 13, 2008 December 11, 2008
2009 Focused Sampling Events	March 9, 2009 April 7 and 8, 2009 May 7, 2009
Additional Assessment Activities included in November 28, 2006 Scope of Work	
Subsurface Investigation Activities	May 14 to 18, 2007
Focused Ground Water Sampling Event	June 18, 2007
Additional Assessment Activities included in March 14, 2008 Scope of Work	
Subsurface Investigation Activities	June 9 to 11, 2008

TABLE 1
SUMMARY OF GROUND WATER ANALYTICAL DATA - PRIMARY VOCs
60 OLYMPIA AVENUE
WOBURN, MASSACHUSETTS

LOCATION ID	Sampling Date	Screen Interval	PCE	TCE	1,1,1-TCA	1,1-DCE	cis-1,2-DCE	Vinyl Chloride	Chloroform	Xylenes	1,1,2-Trichloro-trifluoroethane
GROUND WATER STANDARDS			5	5	200	7	70	2	5	10,000	NA
INSIDE TREATMENT CELL											
OL-002	12/15/87	4-9'	**41**	**3,100**	ND	---	---	---	---	**170**	---
	12/15/87		**33**	**3,400**	ND	---	---	---	---	**140**	---
	09/16/97		**8**	**3,700**	**1**	---	**3**	<1	**13**	**79**	---
	03/20/02		<120	**7,900**	<600	<120	<120	<120	<120	<600	**400 (J)**
OL-002 (Field Dup D02290)	03/20/02		<120	**8,000**	<600	<120	<120	<120	<120	<600	**380 (J)**
	04/22/03		**3**	**91**	<1	<1	**4**	<1	<1	<1	---
	06/02/03		<5	**330**	<5	<5	**17**	<5	<5	<5	---
	04/14/05		<50	**3,200**	<50	<50	**76**	<100	<130	---	---
	04/22/08		<10	**79**	<10	<10	<10	<10	<10	<20	**1,000**
	04/07/09+		<3	**41**	<3	<3	<3	<3	<3	<6	**720**
OL-2M	07/09/02	21.5-31.5'	<0.100	**5**	<10	<0.100	<2	<0.100	**0.0911 (J)**	<10	<10
	06/02/03		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	04/14/05		<1	<1	<1	<1	<1	<2	<1	---	---
	01/11/06		<25	**1,600**	<25	<25	<25	<25	<2	<25	---
	02/09/06		<250	**22,000**	<250	<250	<250	<250	<250	**1,310**	**5,300**
	03/10/06		<25	**1,800**	<25	<25	<25	<25	<25	<25	**290**
	04/24/06		<5	**400**	<5	<5	<5	<5	<5	<5	<50
OL-2M (DUP-3)	04/24/06		<5	**430**	<5	<5	<5	<5	<5	<5	<50
	07/19/06		**1**	**80**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.9**	**25**
	08/31/06		<1	**34**	<1	<1	<1	<1	<1	<1	**11**
	09/28/06		**0.7**	**25**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**12**
	12/14/06		**0.8**	**37**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**23**
	03/28/07		**6**	**260**	<5	<5	<5	<5	<5	<5	**400**
	04/24/07		<10	**690**	<10	<10	<10	<10	<10	**32**	**710**
	04/22/08		<0.5	**3**	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
	04/07/09+		**1**	**2**	<0.5	<0.5	<0.5	<0.5	<0.5	**7**	**760**
GEO-4	06/24/03	6-16'	<5	**340**	<5	<5	<5	<5	<5	<5	---
	04/14/05		<50	**2,500**	<50	<50	<50	<100	<50	---	---
	07/19/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/07/09+		<25	<25	<25	<25	<25	<25	<25	<50	**3,700**
TEST-1	07/09/02	1.8-16.8'	**14**	**12,000**	<10	<2	**15**	**2**	**62**	**150**	**400 (J)**
TEST-1 (Field Dup D02947)	07/09/02		**15**	**12,000**	<10	<2	**15**	**2**	**64**	**160**	**410 (J)**
	06/02/03		**3**	**1,300**	<2.5	<2.5	**130**	**3**	**5**	<2.5	**170**
	06/24/03		<5	**400**	<5	<5	**53**	<5	<5	**5**	---
	04/14/05		<50	**3,500**	<50	<50	**390**	<100	<50	---	---
TEST-1 (DUP-5)	04/14/05		<50	**3,600**	<50	<50	**400**	<100	<50	---	---
	04/08/09+		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
OL-003	12/15/87	4-9'	**45**	**180**	ND	---	**23**	ND	ND	ND	---
	09/16/97		**5**	**94**	<1	---	**280**	**95**	**4**	**300**	---
	03/18/02		**0.508 (J)**	**13**	<10	<0.100	**57**	**16**	**0.796 (J)**	**4 (J)**	**27 (J)**
	06/02/03		**0.8**	**2**	<0.5	<0.5	**11**	**7**	<0.5	**9**	---
	04/13/05		<25	**930**	<25	<25	**480**	**77**	<25	---	---
	04/24/08		**13**	**370**	<3	<3	**450**	**82**	**7**	**3**	**690**
	04/07/09+		<25	<25	<25	<25	<25	<25	<25	<50	<250
OL-3M	07/10/02	21.5-31.5'	<0.100	**0.191**	<10	<0.100	<2	<0.100	<0.100	<10	<10
	06/02/03		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	04/13/05		<1	<1	<1	<1	<1	<2	<1	---	---
	04/07/09+		<3	<3	<3	<3	<3	<3	**6**	<6	**470**
GEO-3	06/24/03	6-16'	<0.5	**4**	<0.5	<0.5	**49**	**35**	<0.5	**65**	---
MW-200S	04/14/05	6.5-9.5'	<200	**14,000**	<200	<200	<200	<400	<200	---	---
	04/07/09+		<25	<25	<25	<25	<25	<25	<25	<50	**4,800**
MW-200D	04/14/05	14-17'	<25,000	**870,000**	<25,000	<25,000	<25,000	<25,000	<25,000	**136,000**	<250,000
MW-200D (Dup)	04/14/05		<25,000	**770,000**	<25,000	<25,000	<25,000	<25,000	<25,000	**25,000**	<250,000
	04/07/09+		<50	<50	**66**	<50	<50	<50	**230**	<100	**8,900**
MW-201S	04/14/05	6.5-9.5'	<5	**330**	<5	<5	<5	<10	<5	---	---
	11/05/07+		<2.5	**4**	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**790 D**
	04/24/08		<10	<10	<10	<10	<10	<10	<10	<20	**1,500**
MW-201D	04/14/05	14-17'	<1	**11**	<1	<1	<1	<2	<1	---	---
	11/05/07+		<5	<5	<5	<5	<5	<5	<5	<5	**1,500 D**
MW-202S	04/14/05	6.5-9.5'	<100	**6,200**	<100	<100	<100	<200	<100	---	---
	4/22/08+		<25	<25	<25	<25	<25	<25	<25	<50	**920**
MW-202D	04/14/05	14-17'	<2,000	**89,000**	<2,000	<2,000	<2,000	<4,000	<2,000	---	---
	04/07/09+		<100	<100	<100	<100	<100	<100	**150**	<200	**30,000**
MW-203S	04/14/05	3-6'	<10	**500**	<10	<10	<10	<20	<10	---	---
	04/25/07		<0.5	**3**	<0.5	<0.5	**0.7**	<0.5	<0.5	<0.5	**23**
	11/5/07+		<0.5	**1**	<0.5	<0.5	**0.7**	<0.5	<0.5	<0.5	**55**
	04/23/08		<0.5	**39**	<0.5	<0.5	<0.5	<0.5	<0.5	<1	**37**
	04/07/09		<0.5	**4**	<0.5	<0.5	**0.5**	<0.5	<0.5	<1	**180**
MW-203D	04/14/05	14-17'	<500	**42,000**	<500	<500	<500	<1,000	<500	---	---
	8/31/2006+		<250	**24,000**	<250	<250	<250	<250	<250	**1,640**	**7,200**
	12/14/06+		**120**	<5	<5	<5	<5	<5	**17**	<5	**6,500 D**
	11/05/07		<500	**33,000**	<500	<500	<500	<500	<500	**830**	**5,700**
	04/24/08		<250	**26,000**	<250	<250	<250	<250	<250	**530**	**3,800**
	08/06/08		<250	**37,000**	<250	<250	<250	<250	<250	**1,360**	**6,300**
	11/13/08+		<250	**47,000**	<250	<250	<250	<250	<250	**3,850**	**5,200**
	12/11/08+		<25	<25	<25	<25	<25	<25	<25	<50	**9,600**
	03/09/09+		**200**	**14,000**	<100	<100	<100	<100	<100	**650**	**8,600**
MW-204S	04/14/05	7-10'	<50	**2,400**	<50	<50	**280**	<100	<50	---	---
MW-204S (DUP-8)	04/14/05		<50	**2,200**	<50	<50	**250**	<100	<50	---	---
	04/23/08+		<250	<250	<250	<250	<250	<250	<250	<500	<2,500
	04/07/09+		<10	<10	<10	<10	<10	<10	<10	<20	**1,900**
MW-204D	04/14/05	14-17'	<1,000	**60,000**	<1,000	<1,000	<1,000	<2,000	<1,000	---	---
	04/25/06		<2,500	**190,000**	<2,500	<2,500	<2,500	<2,500	<2,500	**3,200**	<25,000
	07/19/06		<2,500	**160,000**	<2,500	<2,500	<2,500	<2,500	<2,500	**4,800**	<25,000
	08/31/06		<2,500	**220,000**	<2,500	<2,500	<2,500	<2,500	<2,500	**6,600**	<25,000
	09/28/06		<2,500	**210,000**	<2,500	<2,500	<2,500	<2,500	<2,500	**5,400**	<25,000
	04/25/07		<5,000	**260,000**	<5,000	<5,000	<5,000	<5,000	<5,000	**7,800**	<50,000
	04/24/08+		<2,500	**460,000**	<2,500	<2,500	<2,500	<2,500	<2,500	**19,000**	**72,000**
	8/6/2008+		<2,500	**190,000**	<2,500	<2,500	<2,500	<2,500	<2,500	**11,900**	**46,000**
	11/13/08+		<500	**70,000**	<500	<500	<500	<500	<500	**8,000**	**33,000**
	03/09/09+		<50	<50	<50	<50	<50	<50	<50	**467**	**29,000**
	04/08/09+		<100	<100	<100	<100	<100	<100	<100	<200	**34,000**

TABLE 1
SUMMARY OF GROUND WATER ANALYTICAL DATA - PRIMARY VOCs
60 OLYMPIA AVENUE
WOBURN, MASSACHUSETTS

LOCATION ID	Sampling Date	Screen Interval	PCE	TCE	1,1,1-TCA	1,1-DCE	cis-1,2-DCE	Vinyl Chloride	Chloroform	Xylenes	1,1,2-Trichloro-trifluoroethane
GROUND WATER STANDARDS			5	5	200	7	70	2	5	10,000	NA
INSIDE TREATMENT CELL (continued)											
MW-205S	04/13/05	4-7'	<1	**12**	<1	<1	**4**	<2	<1	---	---
	10/30/06+		<0.5	**2**	<0.5	<0.5	**8**	<0.5	**2**	<0.5	**10**
	04/23/08		<0.5	**5**	**0.6**	<0.5	**5**	**1**	**0.5**	**1.6**	**33**
MW-205S (DUP-3)	04/23/08		<0.5	**4**	<0.5	<0.5	**4**	**0.9**	<0.5	**1.5**	**18**
	4/7/2009+		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1**	<1	**67**
MW-205D	04/13/05	14-17'	<500	**16,000**	<500	<500	<500	<1,000	<500	---	---
	04/26/06		<1,000	**61,000**	<1,000	<1,000	<1,000	<1,000	<1,000	**2,400**	<10,000
	07/19/06		<2,500	**98,000**	<2,500	<2,500	<2,500	<2,500	<2,500	**6,800**	<25,000
	08/31/06		<2,500	**110,000**	<2,500	<2,500	<2,500	<2,500	<2,500	**8,700**	<25,000
	09/28/06		<2,500	**120,000**	<2,500	<2,500	<2,500	<2,500	<2,500	**9,000**	<25,000
	10/30/06		<1,000	**120,000**	<1,000	<1,000	<1,000	<1,000	<1,000	**12,200**	**21,000**
	04/25/07		<2,500	**120,000**	<2,500	<2,500	<2,500	<2,500	<2,500	**7,600**	<25,000
	04/23/08+		**340**	**25,000**	<250	<250	<250	<250	<250	**7,800**	**24,000**
	08/06/08+		<25	<25	<25	<25	<25	<25	<25	<50	**6,700**
	11/13/08+		<50	<50	<50	<50	<50	<50	<50	<100	**19,000**
	03/09/09+		<100	<100	<100	<100	<100	<100	<100	<200	**20,000**
MW-206S	04/14/05	4-7'	<100	**8,200**	<100	<100	**130**	<200	<100	---	---
	04/23/08+		<5	<5	<5	<5	<5	<5	<5	<10	**1,000**
MW-206D	04/14/05	14-17'	<25	<25	<25	<25	**70**	<50	<25	---	---
	04/26/06		<1,000	**81,000**	<1,000	<1,000	<1,000	<1,000	<1,000	**2,800**	<10,000
	07/19/06		<1,000	**73,000**	<1,000	<1,000	<1,000	<1,000	<1,000	**5,000**	**11,000**
	08/31/06		<1,000	**78,000**	<1,000	<1,000	<1,000	<1,000	<1,000	**5,800**	**13,000**
	09/28/06		<1,000	**87,000**	<1,000	<1,000	<1,000	<1,000	<1,000	**6,300**	**13,000**
	04/25/07		<1,000	**83,000**	<1,000	<1,000	<1,000	<1,000	<1,000	**4,100**	<10,000
	04/23/08		**500**	**100,000**	<50	<50	**400**	<50	<50	**11,300**	**15,000**
MW-206D (DUP-2)	04/23/08		<1,000	**77,000**	<1,000	<1,000	<1,000	<1,000	<1,000	**7,000**	<10,000
	08/06/08+		**320**	**870**	<3	<3	<3	<3	<3	**1,340**	**17,000**
	11/13/08		<500	**78,000**	<500	<500	**640**	<500	<500	**4,400**	**10,000**
	12/11/08+		<25	<25	<25	<25	<25	<25	<25	<50	**11,000**
	03/09/09+		**200**	<50	<50	<50	<50	<50	<50	**1,380**	**10,000**
MW-207S	04/13/05	6-9'	**110**	**3,700**	<50	<50	**1,700**	**320**	<50	---	---
	12/14/06+		<10	**550**	<10	<10	**150**	<10	<10	<10	**330**
	11/05/07		<25	**890**	<25	<25	**580**	**54**	<25	<25	**820**
	04/22/08		**83**	**1,700**	<10	<10	**51**	<10	<10	<20	**3,400**
	08/06/08+		**62**	**39**	<5	<5	<5	<5	<5	<10	**2,900**
	04/07/09+		<10	<10	<10	<10	<10	<10	<10	<20	**2,400**
MW-207D	04/14/05	14-17'	<100	**7,900**	<100	<100	<100	<200	<100	---	---
MW-207D (DUP-7)	04/14/05		<100	**8,100**	<100	<100	<100	<200	<100	---	---
	04/07/09+		<50	<50	<50	<50	<50	<50	**230**	<100	**9,800**
MW-208S	04/14/05	4-7'	<25	**1,100**	<25	<25	**1,300**	**95**	<25	---	---
	04/22/08+		<25	<25	<25	<25	<25	<25	<25	<50	<250
	04/07/09+		<10	<10	<10	<10	<10	<10	<10	<20	**110**
MW-208D	04/14/05	14-17'	<500	**38,000**	<500	<500	<500	<500	<500	---	---
	12/14/06+		<2,500	**170,000**	<2,500	<2,500	<2,500	<2,500	<2,500	**5,200**	**37,000**
	12/11/08+		<25	<25	<25	<25	<25	<25	<25	**359**	**24,000**
	03/09/09+		<100	<100	<100	<100	<100	<100	<100	**2,560**	**19,000**
MW-209S	04/13/05	7-10'	<10	**520**	<10	<10	**1,200**	**270**	<10	---	---
	04/22/08		<5	**22**	<5	<5	<5	<5	<5	<10	**1,600**
	04/07/09+		<5	<5	<5	<5	<5	<5	<5	<10	**1,200**
MW-209D	04/13/05	14-17'	<25	**1,600**	<25	<25	<25	<50	<50	---	---
	04/08/09+		<10	<10	<10	<10	<10	<10	**50**	<20	**1,600**
MW-210S	04/13/05	7-10'	<50	**730**	<50	<50	**3,500**	**1,100**	<50	---	---
	11/05/07		<25	**430**	<25	<25	**1,000**	**61**	<25	<25	**710**
	04/22/08		<25	**2,400**	<25	<25	**2,900**	**290**	<25	<50	**1,300**
	08/06/08+		<25	<25	<25	<25	<25	<25	<25	<50	**340**
	04/07/09		**3**	**30**	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
MW-210D	04/14/05	14-17'	<25	**650**	<25	<25	**1,900**	<50	<25	---	---
	04/07/09+		<5	<5	<5	<5	<5	<5	**59**	<10	**770**
MW-211S	04/14/05	6.5-9.5'	<2	**39**	<2	<2	**140**	**27**	<2	---	---
	12/14/06		<0.5	**1**	<0.5	<0.5	**2**	**0.6**	**0.8**	<0.5	**8**
	04/25/07		<0.5	**1**	<0.5	<0.5	**0.7**	<0.5	**0.6**	<0.5	**9**
	04/22/08		<0.5	**2**	<0.5	<0.5	**2**	**0.8**	<0.5	<1	<5
MW-211D	04/14/05	14-17'	<5	**83**	<5	<5	**150**	<10	<5	---	---
	11/05/07		<50	**3,300**	<50	<50	**830**	<50	<50	<50	<500
	4/22/08+		**8**	**69**	<1	<1	<1	<1	**30**	**9**	**270**
	04/08/09+		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**28**	**2**	**190D**
MW-212S	04/14/05	10-13'	**450**	**360**	<10	<10	**12**	<20	<10	---	---
	04/26/06		**1,200**	**2,300**	<25	<25	<25	<25	<25	<25	**340**
	08/31/06		**1,300**	**2,200**	<25	<25	**39**	<25	<25	<25	**490**
	09/28/06		**240**	**1,000**	<25	<25	**310**	<25	<25	<25	<250
	10/30/06		**1,300**	**1,900**	<25	<25	**42**	<25	<25	<25	**360**
	04/26/07		**1,200**	**1,800**	<25	<25	**68**	<25	<25	<25	**440**
	04/24/08		**1,100**	**2,100**	<25	<25	**200**	<25	<25	<50	**500**
	04/08/09+		<25	<25	<25	<25	<25	<25	<25	<50	**1,200**
DEEP OVERBURDEN WELLS											
GEO-1	09/21/99	90-100'	<1.5	**2.5**	<1	<1.5	<1	<2	<1.5	<1	---
	03/18/02		**0.104**	**0.244**	<10	<0.100	<2	<0.100	<0.100	<10	10 (UJ)
	09/13/05		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	01/11/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	04/24/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
GEO-2	09/21/99	95-105'	<1.5	**1.6**	<1	<1.5	<1	<2	<1.5	<1	---
	03/15/02		<0.100	**0.175**	<10	<0.100	<2	<0.100	<0.100	<10	<10

TABLE 1
SUMMARY OF GROUND WATER ANALYTICAL DATA - PRIMARY VOCs
60 OLYMPIA AVENUE
WOBURN, MASSACHUSETTS

LOCATION ID	Sampling Date	Screen Interval	PCE	TCE	1,1,1-TCA	1,1-DCE	cis-1,2-DCE	Vinyl Chloride	Chloroform	Xylenes	1,1,2-Trichloro-trifluoroethane
GROUND WATER STANDARDS			5	5	200	7	70	2	5	10,000	NA
OUTSIDE TREATMENT CELL											
UPGRADIENT											
OL-005	12/15/87	3.5-8.5'	ND	ND	ND	---	---	---	---	ND	---
	03/19/02		<0.100	<0.100	<10	<0.100	<2	<0.100	<0.100	<10	10 (UJ)
	06/02/03		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/14/05		<1	<1	<1	<1	<1	<2	<1	---	---
	04/25/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
MW-12	07/10/02	3.5-13.5'	<0.100	<0.100	<10	<0.100	<2	<0.100	<0.100	<10	<10
	04/14/05		<1	<1	<1	<1	<1	<2	<1	---	---
	04/25/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/07		<0.5	**32**	<0.5	<0.5	**7**	<0.5	<0.5	<0.5	<5
	04/24/08		<0.5	**13**	<0.5	<0.5	**0.5**	<0.5	<0.5	<1	<5
	04/08/09		<0.5	**22**	<0.5	<0.5	**4**	<0.5	<0.5	<1	<5
MW-214S	04/14/05	10-13'	<1	**3**	<1	<1	<1	<2	<1	---	---
	04/25/06		<0.5	**1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/25/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
MW-214M	04/14/05	20-23'	<1	**3**	<1	<1	<1	<2	<1	---	---
	04/25/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/25/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
MW-214D	04/14/05	30-33'	<1	<1	<1	<1	<1	<2	<1	---	---
	04/25/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/25/07		<0.5	**1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
SIDE GRADIENT EAST (Vicinity of Aberjona River)											
MW-010S	04/22/02	4-14'	<0.100	<0.100	<10	<0.100	<2	<0.100	<0.100	**10 (UJ)**	<10
	04/14/05		<1	<1	<1	<1	<1	<2	<1	---	---
	04/25/06		<0.5	<0.5	<0.5	<0.5	**1**	<0.5	<0.5	<0.5	<5
	04/23/08		<0.5	<0.5	<0.5	<0.5	**0.7**	<0.5	<0.5	<1	<5
MW-010M	04/25/02	40-50'	<0.100	**0.0779(J)**	<10	<0.100	<2	<0.100	<0.100	**10 (UJ)**	<10
	04/14/05		**2**	**1**	<1	<1	<1	<2	<1	---	---
	04/25/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/23/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
MW-010D	04/25/02	88.5-98.5'	**0.174**	**1.4**	<10	<0.100	<2	<0.100	<0.100	**10 (UJ)**	<10
	04/25/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
MW-215S	04/13/05	10-13'	**2,300**	**6,200**	<100	<100	**430**	<200	<100	---	---
	04/24/06		**2,400**	**5,400**	<100	<100	**250**	<100	<100	**430**	**13,000**
MW-215S (DUP-1)	04/24/06		**2,400**	**5,200**	<100	<100	**260**	<100	<100	**440**	**15,000**
	09/28/06		**2,900**	**5,400**	<50	<50	**290**	<50	<50	**671**	**21,000**
	04/25/07		**1,900**	**3,500**	<250	<250	<250	<250	<250	<250	**14,000**
	04/22/08		**1,400**	**1,900**	<10	<10	**120**	<10	<10	**121**	**10,000**
	11/13/08+		<50	<50	<50	<50	<50	<50	<50	<100	**8,600**
	12/11/08+		**360**	<3	<3	<3	<3	<3	<3	<6	**9,400**
	03/09/09+		**310**	<50	<50	<50	<50	<50	<50	<100	**9,100**
	04/08/09+		**190**	<50	<50	<50	<50	<50	<50	<100	**9,000**
MW-215M	04/13/05	20-23'	<1	<1	<1	<1	<1	<2	<1	---	---
MW-215M (DUP-2)	04/13/05		<1	<1	<1	<1	<1	<2	<1	---	---
	04/26/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	10/30/06		<0.5	**2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/22/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
MW-215D	04/13/05	30-33'	<1	<1	<1	<1	<1	<2	<1	---	---
	09/13/05		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	01/11/06		<0.5	**1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	04/26/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	07/19/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	03/28/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/22/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
MW-216S	04/13/05	10-13'	<500	**20,000**	<500	<500	<500	<1,000	<500	---	---
	09/13/05		**740**	**32,000**	<500	<500	<500	<500	<500	<500	**5,500**
	04/26/06		<1,000	**35,000**	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<10,000
	09/28/06		<1,000	**48,000**	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<10,000
	04/24/07		<1,000	**48,000**	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<10,000
	04/22/08		<1,000	**95,000**	<1,000	<1,000	<1,000	<1,000	<1,000	<2,000	**10,000**
	12/11/08		<500	**98,000**	<500	<500	<500	<500	<500	<1,000	**10,000**
	03/09/09		<500	**40,000**	<500	<500	<500	<500	<500	<1,000	<5,000
	05/07/09		<250	**26,000**	<250	<250	<250	<250	**300**	<500	**14,000**
MW-216M	04/13/05	20-23'	<1	<1	<1	<1	<1	<2	<1	---	---
	04/26/06		<0.5	**4**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/07		<0.5	**10**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/23/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
MW-216D	04/13/05	30-33'	<1	<1	<1	<1	<1	<2	<1	---	---
	09/13/05		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	01/11/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	04/26/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	07/19/06		<0.5	**0.5**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	12/14/06		<0.5	**1**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	<5
	04/24/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/22/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5

TABLE 1
SUMMARY OF GROUND WATER ANALYTICAL DATA - PRIMARY VOCs
60 OLYMPIA AVENUE
WOBURN, MASSACHUSETTS

LOCATION ID	Sampling Date	Screen Interval	PCE	TCE	1,1,1-TCA	1,1-DCE	cis-1,2-DCE	Vinyl Chloride	Chloroform	Xylenes	1,1,2-Trichloro-trifluoroethane
GROUND WATER STANDARDS			5	5	200	7	70	2	5	10,000	NA
OUTSIDE TREATMENT CELL (continued)											
SIDE GRADIENT WEST (Adjacent to Sewer Line Easement)											
GEO-5	06/24/03	2-12'	**280**	**3,300**	<50	<50	<50	<50	<50	<50	---
GEO-6	06/24/03	11-16'	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	04/13/05		<1	<1	<1	<1	<1	<2	<1	---	---
	04/24/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	10/30/06		<0.5	**2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	06/18/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
GEO-7	06/24/03	6-16'	**2**	**8**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	04/13/05		<1	**4**	<1	<1	<1	<2	---	---	---
	04/24/06		<0.5	**1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	09/28/06		<0.5	**2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/26/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	06/18/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
MW-13	07/09/02	7-17'	**410**	**780**	<10	<2	**1,500**	<2	<2	**6 (J)**	**150**
	04/22/03		**650**	**280**	<10	<10	**780**	<10	<10	<10	---
	06/02/03		**430**	**250**	<25	<25	**1,300**	<25	<25	<25	---
	04/14/05		**470**	**160**	<10	<10	**340**	<20	<10	---	---
	04/26/06		**1,500**	**1,400**	<50	<50	**350**	<50	<50	<50	**3,800**
	09/28/06		**1,100**	**2,200**	<25	<25	**480**	<25	<25	<25	**1,700**
	04/26/07		**1,400**	**4,100**	<50	<50	**380**	<50	<50	<50	**2,100**
	06/18/07		**1,100**	**7,100 D**	<25	<25	**710**	**34**	<25	<25	**2,700**
	11/05/07		**560**	**6,400**	<100	<100	**260**	<100	<100	<100	**1,200**
	04/22/08		**730**	**6,000**	<50	<50	**420**	<50	<50	<100	**1,100**
	04/07/09		**530**	**6,300**	<50	<50	**440**	<50	<50	<100	**1,700**
MW-212M	04/14/05	20-23'	<1	<1	<1	<1	<1	<2	<1	---	---
	04/26/06		<0.5	**3**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	<5
	04/25/07		<0.5	**7**	<0.5	<0.5	**2**	<0.5	<0.5	<0.5	<5
MW-212D	04/14/05	30-33'	<1	<1	<1	<1	<1	<2	<1	---	---
MW-212D (DUP-6)	04/14/05		<1	<1	<1	<1	<1	<2	<1	---	---
	04/26/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/26/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/08/09		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
MW-213S	04/13/05	10-13'	**240**	**70**	<5	<5	**140**	<10	<5	---	---
MW-213S (DUP-1)	04/13/05		**230**	**70**	<5	<5	**140**	<10	<5	---	---
	04/24/06		**120**	**120**	<25	<25	**47**	<25	<25	<25	**1,300**
	03/28/07		**330**	**900**	<10	<10	**150**	<10	<10	<10	**550**
	06/18/07		**400**	**2,000 D**	<10	<10	**200**	<10	<10	<10	**760**
	04/22/08		**280**	**2,100**	<25	<25	**110**	<25	<25	<50	**400**
	04/08/09		**400**	**6,000**	<50	<50	**81**	<50	<50	<100	**790**
MW-213M	04/13/05	20-23'	<1	<1	<1	<1	<1	<2	<1	---	---
	04/24/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	06/18/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
MW-213D	04/13/05	30-33'	<1	<1	<1	<1	<1	<2	<1	---	---
	04/24/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	03/28/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
MW-220M	04/14/05	20-23'	<1	<1	<1	<1	<1	<2	<1	---	---
	04/26/06		<1	<1	<1	<1	<1	<1	<1	<1	<10
	04/27/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
MW-220D	04/13/05	30-33'	<1	<1	<1	<1	<1	<2	<1	---	---
	04/26/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	09/28/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/26/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
SIDE GRADIENT WEST (Adjacent to Sewer Line Easement)											
GEO-8 (MW-301)	06/18/07	15-20'	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/23/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
GEO-9 (MW-302)	06/18/07	15-20'	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
DOWNGRADIENT											
MW-011S	04/26/02	4-14'	<0.100	**0.13**	<10	<0.100	<2	**0.264**	<0.100	**10 (UJ)**	<10
	04/14/05		**2**	**5**	<1	<1	**13**	<2	<1	---	---
	04/25/06		**3**	**8**	<0.5	<0.5	**26**	**2**	<0.5	<0.5	**43**
	04/23/08		**0.5**	**2**	<0.5	<0.5	**12**	**1**	<0.5	<1	<5
MW-011M	04/26/02	40-50'	**7**	**120**	<10	<2	**17**	<2	<2	**10 (UJ)**	**250**
	04/14/05		<1	**19**	<1	<1	**2**	<2	<1	---	---
	04/25/06		<0.5	**4**	<0.5	<0.5	**0.8**	<0.5	<0.5	<0.5	<5
	04/23/08		<0.5	**2**	<0.5	<0.5	**0.6**	<0.5	<0.5	<1	<5
MW-011D	04/26/02	81-91'	<0.100	<0.100	<10	<0.100	<2	<0.100	<0.100	**10 (UJ)**	<10
	04/25/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/23/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
MW-014S	07/10/02	5-15'	**25**	**180**	<10	<2	**670**	**190**	<2	<10	**31**
	04/22/03		**1**	**6**	<1	<1	**61**	**19**	<1	<10	---
	06/02/03		**2**	**15**	<1	<1	**62**	**16**	<1	<1	---
	04/13/05		**3**	**6**	<1	<1	**98**	**16**	<1	---	---
	9/28/2006+		**120**	**810**	<10	<10	**110**	<10	<10	<10	**110**
	04/24/07		**39**	**25**	<0.5	<0.5	**29**	**6**	<0.5	0.7	**130**
	06/18/07		**51**	**29**	<2.5	<2.5	**33**	**7**	<2.5	<2.5	**370**
	04/23/08		**68**	**180**	<3	<3	**210**	**31**	**3**	<6	**160**
	04/07/09		**11**	**27**	<3	<3	**280**	**30**	<3	<6	**110**
MW-014M	07/10/02	20-30'	<0.100	<0.100	<10	<0.100	<2	<0.100	<0.100	<10	<10
	04/13/05		<1	<1	<1	<1	<1	<2	<1	---	<1
	04/24/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	10/30/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5

TABLE 1
SUMMARY OF GROUND WATER ANALYTICAL DATA - PRIMARY VOCs
60 OLYMPIA AVENUE
WOBURN, MASSACHUSETTS

LOCATION ID	Sampling Date	Screen Interval	PCE	TCE	1,1,1-TCA	1,1-DCE	cis-1,2-DCE	Vinyl Chloride	Chloroform	Xylenes	1,1,2-Trichloro-trifluoroethane
GROUND WATER STANDARDS			5	5	200	7	70	2	5	10,000	NA
OUTSIDE TREATMENT CELL (continued)											
DOWNGRADIENT (continued)											
MW-014D	04/13/05	37-40'	<1	<1	<1	<1	<1	<2	<1	---	<1
MW-014D (DUP4)	04/13/05		<1	<1	<1	<1	<1	<2	<1	---	<1
	04/25/06		<0.5	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/06		<0.5	**0.5**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/07		<0.5	**2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
	04/07/09		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
MW-217S	04/13/05	10-13'	<5	**190**	<5	<5	**400**	<10	<5	---	---
	04/24/06		**7**	**69**	<5	<5	**80**	<5	<5	<5	**240**
	04/24/07		<0.5	**3**	<0.5	<0.5	**2**	<0.5	<0.5	<0.5	**26**
	04/22/08		**12**	**83**	<5	<5	**520**	<5	<5	<10	**390**
MW-217S (DUP-1)	04/22/08		**12**	**88**	<5	<5	**530**	<5	<5	<10	**400**
	04/08/09		**5**	**190**	<5	<5	**550**	<5	<5	<10	**230**
MW-217S (DUP-1)	04/08/09		<5	**170**	<5	<5	**510**	<5	<5	<10	**210**
MW-217M	04/13/05	25-28'	<1	<1	<1	<1	<1	<2	<1	---	---
	04/24/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	4/23/08+		<25	<25	<25	<25	<25	<25	<25	<50	<250
	04/08/09+		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	**16**
MW-217D	04/13/05	37-40'	<1	<1	<1	<1	<1	<2	<1	---	---
	09/13/05		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	01/11/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	04/24/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	07/19/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	03/28/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
MW-218S	04/13/05	10-13'	<1	**27**	<1	<1	**93**	**5**	<1	---	---
	04/25/06		<1	**1**	<1	<1	**44**	**6**	<1	<1	<10
MW-218S (DUP-2)	04/25/06		<1	**1**	<1	<1	**45**	**6**	<1	<1	<10
	04/25/07		<0.5	**3**	<0.5	<0.5	**10**	**3**	<0.5	<0.5	<5
	04/23/08		<0.5	**4**	<0.5	<0.5	**9**	**3**	<0.5	<0.5	<5
	04/08/09		<0.5	**0.5**	<0.5	<0.5	**1**	<0.5	<0.5	<1	<5
MW-218M	04/13/05	25-28'	<1	<1	<1	<1	<1	<2	<1	---	---
	04/26/06		<0.5	**4**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/25/07		<0.5	**1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/23/08		<0.5	**0.8**	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
	04/08/09		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	**9**
MW-218D	04/13/05	37-40'	<1	<1	<1	<1	<1	<2	<1	---	---
MW-218D (DUP-3)	04/13/05		<1	<1	<1	<1	<1	<2	<1	---	---
	04/26/06		<0.5	**1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	12/14/06		<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	4/26/07+		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
MW-219S	04/13/05	10-13'	<1	**2**	<1	<1	**33**	**5**	<1	---	---
	04/25/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/25/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/23/08		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
	04/07/09		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5
MW-219M	04/13/05	25-28'	<1	**6**	<1	<1	**63**	**12**	<1	---	---
	04/25/06		<5	**11**	<5	<5	**210**	**12**	<5	<5	<50
	04/24/07		<1	**6**	<1	<1	**56**	**6**	<1	<1	<10
	04/23/08		**1**	**4**	<0.5	<0.5	**39**	**8**	<0.5	<1	<5
	04/08/09		**0.7**	**2**	<0.5	<0.5	**16**	**3**	<0.5	<1	<5
MW-219D	04/13/05	37-40'	<1	<1	<1	<1	<1	<2	<1	---	---
	09/13/05		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	01/11/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	04/25/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	07/19/06		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	03/28/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	04/24/07		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5

NOTES:
1. Values in micrograms per liter (ug/l).
2. Bold exceeds laboratory detection limits.
3. Shaded concentrations exceed applicable Ground Water Standard.
4. Ground Water Standards are ROD ICLs or MCP Method 1/GW-1 Risk Standards.
5. (J) = estimated concentration.
6. (UJ) = estimated non-detect.
7. DCE = Dichloroethene
8. TCE = Trichloroethene
9. TCA = Trichloroethane
10. PCE = Tetrachloroethene
11. ND = Not Detected: detection limit unknown.
12. --- = Not analyzed
13. + = Sodium permanganate was present in monitoring well at time of sampling.
14. Sodium permanganate injected between September 1, 2005 and December 20, 2005.
15. D = listed value obtained from second (diluted) analytical run.
16. e = Concentration exceeded calibration range for the analyte.
17. On March 28, 2007 OL-2M was mislabled as MW-OL-2M on the chain of custody submitted to the lab.

Groundwater Analytical, Inc.
P.O. Box 1200
228 Main Street
Buzzards Bay, MA 02532

Telephone (508) 759-4441
FAX (508) 759-4475
www.groundwateranalytical.com

May 22, 2009

Ms. Christene Binger
GeoInsight, Inc.
5 Lan Drive
Second Floor
Westford, MA 01886

LABORATORY REPORT

Project: **60 Olympia/2491**
Lab ID: **125212**
Received: **05-08-09**

Dear Christene:

Enclosed are the analytical results for the above referenced project. The project was processed for Standard turnaround.

This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC or NVLAP standards, except as may be specifically noted, or described in the project narrative. The analytical results relate only to the samples received. This report may only be used or reproduced in its entirety.

I attest under the pains and penalties of perjury 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.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,

Eric H. Jensen
Operations Manager

EHJ/elm
Enclosures

GROUNDWATER ANALYTICAL

Sample Receipt Report

Project:	**60 Olympia/2491**	Delivery:	**GWA Courier**	Temperature:	**5.9ºC**
Client:	**GeoInsight, Inc.**	Airbill:	**n/a**	Chain of Custody:	**Present**
Lab ID:	**125212**	Lab Receipt:	**05-08-09**	Custody Seal(s):	**n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
125212-1	MW-216S		Aqueous	5/7/09 12:30	EPA 8260B Volatile Organics with Oxygenates				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1159460	40 mL VOA Vial	Proline	BX32904	HCL	R-5614B	02-19-09	n/a		
C1159459	40 mL VOA Vial	Proline	BX32904	HCL	R-5614B	02-19-09	n/a		
C1159420	40 mL VOA Vial	Proline	BX32904	HCL	R-5614B	02-19-09	n/a		

GROUNDWATER ANALYTICAL

Data Certification

Project:	**60 Olympia/2491**	Lab ID:	**125212**
Client:	**GeoInsight, Inc.**	Received:	**05-08-09 18:02**

MA DEP Compendium of Analytical Methods						
Project Location:	**n/a**			MA DEP RTN:	**n/a**	
This Form provides certifications for the following data set:						
EPA 8260B:	125212-1					
Sample Matrices:	Groundwater (X)	Soil/Sediment ( )	Drinking Water ( )	Other ( )		
MCP SW-846 Methods Used	8260B (X)	8151A ( )	8330 ( )	6010B ( )	7470A/1A ( )	
	8270C ( )	8081A ( )	VPH ( )	6020A ( )	9012A[2] ( )	
As specified in MA DEP Compendium of Analytical Methods. (check all that apply)	8082 ( )	8021B ( )	EPH ( )	7000 S[3] ( )	Other ( )	
	1. List Release Tracking Number (RTN), if known.					
	2. SW-846 Method 9012A (Equivalent to 9014) or MA DEP Physiologically Available Cyanide (PAC) Method					
	3. S - SW-846 Methods 7000 Series. List individual method and analyte.					

An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status.

A.	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?	Yes
B.	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	Yes
C.	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty," as described in Section 2.0 of the MA DEP document CAM VII A, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data* ?	Yes
D.	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	n/a

A response to questions E and F below is required for "Presumptive Certainty" status.

E.	Were all QC performance standards and recommendations for the specified methods achieved?	Yes
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?	Yes

All No answers are addressed in the attached Project Narrative.

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

Signature:		Position:	Operations Manager
Printed Name:	Eric H. Jensen	Date:	05-22-09

GROUNDWATER ANALYTICAL

EPA Method 8260B
Volatile Organics by GC/MS

Field ID:	**MW-216S**	Matrix:	**Aqueous**
Project:	**60 Olympia/2491**	Container:	**40 mL VOA Vial**
Client:	**GeoInsight, Inc.**	Preservation:	**HCl/ Cool**
Laboratory ID:	**125212-1**	QC Batch ID:	**VM5-3956-W**
Sampled:	**05-07-09 12:30**	Instrument ID:	**MS-5 HP 6890**
Received:	**05-08-09 18:02**	Sample Volume:	**25 mL**
Analyzed:	**05-21-09 05:37**	Dilution Factor:	**500**
Analyst:	**LMG**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	250
74-87-3	Chloromethane	BRL		ug/L	250
75-01-4	Vinyl Chloride	BRL		ug/L	250
74-83-9	Bromomethane	BRL		ug/L	250
75-00-3	Chloroethane	BRL		ug/L	250
75-69-4	Trichlorofluoromethane	BRL		ug/L	250
60-29-7	Diethyl Ether	BRL		ug/L	1,000
75-35-4	1,1-Dichloroethene	BRL		ug/L	250
76-13-1	1,1,2-Trichlorotrifluoroethane	**14,000**		ug/L	2,500
67-64-1	Acetone	BRL		ug/L	5,000
75-15-0	Carbon Disulfide	BRL		ug/L	2,500
75-09-2	Methylene Chloride	BRL		ug/L	1,300
107-13-1	Acrylonitrile	BRL		ug/L	250
156-60-5	*trans*- 1,2-Dichloroethene	BRL		ug/L	250
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	BRL		ug/L	250
75-34-3	1,1-Dichloroethane	BRL		ug/L	250
594-20-7	2,2-Dichloropropane	BRL		ug/L	250
156-59-2	*cis*- 1,2-Dichloroethene	BRL		ug/L	250
78-93-3	2-Butanone (MEK)	BRL		ug/L	2,500
74-97-5	Bromochloromethane	BRL		ug/L	250
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	2,500
67-66-3	Chloroform	**300**		ug/L	250
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	250
56-23-5	Carbon Tetrachloride	BRL		ug/L	250
563-58-6	1,1-Dichloropropene	BRL		ug/L	250
71-43-2	Benzene	BRL		ug/L	250
107-06-2	1,2-Dichloroethane	BRL		ug/L	250
79-01-6	Trichloroethene	**26,000**		ug/L	250
78-87-5	1,2-Dichloropropane	BRL		ug/L	250
74-95-3	Dibromomethane	BRL		ug/L	250
75-27-4	Bromodichloromethane	BRL		ug/L	250
123-91-1	1,4-Dioxane	BRL		ug/L	250,000
10061-01-5	*cis*- 1,3-Dichloropropene	BRL		ug/L	200
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	2,500
108-88-3	Toluene	BRL		ug/L	250
10061-02-6	*trans*- 1,3-Dichloropropene	BRL		ug/L	200
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	250
127-18-4	Tetrachloroethene	BRL		ug/L	250
142-28-9	1,3-Dichloropropane	BRL		ug/L	250
591-78-6	2-Hexanone	BRL		ug/L	2,500
124-48-1	Dibromochloromethane	BRL		ug/L	250
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	250
108-90-7	Chlorobenzene	BRL		ug/L	250
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	250
100-41-4	Ethylbenzene	BRL		ug/L	250
108-38-3/106-42-3	*meta*- Xylene and *para*- Xylene	BRL		ug/L	250

GROUNDWATER ANALYTICAL

EPA Method 8260B (Continued)
Volatile Organics by GC/MS

Field ID:	**MW-216S**	Matrix:	**Aqueous**
Project:	**60 Olympia/2491**	Container:	**40 mL VOA Vial**
Client:	**GeoInsight, Inc.**	Preservation:	**HCl/ Cool**
Laboratory ID:	**125212-1**	QC Batch ID:	**VM5-3956-W**
Sampled:	**05-07-09 12:30**	Instrument ID:	**MS-5 HP 6890**
Received:	**05-08-09 18:02**	Sample Volume:	**25 mL**
Analyzed:	**05-21-09 05:37**	Dilution Factor:	**500**
Analyst:	**LMG**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
95-47-6	*ortho*- Xylene	BRL		ug/L	250
100-42-5	Styrene	BRL		ug/L	250
75-25-2	Bromoform	BRL		ug/L	250
98-82-8	Isopropylbenzene	BRL		ug/L	250
108-86-1	Bromobenzene	BRL		ug/L	250
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	250
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	250
110-57-6	*trans* -1,4-Dichloro-2-butene	BRL		ug/L	13,000
103-65-1	*n* -Propylbenzene	BRL		ug/L	250
95-49-8	2-Chlorotoluene	BRL		ug/L	250
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	250
106-43-4	4-Chlorotoluene	BRL		ug/L	250
98-06-6	*tert*- Butylbenzene	BRL		ug/L	250
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	250
135-98-8	*sec* -Butylbenzene	BRL		ug/L	250
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	250
99-87-6	4-Isopropyltoluene	BRL		ug/L	250
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	250
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	250
104-51-8	*n* -Butylbenzene	BRL		ug/L	250
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	250
108-70-3	1,3,5-Trichlorobenzene	BRL		ug/L	250
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	250
87-68-3	Hexachlorobutadiene	BRL		ug/L	250
91-20-3	Naphthalene	BRL		ug/L	250
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	250
75-65-0	*tert* -Butyl Alcohol (TBA)	BRL		ug/L	10,000
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	250
637-92-3	Ethyl *tert*- butyl Ether (ETBE)	BRL		ug/L	250
994-05-8	*tert* -Amyl Methyl Ether (TAME)	BRL		ug/L	250

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	**99** %	70 - 130 %
1,2-Dichloroethane-d_4	10	10	**96** %	70 - 130 %
Toluene-d_8	10	11	**105** %	70 - 130 %
4-Bromofluorobenzene	10	12	**116** %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

GROUNDWATER ANALYTICAL

Project Narrative

Project:	**60 Olympia/2491**	Lab ID:	**125212**
Client:	**GeoInsight, Inc.**	Received:	**05-08-09 18:02**

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1 . No documentation discrepancies, changes, or amendments were noted.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1 . EPA 8260B Note: Sample 125212-1. Sample was diluted prior to analysis. Dilution was required to keep all target analytes within calibration.

GROUNDWATER ANALYTICAL

228 Main Street, P.O. Box 1200
Buzzards Bay, MA 02532
Telephone (508) 759-4441 • FAX (508) 759-4475
www.groundwateranalytical.com

CHAIN-OF-CUSTODY RECORD AND WORK ORDER

Project Name: 160 Olympia	Firm: GeoInsight Inc.
Project Number: 2491	Address: 5 Lan Drive, Suite 200
Sampler Name: RSE	City / State / Zip: Westford, MA 01886
Project Manager: CAB	Telephone: (978) 692-1114

INSTRUCTIONS: Use separate line for each container (except replicates).

TURNAROUND

- [X] STANDARD (10 Business Days)
- [ ] PRIORITY (5 Business Days)
- [ ] RUSH (RAN- _____)
  (Rush requires Rush Authorization Number)
- [X] Please Email to: CABinger@geoinsight.com
- [ ] Please FAX to: _____

BILLING

- [ ] Purchase Order No.: _____
- [ ] Third Party Billing: _____
- [ ] GWA Quote: _____

ANALYSIS REQUEST

Sampling DATE	Sampling TIME	SAMPLE IDENTIFICATION	Matrix: GROUNDWATER	DRINKING WATER	WASTEWATER	SOIL	OTHER SOLID	OIL/ORGANIC LIQUID	Type: COMPOSITE	GRAB	Container(s): NUMBER	40mL VOA Vial	60mL/2 oz Glass	120mL/4 oz Amber Glass	250mL/8 oz Glass	500mL/16 oz Glass	1L/32 oz Amber Glass	250mL/8 oz Plastic	500mL/16 oz Plastic	1L/32 oz Plastic	120mL Sterile	Preservation: HCl	HNO_3	H_2SO_4	NaOH	Methanol	Sodium Bisulfate	ICE	Filtered: YES	NO	LABORATORY NUMBER (Lab Use Only)
5/7/09	12:30	MW-2116S	X							X	33											X					X	X			

OPTIONS: Volatiles: TIC Search; Semivolatiles: Acid Only, B/N Only, TIC Search; Pest/Herb/PCBs: Extractable, Vol.; Metals: Specify For Water Samples, Total, Dissolved

SDWA: 524.2+MTBE; 525.2; 505, 508; 531.1; 515.1; 504.1 EDB/DBCP; Lead and Copper

NPDES: 624; 602+MTBE; 601; 601/602+MTBE; 625; 625 PAHs only; 608 Pesticides; 608 PCBs; 615; 13 Priority Pollutant

RCRA/21E: 8260B TCL+MTBE; 8260B NH PETROLEUM; 8260B; 8021B Aromatics; 8021B Halocarbons; 8021B; 8270C; 8270C PAHs only; 8081A Pesticides; 8082 PCBs; 8151A Herbicides; 8011 EDB/DBCP; 6 RCRA; 5 RCRA; MA List Metals; 23 TAL; Specify:

Petroleum Hydrocarbon: Ext. TPH: TPH-IR; Diesel Range Organics (DRO); ME DRO; CT ETPH; MA DEP EPH w/all targets; EPH Carbon Ranges only; EPH w/4 PAHs; Hydrocarbon Fingerprint (GC/FID by ASTM D3328-00-Mod.); TPH by GC/FID (8015B Mod) Quantitative Only; Gasoline Range Organics (GRO); ME GRO; MA DEP VPH w/all targets; VPH Carbon ranges only; Vol. TPH

Haz. Waste: TCLP; SPLP; 8 Metals; Pb only; VOA; Semi VOA; Pesticides; Herbicides; Corrosivity (as pH); Reactivity; Ignitability (as Flashpoint); Paint Filter; MA Basic Disposal Criteria: 9250B, TPH by GC, PCBs, 5 Metals, Corrosivity, Ignitability, Reactivity

General Chemistry: Nitrate; Nitrite; Chloride; Fluoride; Sulfate; Dissolved Phosphorus; Ammonia; TKN; Total Phosphorus; Total N (as N02/N03/TKN); Oil & Grease; COD; TOC; BOD; TDS; TSS; Alkalinity; Cyanide, Total; Cyanide, Physiologically Available; pH; Dissolved Oxygen; Turbidity

Other: Total Coliform; Fecal Coliform; HPC

REMARKS / SPECIAL INSTRUCTIONS

MA DEP MCP Data Enhancement Affirmation

- [ ] YES [ ] NO MCP Data Certification required.
- [ ] YES [ ] NO MCP Drinking Water Sample included.
  (Require collection of contingent duplicate sample. Trip blanks are also required, if VOA sample collected).

Signature: _____

DATA QUALITY OBJECTIVES

Regulatory Program

State	Standard	Deliverables
[ ] CT	[X] MCP GW-1/S-1	[ ] PWS Form
[ ] ME	[ ] MCP GW-2/S-2	[ ] MWRA
[X] MA	[ ] NY STARS	[ ] _____
[ ] NH	[ ] Drinking Water	
[ ] NY	[ ] Wastewater	
[ ] RI	[ ] Waste Disposal	
[ ] VT	[ ] Dredge Material	
[ ] ___	[ ] _____	

Project Specific QC

Many regulatory programs and EPA methods require project specific QC. Project specific QC includes Sample Duplicates, Matrix Spikes, and/or Matrix Spike Duplicates. Laboratory QC is not project specific unless prearranged. Project specific QC samples are charged on a per sample basis. **Each MS, MSD and Sample Duplicate requires an additional sample aliquot.**

Project Specific QC Required
- [ ] Sample Duplicate
- [ ] Matrix Spike
- [ ] Matrix Spike Duplicate

Selection of QC Sample
- [ ] Please use sample: _____

CHAIN-OF-CUSTODY RECORD

NOTE: All samples submitted subject to Standard Terms and Conditions on reverse hereof.

Relinquished by Sampler: Renee Stgaster	Date: 5/8/09	Time: 1345	Received by: [signature]	Receipt Temperature: 5.9 (☐ Ice ☐ Refrigerated 2-6°C Recommended)
Relinquished by: [signature]	Date: 5/8/09	Time: 1800	Received by: [signature]	Container Count: 7
Relinquished by:	Date:	Time:	Received by Laboratory:	Shipping/Airbill Number:

Method of Shipment: [X] GWA Courier [ ] Express Mail [ ] Federal Express [ ] UPS [ ] Hand [ ] _____

Custody Seal Number:

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans,* US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste,* US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	**EPA Method 8260B**	Instrument ID:	**MS-5 HP 6890**	Instrument ID:	**MS-5 HP 6890**
QC Batch ID:	**VM5-3956-W**	Analyzed:	**05-21-09 03:50**	Analyzed:	**05-21-09 04:26**
Matrix:	**Aqueous**	Analyst:	**LMG**	Analyst:	**LMG**
Units:	**ug/L**				

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
75-71-8	Dichlorodifluoromethane	10	9.6	**96** %	10	9.0	**90** %	**7** %	70 - 130 %	25%
74-87-3	Chloromethane	10	11	**114** %	10	11	**109** %	**5** %	70 - 130 %	25%
75-01-4	Vinyl Chloride	10	10	**104** %	10	9.9	**99** %	**5** %	70 - 130 %	25%
74-83-9	Bromomethane	10	11	**109** %	10	11	**107** %	**2** %	70 - 130 %	25%
75-00-3	Chloroethane	10	10	**104** %	10	10	**103** %	**2** %	70 - 130 %	25%
75-69-4	Trichlorofluoromethane	10	9.2	**92** %	10	8.9	**89** %	**3** %	70 - 130 %	25%
60-29-7	Diethyl Ether	20	19	**93** %	20	19	**94** %	**1** %	70 - 130 %	25%
75-35-4	1,1-Dichloroethene	10	8.6	**86** %	10	8.4	**84** %	**3** %	70 - 130 %	25%
76-13-1	1,1,2-Trichlorotrifluoroethane	20	24	**119** %	20	23	**117** %	**2** %	70 - 130 %	25%
67-64-1	Acetone	20	17	**87** %	20	16	**80** %	**8** %	70 - 130 %	25%
75-15-0	Carbon Disulfide	20	18	**91** %	20	18	**88** %	**4** %	70 - 130 %	25%
75-09-2	Methylene Chloride	10	11	**114** %	10	11	**112** %	**2** %	70 - 130 %	25%
107-13-1	Acrylonitrile	10	11	**114** %	10	11	**112** %	**2** %	70 - 130 %	25%
156-60-5	*trans*- 1,2-Dichloroethene	10	9.9	**99** %	10	10	**100** %	**0** %	70 - 130 %	25%
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	10	8.3	**83** %	10	8.3	**83** %	**1** %	70 - 130 %	25%
75-34-3	1,1-Dichloroethane	10	11	**106** %	10	11	**106** %	**0** %	70 - 130 %	25%
594-20-7	2,2-Dichloropropane	10	9.2	**92** %	10	9.4	**94** %	**2** %	70 - 130 %	25%
156-59-2	*cis*- 1,2-Dichloroethene	10	11	**105** %	10	11	**106** %	**1** %	70 - 130 %	25%
78-93-3	2-Butanone (MEK)	20	16	**81** %	20	18	**89** %	**9** %	70 - 130 %	25%
74-97-5	Bromochloromethane	10	10	**104** %	10	11	**106** %	**1** %	70 - 130 %	25%
109-99-9	Tetrahydrofuran (THF)	20	19	**97** %	20	19	**96** %	**1** %	70 - 130 %	25%
67-66-3	Chloroform	10	10	**104** %	10	10	**104** %	**0** %	70 - 130 %	25%
71-55-6	1,1,1-Trichloroethane	10	9.3	**93** %	10	9.2	**92** %	**1** %	70 - 130 %	25%
56-23-5	Carbon Tetrachloride	10	9.5	**95** %	10	9.5	**95** %	**1** %	70 - 130 %	25%
563-58-6	1,1-Dichloropropene	10	10	**101** %	10	10	**100** %	**1** %	70 - 130 %	25%
71-43-2	Benzene	10	11	**105** %	10	10	**104** %	**1** %	70 - 130 %	25%
107-06-2	1,2-Dichloroethane	10	11	**108** %	10	11	**106** %	**2** %	70 - 130 %	25%
79-01-6	Trichloroethene	10	9.9	**99** %	10	9.6	**96** %	**3** %	70 - 130 %	25%
78-87-5	1,2-Dichloropropane	10	11	**110** %	10	11	**108** %	**2** %	70 - 130 %	25%
74-95-3	Dibromomethane	10	11	**106** %	10	11	**105** %	**1** %	70 - 130 %	25%
75-27-4	Bromodichloromethane	10	11	**111** %	10	11	**111** %	**0** %	70 - 130 %	25%
123-91-1	1,4-Dioxane	200	240	**122** %	200	230	**114** %	**7** %	70 - 130 %	25%
10061-01-5	*cis*- 1,3-Dichloropropene	10	10	**103** %	10	10	**102** %	**2** %	70 - 130 %	25%
108-10-1	4-Methyl-2-Pentanone (MIBK)	20	21	**106** %	20	21	**104** %	**2** %	70 - 130 %	25%
108-88-3	Toluene	10	10	**104** %	10	10	**102** %	**1** %	70 - 130 %	25%
10061-02-6	*trans*- 1,3-Dichloropropene	10	9.3	**93** %	10	9.3	**93** %	**0** %	70 - 130 %	25%
79-00-5	1,1,2-Trichloroethane	10	11	**105** %	10	10	**104** %	**1** %	70 - 130 %	25%
127-18-4	Tetrachloroethene	10	9.8	**98** %	10	9.7	**97** %	**1** %	70 - 130 %	25%
142-28-9	1,3-Dichloropropane	10	11	**106** %	10	11	**106** %	**0** %	70 - 130 %	25%
591-78-6	2-Hexanone	20	21	**106** %	20	21	**107** %	**1** %	70 - 130 %	25%
124-48-1	Dibromochloromethane	10	10	**101** %	10	10	**103** %	**1** %	70 - 130 %	25%
106-93-4	1,2-Dibromoethane (EDB)	10	10	**102** %	10	10	**102** %	**0** %	70 - 130 %	25%
108-90-7	Chlorobenzene	10	10	**102** %	10	10	**101** %	**1** %	70 - 130 %	25%
630-20-6	1,1,1,2-Tetrachloroethane	10	12	**116** %	10	12	**118** %	**2** %	70 - 130 %	25%
100-41-4	Ethylbenzene	10	10	**104** %	10	10	**103** %	**1** %	70 - 130 %	25%
108-38-3/106-42-3	*meta*- Xylene and *para*- Xylene	20	20	**101** %	20	20	**101** %	**0** %	70 - 130 %	25%
95-47-6	*ortho*- Xylene	10	10	**100** %	10	10	**100** %	**1** %	70 - 130 %	25%
100-42-5	Styrene	10	10	**103** %	10	10	**103** %	**0** %	70 - 130 %	25%
75-25-2	Bromoform	10	10	**101** %	10	10	**101** %	**0** %	70 - 130 %	25%

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	**EPA Method 8260B**	Instrument ID:	**MS-5 HP 6890**	Instrument ID:	**MS-5 HP 6890**
QC Batch ID:	**VM5-3956-W**	Analyzed:	**05-21-09 03:50**	Analyzed:	**05-21-09 04:26**
Matrix:	**Aqueous**	Analyst:	**LMG**	Analyst:	**LMG**
Units:	**ug/L**				

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
98-82-8	Isopropylbenzene	10	9.6	**96** %	10	9.5	**95** %	**1** %	70 - 130 %	25%
108-86-1	Bromobenzene	10	11	**105** %	10	11	**105** %	**0** %	70 - 130 %	25%
79-34-5	1,1,2,2-Tetrachloroethane	10	12	**116** %	10	12	**118** %	**2** %	70 - 130 %	25%
96-18-4	1,2,3-Trichloropropane	10	12	**119** %	10	12	**120** %	**0** %	70 - 130 %	25%
110-57-6	*trans*-1,4-Dichloro-2-butene	200	210	**103** %	200	200	**101** %	**3** %	70 - 130 %	25%
103-65-1	*n*-Propylbenzene	10	11	**109** %	10	11	**108** %	**1** %	70 - 130 %	25%
95-49-8	2-Chlorotoluene	10	11	**106** %	10	10	**104** %	**1** %	70 - 130 %	25%
108-67-8	1,3,5-Trimethylbenzene	10	11	**107** %	10	11	**107** %	**1** %	70 - 130 %	25%
106-43-4	4-Chlorotoluene	10	11	**105** %	10	11	**105** %	**0** %	70 - 130 %	25%
98-06-6	*tert*-Butylbenzene	10	11	**107** %	10	11	**107** %	**1** %	70 - 130 %	25%
95-63-6	1,2,4-Trimethylbenzene	10	11	**109** %	10	11	**108** %	**1** %	70 - 130 %	25%
135-98-8	*sec*-Butylbenzene	10	11	**106** %	10	11	**106** %	**0** %	70 - 130 %	25%
541-73-1	1,3-Dichlorobenzene	10	10	**105** %	10	10	**103** %	**2** %	70 - 130 %	25%
99-87-6	4-Isopropyltoluene	10	11	**107** %	10	11	**106** %	**1** %	70 - 130 %	25%
106-46-7	1,4-Dichlorobenzene	10	10	**103** %	10	10	**103** %	**0** %	70 - 130 %	25%
95-50-1	1,2-Dichlorobenzene	10	10	**103** %	10	10	**104** %	**1** %	70 - 130 %	25%
104-51-8	*n*-Butylbenzene	10	11	**105** %	10	10	**104** %	**1** %	70 - 130 %	25%
96-12-8	1,2-Dibromo-3-chloropropane	10	10	**104** %	10	11	**105** %	**1** %	70 - 130 %	25%
108-70-3	1,3,5-Trichlorobenzene	10	10	**100** %	10	10	**101** %	**1** %	70 - 130 %	25%
120-82-1	1,2,4-Trichlorobenzene	10	11	**106** %	10	11	**107** %	**2** %	70 - 130 %	25%
87-68-3	Hexachlorobutadiene	10	10	**102** %	10	10	**101** %	**1** %	70 - 130 %	25%
91-20-3	Naphthalene	10	11	**113** %	10	12	**115** %	**2** %	70 - 130 %	25%
87-61-6	1,2,3-Trichlorobenzene	10	11	**112** %	10	11	**114** %	**1** %	70 - 130 %	25%
75-65-0	*tert*-Butyl Alcohol (TBA)	200	250	**123** %	200	210	**105** %	**17** %	70 - 130 %	25%
108-20-3	Di-isopropyl Ether (DIPE)	10	11	**106** %	10	10	**104** %	**2** %	70 - 130 %	25%
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	10	9.0	**90** %	10	9.1	**91** %	**0** %	70 - 130 %	25%
994-05-8	*tert*-Amyl Methyl Ether (TAME)	10	9.6	**96** %	10	9.6	**96** %	**0** %	70 - 130 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limits
Dibromofluoromethane	10	9	**89** %	10	10	**100** %		70 - 130 %
1,2-Dichloroethane-d_4	10	9	**86** %	10	9	**91** %		70 - 130 %
Toluene-d_8	10	10	**96** %	10	11	**106** %		70 - 130 %
4-Bromofluorobenzene	10	11	**105** %	10	12	**116** %		70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	**EPA Method 8260B**	Instrument ID:	**MS-5 HP 6890**
QC Batch ID:	**VM5-3956-W**	Analyzed:	**05-21-09 05:01**
Matrix:	**Aqueous**	Analyst:	**LMG**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	3
107-13-1	Acrylonitrile	BRL		ug/L	0.5
156-60-5	*trans*- 1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	*cis*- 1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	*cis*- 1,3-Dichloropropene	BRL		ug/L	0.4
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	*trans*- 1,3-Dichloropropene	BRL		ug/L	0.4
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	*meta*- Xylene and *para*- Xylene	BRL		ug/L	0.5
95-47-6	*ortho*- Xylene	BRL		ug/L	0.5
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	**EPA Method 8260B**	Instrument ID:	**MS-5 HP 6890**
QC Batch ID:	**VM5-3956-W**	Analyzed:	**05-21-09 05:01**
Matrix:	**Aqueous**	Analyst:	**LMG**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
98-82-8	Isopropylbenzene	BRL		ug/L	0.5
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
110-57-6	*trans*-1,4-Dichloro-2-butene	BRL		ug/L	25
103-65-1	*n*-Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	*tert*-Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	*sec*-Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	*n*-Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
108-70-3	1,3,5-Trichlorobenzene	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	*tert*-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	*tert*-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	**96** %	70 - 130 %
1,2-Dichloroethane-d_4	10	9	**88** %	70 - 130 %
Toluene-d_8	10	10	**103** %	70 - 130 %
4-Bromofluorobenzene	10	11	**112** %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

GROUNDWATER ANALYTICAL

Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states.
Copies of our current certificates may be obtained from our website:

http://www.groundwateranalytical.com/qualifications.htm

CONNECTICUT

Department of Health Services, PH-0586 — Potable Water, Wastewater, Solid Waste and Soil
http://www.ct.gov/dph/lib/dph/environmental health/environmental laboratories/pdf/Out State.pdf

MASSACHUSETTS

Department of Environmental Protection, M-MA-103 — Potable Water and Non-Potable Water
http://public.dep.state.ma.us/labcert/labcert.aspx

Department of Labor,
Division of Occupational Safety, AA000195 — Asbestos Analytical Services, Class A
http://www.mass.gov/dos/forms/la-rpt list aa.pdf

NEW HAMPSHIRE

Department of Environmental Services, 202708 — Potable Water, Non-Potable Water, Solid and Chemical Materials
http://www4.egov.nh.gov/DES/NHELAP

NEW YORK

Department of Health, 11754 — Potable Water, Non-Potable Water, Solid and Hazardous Waste
http://www.wadsworth.org/labcert/elap/comm.html

NIST NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP)

NVLAP Lab Code 200751-1 — Bulk Asbestos Fiber Analysis (PLM)
http://ts.nist.gov/Standards/scopes/plmtm.htm

RHODE ISLAND

Department of Health,
Division of Laboratories, LAO00054 — Potable and Non-Potable Water Microbiology, Organic and Inorganic Chemistry
http://www.health.ri.gov/labs/outofstatelabs.pdf

U.S. DEPARTMENT OF AGRICULTURE

USDA, Soil Permit, S-53921 — Foreign soil import permit

VERMONT

Department of Health, VT-87643 — Potable Water
http://healthvermont.gov/enviro/ph_lab/water_test.aspx#cert

GROUNDWATER ANALYTICAL

Certifications and Approvals

MASSACHUSETTS	Department of Environmental Protection, M-MA-103

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

Potable Water (Drinking Water)

Analyte	Method
1,2-Dibromo-3-Chloropropane	EPA 504.1
1,2-Dibromoethane	EPA 504.1
Alkalinity, Total	SM 2320-B
Antimony	EPA 200.8
Antimony	EPA 200.9
Arsenic	EPA 200.8
Arsenic	EPA 200.9
Barium	EPA 200.7
Barium	EPA 200.8
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chlorine, Residual Free	SM 4500-CL-G
Chromium	EPA 200.7
Copper	EPA 200.7
Copper	EPA 200.8
Cyanide, Total	Lachat 10-204-00-1-A
E. Coli (Treatment and Distribution)	EC-MUG SM 9221-F
E. Coli (Treatment and Distribution)	Enz. Sub. SM 9223
E. Coli (Treatment and Distribution)	NA-MUG SM 9222-G
Fecal Coliform (Source Water)	MF SM 9222-D
Fluoride	EPA 300.0
Fluoride	SM 4500-F-C
Heterotrophic Plate Count	SM 9215-B
Lead	EPA 200.8
Lead	EPA 200.9
Mercury	EPA 245.1
Nickel	EPA 200.7
Nickel	EPA 200.8
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Nitrite-N	EPA 300.0
Nitrite-N	Lachat 10-107-04-1-C
pH	SM 4500-H-B
Selenium	EPA 200.8
Selenium	EPA 200.9
Silver	EPA 200.7
Silver	EPA 200.8
Sodium	EPA 200.7
Sulfate	EPA 300.0
Thallium	EPA 200.8
Thallium	EPA 200.9
Total Coliform (Treatment and Distribution)	Enz. Sub. SM 9223
Total Coliform (Treatment and Distribution)	MF SM 9222-B
Total Dissolved Solids	SM 2540-C
Trihalomethanes	EPA 524.2
Turbidity	SM 2130-B
Volatile Organic Compounds	EPA 524.2

Non-Potable Water (Wastewater)

Analyte	Method
Aldrin	EPA 608
Alkalinity, Total	Lachat 10-303-31-1-A
Alpha-BHC	EPA 608
Aluminum	EPA 200.7
Aluminum	EPA 200.8

Non-Potable Water (Wastewater)

Analyte	Method
Ammonia-N	Lachat 10-107-06-1-B
Antimony	EPA 200.7
Antimony	EPA 200.8
Antimony	EPA 200.9
Arsenic	EPA 200.7
Arsenic	EPA 200.8
Arsenic	EPA 200.9
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Beta-BHC	EPA 608
Biochemical Oxygen Demand	SM 5210-B
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chemical Oxygen Demand	SM 5220-D
Chlordane	EPA 608
Chloride	EPA 300.0
Chlorine, Total Residual	SM 4500-CL-G
Chromium	EPA 200.7
Chromium	EPA 200.8
Cobalt	EPA 200.7
Cobalt	EPA 200.8
Copper	EPA 200.7
Copper	EPA 200.8
Copper	EPA 200.9
Cyanide, Total	Lachat 10-204-00-1-A
DDD	EPA 608
DDE	EPA 608
DDT	EPA 608
Delta-BHC	EPA 608
Dieldrin	EPA 608
Endosulfan I	EPA 608
Endosulfan II	EPA 608
Endosulfan Sulfate	EPA 608
Endrin	EPA 608
Endrin Aldehyde	EPA 608
Fluoride	EPA 300.0
Gamma-BHC	EPA 608
Hardness (CaCO3), Total	EPA 200.7
Hardness (CaCO3), Total	SM 2340-B
Heptachlor	EPA 608
Heptachlor Epoxide	EPA 608
Iron	EPA 200.7
Kjeldahl-N	Lachat 10-107-06-02-D
Lead	EPA 200.7
Lead	EPA 200.9
Magnesium	EPA 200.7
Manganese	EPA 200.7
Manganese	EPA 200.8
Mercury	EPA 245.1
Molybdenum	EPA 200.7
Molybdenum	EPA 200.8
Nickel	EPA 200.7
Nickel	EPA 200.8
Nickel	EPA 200.9
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Non-Filterable Residue	SM 2540-D
Oil and Grease	EPA 1664

GROUNDWATER ANALYTICAL

Certifications and Approvals

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Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

Non-Potable Water (Wastewater)

Analyte	Method
Orthophosphate	Lachat 10-115-01-1-A
pH	SM 4500-H-B
Phenolics, Total	EPA 420.4
Phenolics, Total	Lachat 10-210-00-1-B
Phosphorus, Total	Lachat 10-115-01-1-C
Phosphorus, Total	SM 4500-P-B,E
Polychlorinated Biphenyls (Oil)	EPA 600/4-81-045
Polychlorinated Biphenyls (Water)	EPA 608
Potassium	EPA 200.7
Selenium	EPA 200.7
Selenium	EPA 200.8
Selenium	EPA 200.9
Silver	EPA 200.7
Sodium	EPA 200.7
Specific Conductivity	SM 2510-B
Strontium	EPA 200.7
Sulfate	EPA 300.0
SVOC-Acid Extractables	EPA 625
SVOC-Base/Neutral Extractables	EPA 625
Thallium	EPA 200.7
Thallium	EPA 200.8
Thallium	EPA 200.9
Titanium	EPA 200.7
Total Dissolved Solids	SM 2540-C
Total Organic Carbon	SM 5310-B
Toxaphene	EPA 608
Vanadium	EPA 200.7
Vanadium	EPA 200.8
Volatile Aromatics	EPA 602
Volatile Aromatics	EPA 624
Volatile Halocarbons	EPA 624
Zinc	EPA 200.7
Zinc	EPA 200.8