Groundwater Analytical, Inc.
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228 Main Street
Buzzards Bay, MA 02532

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GROUNDWATER ANALYTICAL

e-mail

To:	Kevin Trainer	**From:**	e-mail reporting GWA
	GeoInsight, Inc.-Westford	**Pages:**	25
e-mail:	kdtrainer@geoinc.com	**Date:**	09/20/2004 05:12:36 PM
Re:	76312	**CC:**	

NOTE

The format or contents of this e-mail transmission may not meet all applicable National Environmental Laboratory Accreditation Conference (NELAC) Standards for data reporting.

- **Comments:** Project Number: 76312

Confidential

GROUNDWATER ANALYTICAL

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Buzzards Bay, MA 02532

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www.groundwateranalytical.com

September 20, 2004

Mr. Kevin Trainer
GeoInsight, Inc.
319 Littleton Rd.
Suite 105
Westford, MA 01886

LABORATORY REPORT

Project: **Buzzards Bay/3871-000**
Lab ID: **76312**
Received: **09-03-04**

Dear Kevin:

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 standards, except as may be specifically noted, or described in the project narrative. 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/abc
Enclosures

GROUNDWATER ANALYTICAL

Sample Receipt Report

Project: **Buzzards Bay/3871-000**
Client: **GeoInsight, Inc.**
Lab ID: **76312**

Delivery: **GWA Courier**
Airbill: **n/a**
Lab Receipt: **09-03-04**

Temperature: **2.1°C**
Chain of Custody: **Present**
Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
76312-1	BJ-SS-S01		Soil	9/2/04 12:15	EPA 8270C PAHs Low Level SIM MA DEP EPH Carbon Ranges Only				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C482682	120 mL Amber Glass	Proline	BX11339	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
76312-2	BJ-SS-S01 MS		Soil	9/2/04 12:15	EPA 8270C PAHs Low Level SIM MA DEP EPH Carbon Ranges Only				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C482683	120 mL Amber Glass	Proline	BX11339	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
76312-3	BJ-SS-S01 MSD		Soil	9/2/04 12:15	EPA 8270C PAHs Low Level SIM MA DEP EPH Carbon Ranges Only				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C482678	120 mL Amber Glass	Proline	BX11339	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
76312-4	BJ-SS-S02		Soil	9/2/04 12:30	EPA 8270C PAHs Low Level SIM MA DEP EPH Carbon Ranges Only				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C482677	120 mL Amber Glass	Proline	BX11339	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
76312-5	BJ-DS-S01		Soil	9/2/04 12:45	EPA 8270C PAHs Low Level SIM MA DEP EPH Carbon Ranges Only				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C482689	120 mL Amber Glass	Proline	BX11339	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
76312-6	BJ-DS-S02		Soil	9/2/04 13:00	EPA 8270C PAHs Low Level SIM MA DEP EPH Carbon Ranges Only				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C482691	120 mL Amber Glass	Proline	BX11339	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
76312-7	BJ-SS-S03		Soil	9/2/04 13:20	EPA 8270C PAHs Low Level SIM MA DEP EPH Carbon Ranges Only				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C482674	120 mL Amber Glass	Proline	BX11339	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
76312-8	BJ-SS-S04		Soil	9/2/04 14:10	EPA 8270C PAHs Low Level SIM MA DEP EPH Carbon Ranges Only				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C482675	120 mL Amber Glass	Proline	BX11339	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
76312-9	BJ-DS-S03		Soil	9/2/04 14:22	EPA 8270C PAHs Low Level SIM MA DEP EPH Carbon Ranges Only				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C482687	120 mL Amber Glass	Proline	BX11339	None	n/a	n/a	n/a		

GROUNDWATER ANALYTICAL

Sample Receipt Report (Continued)

Project:	**Buzzards Bay/3871-000**	Delivery:	**GWA Courier**	Temperature:	**2.1°C**
Client:	**GeoInsight, Inc.**	Airbill:	**n/a**	Chain of Custody:	**Present**
Lab ID:	**76312**	Lab Receipt:	**09-03-04**	Custody Seal(s):	**n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
76312-10	BJ-DS-S04		Soil	9/2/04 15:20	EPA 8270C PAHs Low Level SIM MA DEP EPH Carbon Ranges Only				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C482676	120 mL Amber Glass	Proline	BX11339	None	n/a	n/a	n/a		

GROUNDWATER ANALYTICAL

Data Certification

Project:	**Buzzards Bay/3871-000**	Lab ID:	**76312**
Client:	**GeoInsight, Inc.**	Received:	**09-03-04 18:40**

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 8270C: 76312-01,-02,-03,-04,-05,-06,-07,-08,-09,-10
MA DEP EPH: 76312-01,-02,-03,-04,-05,-06,-07,-08,-09,-10

Sample Matrices:	Groundwater ( )	Soil/Sediment (X)	Drinking Water ( )	Other ( )	
MCP SW-846 Methods Used	8260B ( )	8151A ( )	8330 ( )	6010B ( )	7470A/1A ( )
	8270C (X)	8081A ( )	VPH ( )	6020 ( )	9012A[2] ( )
As specified in MA DEP Compendium of Analytical Methods (check all that apply)	8082 ( )	8021B ( )	EPH (X)	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?	Yes

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?	No
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?	No

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: 09-20-04

GROUNDWATER ANALYTICAL

Massachusetts DEP EPH Method
Extractable Petroleum Hydrocarbons by GC/FID

Field ID:	**BJ-SS-S01**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-01**	QC Batch ID:	**EP-1945-M**
Sampled:	**09-02-04 12:15**	Instrument ID:	**GC-9 Agilent 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**16 g**
Extracted:	**09-08-04 16:00**	Final Volume:	**1 mL**
Analyzed (AL):	**09-10-04 23:23**	% Solids:	**78**
Analyzed (AR):	**09-11-04 00:08**	Aliphatic Dilution Factor:	**1**
Analyst:	**MM**	Aromatic Dilution Factor:	**1**

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †	BRL		mg/Kg	37
n-C19 to n-C36 Aliphatic Hydrocarbons †	BRL		mg/Kg	37
n-C11 to n-C22 Aromatic Hydrocarbons †◊	BRL		mg/Kg	37
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	BRL		mg/Kg	37

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
Fractionation:	2-Fluorobiphenyl	3.3	2.6	79 %	40 - 140 %
	2-Bromonaphthalene	3.3	1.8	56 %	40 - 140 %
Extraction:	Chloro-octadecane	3.3	2.2	66 %	40 - 140 %
	ortho-Terphenyl	3.3	2.7	82 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?	No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

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.

† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

◊ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

GROUNDWATER ANALYTICAL

Matrix Spike and Matrix Spike Duplicate
MA DEP Extractable Petroleum Hydrocarbons by GC/FID

			Parent Sample	Matrix Spike	Spike Duplicate
Field ID:	**BJ-SS-S01**	Laboratory ID:	76312-01	76312-02	76312-03
Project:	**Buzzards Bay/3871-000**	Sampled:	09-02-04 12:15	09-02-04 12:15	09-02-04 12:15
Client:	**GeoInsight, Inc.**	Received:	09-03-04 18:40	09-03-04 18:40	09-03-04 18:40
Matrix:	**Soil**	Extracted:	09-08-04 16:00	09-08-04 16:00	09-08-04 16:00
Container:	**250 mL Glass**	Analyzed (AL):	09-10-04 23:23	09-11-04 00:52	09-11-04 02:20
Preservation:	**Cool**	Analyzed (AR):	09-11-04 00:08	09-11-04 01:36	09-11-04 03:05
		Analyst:	MM	MM	MM
		QC Batch ID:	EP-1945-M	EP-1945-M	EP-1945-M
		Instrument ID:	GC-9 Agilenmt 6890	GC-9 Agilenmt 6890	GC-9 Agilenmt 6890
		Sample Weight:	16 g	16 g	16 g
		Final Volume:	1 mL	1 mL	1 mL
		% Solids:	78	78	78
		Aliphatic Dilution Factor:	1	1	1
		Aromatic Dilution Factor:	1	1	1

CAS Number	Analyte	Unspiked Sample (mg/Kg)	MS Spiked (mg/Kg)	MS Measured (mg/Kg)	MS Recovery	MSD Spiked (mg/Kg)	MSD Measured (mg/Kg)	MSD Recovery	RPD	QC Limits Spike	QC Limits RPD
111-84-2	*n*-Nonane (C_9)	BRL	3.3	2.2	**66 %**	3.4	2.1	**61 %**	**6 %**	40 - 140%	50 %
629-59-4	*n*-Tetradecane (C_{14})	BRL	3.3	2.9	**85 %**	3.4	2.7	**80 %**	**6 %**	40 - 140%	50 %
629-92-5	*n*-Nonadecane (C_{19})	BRL	3.3	3.2	**96 %**	3.4	3.0	**90 %**	**5 %**	40 - 140%	50 %
112-95-8	*n*-Eicosane (C_{20})	BRL	3.3	3.5	**102 %**	3.4	3.2	**91 %**	**10 %**	40 - 140%	50 %
630-02-4	*n*-Octacosane (C_{28})	BRL	3.3	3.1	**94 %**	3.4	3.0	**88 %**	**5 %**	40 - 140%	50 %
91-20-3	Naphthalene	BRL	3.3	2.4	**73 %**	3.4	2.5	**76 %**	**5 %**	40 - 140%	50 %
83-32-9	Acenaphthene	BRL	3.3	3.0	**90 %**	3.4	3.1	**91 %**	**2 %**	40 - 140%	50 %
120-12-7	Anthracene	BRL	3.3	3.8	**116 %**	3.4	4.0	**118 %**	**3 %**	40 - 140%	50 %
129-00-0	Pyrene	BRL	3.3	3.4	**104 %**	3.4	3.6	**107 %**	**4 %**	40 - 140%	50 %
218-01-9	Chrysene	BRL	3.3	3.6	**109 %**	3.4	3.6	**108 %**	**0 %**	40 - 140%	50 %

QC Surrogate Compound		Surrogate Recovery								QC Limits
Fractionation:	2-Fluorobiphenyl	**79%**	2.7	2.4	**78%**	3.5	3.1	**77%**		40 - 140 %
	2-Bromonaphthalene	**56%**	2.7	2.5	**61%**	3.5	3.2	**63%**		40 - 140 %
Extraction:	Chloro-octadecane	**66%**	2.7	2.1	**73%**	3.5	2.7	**67%**		40 - 140 %
	ortho-Terphenyl	**82%**	2.7	2.3	**86%**	3.5	3.1	**87%**		40 - 140 %

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (1998).
Sample extraction performed by microwave accelerated solvent extraction. Results are reported on a dry weight basis.

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

EPA Method 8270C
Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

Field ID:	**BJ-SS-S01**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-01**	QC Batch ID:	**SV-1491-P**
Sampled:	**09-02-04 12:15**	Instrument ID:	**MS-6 HP 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**16 g**
Extracted:	**09-08-04 19:00**	Final Volume:	**1 mL**
Cleaned Up:	**09-13-04 20:00**	Percent Solids:	**78**
Analyzed:	**09-14-04 14:10**	Dilution Factor:	**1**
Analyst:	**JJT**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/Kg	12
91-57-6	2-Methylnaphthalene	BRL		ug/Kg	12
208-96-8	Acenaphthylene	BRL		ug/Kg	12
83-32-9	Acenaphthene	BRL		ug/Kg	12
86-73-7	Fluorene	BRL		ug/Kg	12
85-01-8	Phenanthrene	BRL		ug/Kg	12
120-12-7	Anthracene	BRL		ug/Kg	12
206-44-0	Fluoranthene	BRL		ug/Kg	12
129-00-0	Pyrene	BRL		ug/Kg	12
56-55-3	Benzo[a]anthracene	BRL		ug/Kg	12
218-01-9	Chrysene	BRL		ug/Kg	12
205-99-2	Benzo[b]fluoranthene	BRL		ug/Kg	12
207-08-9	Benzo[k]fluoranthene	BRL		ug/Kg	12
50-32-8	Benzo[a]pyrene	BRL		ug/Kg	12
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/Kg	12
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/Kg	12
191-24-2	Benzo[g,h,i]perylene	BRL		ug/Kg	12

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Nitrobenzene-d5	830	400	49 %	30 - 130 %
2-Fluorobiphenyl	830	330	40 %	30 - 130 %
Terphenyl-d14	830	540	65 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method. Sample extraction performed by EPA Method 3545. Cleanup performed by EPA Method 3630C. Results are reported on a dry weight basis.

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

Matrix Spike and Matrix Spike Duplicate
EPA Method 8270C

			Parent Sample	Matrix Spike	Spike Duplicate
Field ID:	**BJ-SS-S01**	Laboratory ID:	76312-01	76312-02	76312-03
Project:	**Buzzards Bay/3871-000**	Sampled:	09-02-04 12:15	09-02-04 12:15	09-02-04 12:15
Client:	**GeoInsight, Inc.**	Received:	09-03-04 18:40	09-03-04 18:40	09-03-04 18:40
Matrix:	**Soil**	Extracted:	09-08-04 19:00	09-08-04 19:00	09-08-04 19:00
Container:	**250 mL Glass**	Clean Up:	09-13-04 20:00	09-13-04 20:00	09-13-04 20:00
Preservation:	**Cool**	Analyzed:	09-14-04 14:10	09-14-04 14:49	09-14-04 15:28
		Analyst:	JJT	JJT	JJT
		QC Batch ID:	SV-1491-P	SV-1491-P	SV-1491-P
		Instrument ID:	MS 6 HP 6890	MS 6 HP 6890	MS 6 HP 6890
		Sample Weight:	16 g	16 g	16 g
		Final Volume:	1 mL	1 mL	1 mL
		Percent Solids:	78	78	78
		Dilution Factor:	1	1	1

CAS Number	Analyte	Unspiked Sample (ug/Kg)	MS Spiked (ug/Kg)	MS Measured (ug/Kg)	MS Recovery	MSD Spiked (ug/Kg)	MSD Measured (ug/Kg)	MSD Recovery	RPD	QC Limits Spike	QC Limits RPD
91-20-3	Naphthalene	BRL	420	170	40 %	410	170	41 %	0 %	40 - 140%	30 %
91-57-6	2-Methylnaphthalene	BRL	420	180	42 %	410	180	44 %	3 %	40 - 140%	30 %
208-96-8	Acenaphthylene	BRL	420	200	47 %	410	220	54 %	9 %	40 - 140%	30 %
83-32-9	Acenaphthene	BRL	420	190	44 %	410	210	51 %	11 %	40 - 140%	30 %
86-73-7	Fluorene	BRL	420	190	45 %	410	210	50 %	8 %	40 - 140%	30 %
85-01-8	Phenanthrene	BRL	420	250	58 %	410	280	69 %	14 %	40 - 140%	30 %
120-12-7	Anthracene	BRL	420	270	64 %	410	310	75 %	12 %	40 - 140%	30 %
206-44-0	Fluoranthene	BRL	420	230	54 %	410	260	65 %	15 %	40 - 140%	30 %
129-00-0	Pyrene	BRL	420	240	56 %	410	270	66 %	14 %	40 - 140%	30 %
56-55-3	Benzo[a]anthracene	BRL	420	230	53 %	410	260	63 %	13 %	40 - 140%	30 %
218-01-9	Chrysene	BRL	420	240	56 %	410	270	66 %	14 %	40 - 140%	30 %
205-99-2	Benzo[b]fluoranthene	BRL	420	210	50 %	410	240	59 %	13 %	40 - 140%	30 %
207-08-9	Benzo[k]fluoranthene	BRL	420	230	54 %	410	270	65 %	15 %	40 - 140%	30 %
50-32-8	Benzo[a]pyrene	BRL	420	250	60 %	410	280	70 %	12 %	40 - 140%	30 %
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL	420	250	59 %	410	290	70 %	14 %	40 - 140%	30 %
53-70-3	Dibenzo[a,h]anthracene	BRL	420	240	57 %	410	280	68 %	13 %	40 - 140%	30 %
191-24-2	Benzo[g,h,i]perylene	BRL	420	250	58 %	410	280	69 %	14 %	40 - 140%	30 %

QC Surrogate Compound	Surrogate Recovery								QC Limits
Nitrobenzene-d5	49%	840	360	43%	820	360	45%		30 - 130 %
2-Fluorobiphenyl	40%	840	300	35%	820	310	38%		30 - 130 %
Terphenyl-d14	65%	840	500	59%	820	550	67%		30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3546. Results are reported on a dry weight basis.

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

Massachusetts DEP EPH Method
Extractable Petroleum Hydrocarbons by GC/FID

Field ID:	**BJ-SS-S02**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-04**	QC Batch ID:	**EP-1945-M**
Sampled:	**09-02-04 12:30**	Instrument ID:	**GC-9 Agilent 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**16 g**
Extracted:	**09-08-04 16:00**	Final Volume:	**1 mL**
Analyzed (AL):	**09-11-04 04:33**	% Solids:	**62**
Analyzed (AR):	**09-11-04 05:18**	Aliphatic Dilution Factor:	**1**
Analyst:	**MM**	Aromatic Dilution Factor:	**1**

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †	BRL		mg/Kg	46
n-C19 to n-C36 Aliphatic Hydrocarbons †	BRL		mg/Kg	46
n-C11 to n-C22 Aromatic Hydrocarbons †◊	BRL		mg/Kg	46
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	BRL		mg/Kg	46

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
Fractionation:	2-Fluorobiphenyl	4.1	2.9	71 %	40 - 140 %
	2-Bromonaphthalene	4.1	2.5	61 %	40 - 140 %
Extraction:	Chloro-octadecane	4.1	2.8	68 %	40 - 140 %
	ortho-Terphenyl	4.1	3.0	73 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?	No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

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.

† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

◊ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

GROUNDWATER ANALYTICAL

EPA Method 8270C
Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

Field ID:	**BJ-SS-S02**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-04**	QC Batch ID:	**SV-1491-P**
Sampled:	**09-02-04 12:30**	Instrument ID:	**MS-6 HP 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**15 g**
Extracted:	**09-08-04 19:00**	Final Volume:	**1 mL**
Cleaned Up:	**09-13-04 20:00**	Percent Solids:	**62**
Analyzed:	**09-14-04 16:07**	Dilution Factor:	**1**
Analyst:	**JJT**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/Kg	16
91-57-6	2-Methylnaphthalene	BRL		ug/Kg	16
208-96-8	Acenaphthylene	BRL		ug/Kg	16
83-32-9	Acenaphthene	BRL		ug/Kg	16
86-73-7	Fluorene	BRL		ug/Kg	16
85-01-8	Phenanthrene	7	j	ug/Kg	16
120-12-7	Anthracene	BRL		ug/Kg	16
206-44-0	Fluoranthene	7	j	ug/Kg	16
129-00-0	Pyrene	11	j	ug/Kg	16
56-55-3	Benzo[a]anthracene	6	j	ug/Kg	16
218-01-9	Chrysene	6	j	ug/Kg	16
205-99-2	Benzo[b]fluoranthene	BRL		ug/Kg	16
207-08-9	Benzo[k]fluoranthene	BRL		ug/Kg	16
50-32-8	Benzo[a]pyrene	5	j	ug/Kg	16
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/Kg	16
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/Kg	16
191-24-2	Benzo[g,h,i]perylene	BRL		ug/Kg	16

QC Surrogate Compound	Spiked	Measured	Recovery		QC Limits
Nitrobenzene-d5	1,100	420	40 %		30 - 130 %
2-Fluorobiphenyl	1,100	290	27 %	m	30 - 130 %
Terphenyl-d14	1,100	680	64 %		30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method. Sample extraction performed by EPA Method 3545. Cleanup performed by EPA Method 3630C. Results are reported on a dry weight basis.

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.

m Surrogate recovery outside recommended limits due to sample matrix interference.

j Indicates an estimated value detected below the reporting limit for the analyte.

GROUNDWATER ANALYTICAL

Massachusetts DEP EPH Method
Extractable Petroleum Hydrocarbons by GC/FID

Field ID:	**BJ-DS-S01**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-05**	QC Batch ID:	**EP-1945-M**
Sampled:	**09-02-04 12:45**	Instrument ID:	**GC-9 Agilent 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**15 g**
Extracted:	**09-08-04 16:00**	Final Volume:	**1 mL**
Analyzed (AL):	**09-11-04 06:02**	% Solids:	**73**
Analyzed (AR):	**09-11-04 06:46**	Aliphatic Dilution Factor:	**1**
Analyst:	**MM**	Aromatic Dilution Factor:	**1**

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †	BRL		mg/Kg	40
n-C19 to n-C36 Aliphatic Hydrocarbons †	BRL		mg/Kg	40
n-C11 to n-C22 Aromatic Hydrocarbons †◊	BRL		mg/Kg	40
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	BRL		mg/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
Fractionation:	2-Fluorobiphenyl	3.5	2.7	**75 %**	40 - 140 %
	2-Bromonaphthalene	3.5	2.3	**65 %**	40 - 140 %
Extraction:	Chloro-octadecane	3.5	2.6	**74 %**	40 - 140 %
	ortho-Terphenyl	3.5	2.9	**82 %**	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?	No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

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.

† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

◊ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

GROUNDWATER ANALYTICAL

EPA Method 8270C
Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

Field ID:	**BJ-DS-S01**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-05**	QC Batch ID:	**SV-1491-P**
Sampled:	**09-02-04 12:45**	Instrument ID:	**MS-6 HP 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**16 g**
Extracted:	**09-08-04 19:00**	Final Volume:	**1 mL**
Cleaned Up:	**09-13-04 20:00**	Percent Solids:	**73**
Analyzed:	**09-14-04 16:46**	Dilution Factor:	**1**
Analyst:	**JJT**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	5	j	ug/Kg	13
91-57-6	2-Methylnaphthalene	5	j	ug/Kg	13
208-96-8	Acenaphthylene	BRL		ug/Kg	13
83-32-9	Acenaphthene	BRL		ug/Kg	13
86-73-7	Fluorene	BRL		ug/Kg	13
85-01-8	Phenanthrene	7	j	ug/Kg	13
120-12-7	Anthracene	BRL		ug/Kg	13
206-44-0	Fluoranthene	8	j	ug/Kg	13
129-00-0	Pyrene	6	j	ug/Kg	13
56-55-3	Benzo[a]anthracene	5	j	ug/Kg	13
218-01-9	Chrysene	BRL		ug/Kg	13
205-99-2	Benzo[b]fluoranthene	BRL		ug/Kg	13
207-08-9	Benzo[k]fluoranthene	BRL		ug/Kg	13
50-32-8	Benzo[a]pyrene	BRL		ug/Kg	13
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/Kg	13
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/Kg	13
191-24-2	Benzo[g,h,i]perylene	BRL		ug/Kg	13

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Nitrobenzene-d5	860	390	45 %	30 - 130 %
2-Fluorobiphenyl	860	260	31 %	30 - 130 %
Terphenyl-d14	860	570	66 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method. Sample extraction performed by EPA Method 3545. Cleanup performed by EPA Method 3630C. Results are reported on a dry weight basis.

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.

j Indicates an estimated value detected below the reporting limit for the analyte.

GROUNDWATER ANALYTICAL

Massachusetts DEP EPH Method
Extractable Petroleum Hydrocarbons by GC/FID

Field ID:	**BJ-DS-S02**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-06**	QC Batch ID:	**EP-1945-M**
Sampled:	**09-02-04 13:00**	Instrument ID:	**GC-9 Agilent 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**15 g**
Extracted:	**09-08-04 16:00**	Final Volume:	**1 mL**
Analyzed (AL):	**09-11-04 07:30**	% Solids:	**77**
Analyzed (AR):	**09-11-04 08:15**	Aliphatic Dilution Factor:	**1**
Analyst:	**MM**	Aromatic Dilution Factor:	**1**

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †	BRL		mg/Kg	38
n-C19 to n-C36 Aliphatic Hydrocarbons †	BRL		mg/Kg	38
n-C11 to n-C22 Aromatic Hydrocarbons †◊	BRL		mg/Kg	38
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	BRL		mg/Kg	38

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
Fractionation:	2-Fluorobiphenyl	3.4	2.6	76 %	40 - 140 %
	2-Bromonaphthalene	3.4	2.1	63 %	40 - 140 %
Extraction:	Chloro-octadecane	3.4	2.2	64 %	40 - 140 %
	ortho-Terphenyl	3.4	2.6	76 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?	No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004). Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

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.

† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

◊ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

GROUNDWATER ANALYTICAL

EPA Method 8270C
Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

Field ID:	**BJ-DS-S02**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc**	Preservation:	**Cool**
Laboratory ID:	**76312-06**	QC Batch ID:	**SV-1491-P**
Sampled:	**09-02-04 13:00**	Instrument ID:	**MS-6 HP 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**16 g**
Extracted:	**09-08-04 19:00**	Final Volume:	**1 mL**
Cleaned Up:	**09-13-04 20:00**	Percent Solids:	**77**
Analyzed:	**09-14-04 17:26**	Dilution Factor:	**1**
Analyst:	**JJT**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/Kg	13
91-57-6	2-Methylnaphthalene	BRL		ug/Kg	13
208-96-8	Acenaphthylene	BRL		ug/Kg	13
83-32-9	Acenaphthene	BRL		ug/Kg	13
86-73-7	Fluorene	BRL		ug/Kg	13
85-01-8	Phenanthrene	BRL		ug/Kg	13
120-12-7	Anthracene	BRL		ug/Kg	13
206-44-0	Fluoranthene	BRL		ug/Kg	13
129-00-0	Pyrene	BRL		ug/Kg	13
56-55-3	Benzo[a]anthracene	BRL		ug/Kg	13
218-01-9	Chrysene	BRL		ug/Kg	13
205-99-2	Benzo[b]fluoranthene	BRL		ug/Kg	13
207-08-9	Benzo[k]fluoranthene	BRL		ug/Kg	13
50-32-8	Benzo[a]pyrene	BRL		ug/Kg	13
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/Kg	13
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/Kg	13
191-24-2	Benzo[g,h,i]perylene	BRL		ug/Kg	13

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Nitrobenzene-d5	830	400	48 %	30 - 130 %
2-Fluorobiphenyl	830	290	35 %	30 - 130 %
Terphenyl-d14	830	560	67 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method. Sample extraction performed by EPA Method 3545. Cleanup performed by EPA Method 3630C. Results are reported on a dry weight basis.

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

Massachusetts DEP EPH Method
Extractable Petroleum Hydrocarbons by GC/FID

Field ID:	**BJ-SS-S03**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-07**	QC Batch ID:	**EP-1945-M**
Sampled:	**09-02-04 13:20**	Instrument ID:	**GC-9 Agilent 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**16 g**
Extracted:	**09-08-04 16:00**	Final Volume:	**1 mL**
Analyzed (AL):	**09-11-04 08:59**	% Solids:	**79**
Analyzed (AR):	**09-11-04 09:43**	Aliphatic Dilution Factor:	**1**
Analyst:	**MM**	Aromatic Dilution Factor:	**1**

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †	BRL		mg/Kg	36
n-C19 to n-C36 Aliphatic Hydrocarbons †	BRL		mg/Kg	36
n-C11 to n-C22 Aromatic Hydrocarbons †◊	BRL		mg/Kg	36
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	BRL		mg/Kg	36

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
Fractionation:	2-Fluorobiphenyl	3.2	2.4	74 %	40 - 140 %
	2-Bromonaphthalene	3.2	2.2	67 %	40 - 140 %
Extraction:	Chloro-octadecane	3.2	2.1	64 %	40 - 140 %
	ortho-Terphenyl	3.2	2.5	79 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?	No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

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.

† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

◊ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

GROUNDWATER ANALYTICAL

EPA Method 8270C
Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

Field ID:	**BJ-SS-S03**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-07**	QC Batch ID:	**SV-1491-P**
Sampled:	**09-02-04 13:20**	Instrument ID:	**MS-6 HP 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**15 g**
Extracted:	**09-08-04 19:00**	Final Volume:	**1 mL**
Cleaned Up:	**09-13-04 20:00**	Percent Solids:	**79**
Analyzed:	**09-14-04 18:06**	Dilution Factor:	**1**
Analyst:	**JJT**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/Kg	12
91-57-6	2-Methylnaphthalene	BRL		ug/Kg	12
208-96-8	Acenaphthylene	BRL		ug/Kg	12
83-32-9	Acenaphthene	BRL		ug/Kg	12
86-73-7	Fluorene	BRL		ug/Kg	12
85-01-8	Phenanthrene	BRL		ug/Kg	12
120-12-7	Anthracene	BRL		ug/Kg	12
206-44-0	Fluoranthene	BRL		ug/Kg	12
129-00-0	Pyrene	BRL		ug/Kg	12
56-55-3	Benzo[a]anthracene	BRL		ug/Kg	12
218-01-9	Chrysene	BRL		ug/Kg	12
205-99-2	Benzo[b]fluoranthene	BRL		ug/Kg	12
207-08-9	Benzo[k]fluoranthene	BRL		ug/Kg	12
50-32-8	Benzo[a]pyrene	BRL		ug/Kg	12
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/Kg	12
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/Kg	12
191-24-2	Benzo[g,h,i]perylene	BRL		ug/Kg	12

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Nitrobenzene-d5	820	360	44 %	30 - 130 %
2-Fluorobiphenyl	820	250	30 %	30 - 130 %
Terphenyl-d14	820	540	65 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method. Sample extraction performed by EPA Method 3545. Cleanup performed by EPA Method 3630C. Results are reported on a dry weight basis.

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

Massachusetts DEP EPH Method
Extractable Petroleum Hydrocarbons by GC/FID

Field ID:	**BJ-SS-S04**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-08**	QC Batch ID:	**EP-1945-M**
Sampled:	**09-02-04 14:10**	Instrument ID:	**GC-9 Agilent 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**15 g**
Extracted:	**09-08-04 16:00**	Final Volume:	**1 mL**
Analyzed (AL):	**09-11-04 04:33**	% Solids:	**74**
Analyzed (AR):	**09-11-04 05:18**	Aliphatic Dilution Factor:	**1**
Analyst:	**MM**	Aromatic Dilution Factor:	**1**

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †	BRL		mg/Kg	40
n-C19 to n-C36 Aliphatic Hydrocarbons †	BRL		mg/Kg	40
n-C11 to n-C22 Aromatic Hydrocarbons †◊	BRL		mg/Kg	40
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	BRL		mg/Kg	40

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
Fractionation:	2-Fluorobiphenyl	3.5	2.8	80 %	40 - 140 %
	2-Bromonaphthalene	3.5	1.7	49 %	40 - 140 %
Extraction:	Chloro-octadecane	3.5	2.6	74 %	40 - 140 %
	ortho-Terphenyl	3.5	3.1	87 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed? Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved? Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1? No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

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.
- † Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
- ◊ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

GROUNDWATER ANALYTICAL

EPA Method 8270C
Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

Field ID:	**BJ-SS-S04**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-08**	QC Batch ID:	**SV-1491-P**
Sampled:	**09-02-04 14:10**	Instrument ID:	**MS-6 HP 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**15 g**
Extracted:	**09-08-04 19:00**	Final Volume:	**1 mL**
Cleaned Up:	**09-13-04 20:00**	Percent Solids:	**74**
Analyzed:	**09-14-04 18:46**	Dilution Factor:	**1**
Analyst:	**JJT**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/Kg	13
91-57-6	2-Methylnaphthalene	BRL		ug/Kg	13
208-96-8	Acenaphthylene	BRL		ug/Kg	13
83-32-9	Acenaphthene	BRL		ug/Kg	13
86-73-7	Fluorene	BRL		ug/Kg	13
85-01-8	Phenanthrene	BRL		ug/Kg	13
120-12-7	Anthracene	BRL		ug/Kg	13
206-44-0	Fluoranthene	BRL		ug/Kg	13
129-00-0	Pyrene	BRL		ug/Kg	13
56-55-3	Benzo[a]anthracene	BRL		ug/Kg	13
218-01-9	Chrysene	BRL		ug/Kg	13
205-99-2	Benzo[b]fluoranthene	BRL		ug/Kg	13
207-08-9	Benzo[k]fluoranthene	BRL		ug/Kg	13
50-32-8	Benzo[a]pyrene	BRL		ug/Kg	13
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/Kg	13
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/Kg	13
191-24-2	Benzo[g,h,i]perylene	BRL		ug/Kg	13

QC Surrogate Compound	Spiked	Measured	Recovery		QC Limits
Nitrobenzene-d5	890	350	**39 %**		30 - 130 %
2-Fluorobiphenyl	890	250	**28 %**	m	30 - 130 %
Terphenyl-d14	890	630	**70 %**		30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method. Sample extraction performed by EPA Method 3545. Cleanup performed by EPA Method 3630C. Results are reported on a dry weight basis.

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.

m Surrogate recovery outside recommended limits due to sample matrix interference.

GROUNDWATER ANALYTICAL

Massachusetts DEP EPH Method
Extractable Petroleum Hydrocarbons by GC/FID

Field ID:	**BJ-DS-S03**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc.**	Preservation:	**Cool**
Laboratory ID:	**76312-09**	QC Batch ID:	**EP-1945-M**
Sampled:	**09-02-04 14:22**	Instrument ID:	**GC-9 Agilent 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**15 g**
Extracted:	**09-08-04 16:00**	Final Volume:	**1 mL**
Analyzed (AL):	**09-11-04 06:02**	% Solids:	**77**
Analyzed (AR):	**09-11-04 06:46**	Aliphatic Dilution Factor:	**1**
Analyst:	**MM**	Aromatic Dilution Factor:	**1**

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †	BRL		mg/Kg	38
n-C19 to n-C36 Aliphatic Hydrocarbons †	BRL		mg/Kg	38
n-C11 to n-C22 Aromatic Hydrocarbons †◊	BRL		mg/Kg	38
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	BRL		mg/Kg	38

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
Fractionation:	2-Fluorobiphenyl	3.4	2.7	79 %	40 - 140 %
	2-Bromonaphthalene	3.4	1.6	48 %	40 - 140 %
Extraction:	Chloro-octadecane	3.4	2.4	70 %	40 - 140 %
	ortho-Terphenyl	3.4	3.0	88 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?	No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

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.

† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

◊ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

GROUNDWATER ANALYTICAL

EPA Method 8270C
Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

Field ID:	**BJ-DS-S03**	Matrix:	**Soil**
Project:	**Buzzards Bay/3871-000**	Container:	**120 mL Amber Glass**
Client:	**GeoInsight, Inc**	Preservation:	**Cool**
Laboratory ID:	**76312-09**	QC Batch ID:	**SV-1491-P**
Sampled:	**09-02-04 14:22**	Instrument ID:	**MS-6 HP 6890**
Received:	**09-03-04 18:40**	Sample Weight:	**16 g**
Extracted:	**09-08-04 19:00**	Final Volume:	**1 mL**
Cleaned Up:	**09-13-04 20:00**	Percent Solids:	**77**
Analyzed:	**09-14-04 19:27**	Dilution Factor:	**1**
Analyst:	**JJT**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/Kg	12
91-57-6	2-Methylnaphthalene	BRL		ug/Kg	12
208-96-8	Acenaphthylene	BRL		ug/Kg	12
83-32-9	Acenaphthene	BRL		ug/Kg	12
86-73-7	Fluorene	BRL		ug/Kg	12
85-01-8	Phenanthrene	BRL		ug/Kg	12
120-12-7	Anthracene	BRL		ug/Kg	12
206-44-0	Fluoranthene	BRL		ug/Kg	12
129-00-0	Pyrene	BRL		ug/Kg	12
56-55-3	Benzo[a]anthracene	BRL		ug/Kg	12
218-01-9	Chrysene	BRL		ug/Kg	12
205-99-2	Benzo[b]fluoranthene	BRL		ug/Kg	12
207-08-9	Benzo[k]fluoranthene	BRL		ug/Kg	12
50-32-8	Benzo[a]pyrene	BRL		ug/Kg	12
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/Kg	12
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/Kg	12
191-24-2	Benzo[g,h,i]perylene	BRL		ug/Kg	12

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Nitrobenzene-d5	820	420	51 %	30 - 130 %
2-Fluorobiphenyl	820	300	37 %	30 - 130 %
Terphenyl-d14	820	590	72 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method. Sample extraction performed by EPA Method 3545. Cleanup performed by EPA Method 3630C. Results are reported on a dry weight basis.

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.