

APPENDIX C
GROUNDWATER SAMPLING ROUND 4
QUALITY ASSURANCE/QUALITY CONTROL SUMMARY
AND LABORATORY REPORTS

Appendix C: Quality Assurance/Quality Control, Round 1 Groundwater

Quality Assurance/Quality Control (QA/QC) data were reviewed for this report to assess the validity of the Round 1 groundwater analytical results reported for the Port of Seattle T-108 Groundwater and Shoreline Soil Investigation. TestAmerica Analytical Testing Corporation was the analytical laboratory for this data set. Three groundwater samples collected in wells PGG-5 through PGG-7 on May 29 and 30, 2007 were submitted to the lab as part of the above referenced investigation. Additional sample volume was collected from PGG-5 and submitted to the lab for matrix spike/matrix spike duplicate testing. The data package provided by the lab has been reviewed against criteria specified in the USEPA CLP National Functional Guidelines (CLP Guidelines).

The analytical results were found to be generally acceptable with respect to the QA/QC program. These results were generally found to meet Contract Laboratory Program (CLP) (Environmental Protection Agency (EPA, 2004) limits or project guidelines.

The following summarizes the findings of the QA/QC review:

1. Methodology: ACCEPTABLE

Samples were analyzed using acceptable EPA and standard methods as listed on each page of the analytical results. The methods used correspond to those specified in the T-108 Groundwater and Shoreline Soil Investigation Final Work Plan (PGG, June 2006), with the exception of mercury. This parameter was added to the analytical suite after the Work Plan was issued.

2. Holding Times: ACCEPTABLE

The holding times were met for all analyses.

3. Surrogate Spikes: ACCEPTABLE

Surrogate spikes are known concentrations of compounds not normally found in samples. They are added to check for analytical interferences in every sample. Surrogates were added to all samples for all analyses with the exceptions of total and dissolved metals, which is a standard analytical procedure. The surrogate percent recovery ranges for all methods were within the acceptable ranges.

4. Lab Control Sample: ACCEPTABLE

Laboratory control samples (LCS) are known concentrations of analytes added to a matrix free of interferences in order to demonstrate that the laboratory can perform the analytical approach in a matrix free of interferences (e.g. clean sand or DI water). The LCS results are used in conjunction with MS/MSD results to separate issues of laboratory performance and matrix effects.

LCS samples were run for all requested analytes and the percent recoveries were within acceptable lab limits.

5. Matrix Spikes/Matrix Spike Duplicate (MS/MSD): ACCEPTABLE

Matrix Spikes/Matrix Spike Duplicates (MS/MSD) are known concentrations of analytes added to one sample in 20 to check for matrix interferences in recovering the analyte from the sample matrix; the duplicate is then run to check analytical duplication.

MS were run for all analytical methods and MSD were run for all analytical methods with the exception of total and dissolved metals. MSD are typically not analyzed for inorganic compounds. MS/MSD indicate acceptable recovery of analytes and acceptable relative percent differences (RPDs) for all analyses.

6. Method Blanks: ACCEPTABLE

Method Blanks were run by the laboratory to check for possible laboratory contamination. Blanks were analyzed for all analytes in all analytical batches at a rate of at least one in 20. No lab contamination was detected.

USEPA, October 1999. USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. EPA-540/R-99-008 (PB99-963506).

7. Method Detection Limits: ACCEPTABLE

Method reporting limits were found to be lower or equivalent to those quoted in the Work Plan (PGG, 2006) for all analyses except those where sample concentrations required dilution or re-extraction. Dilution and re-extraction result in elevated detection limits.

8. Lab Duplicates: ACCEPTABLE

The objective of a duplicate sample analysis is to demonstrate acceptable method precision by the lab at the time of analysis. Lab duplicates were analyzed for gasoline/BTEX, total metals, and dissolved metals. The relative percent difference between the initial and duplicate analyses were within acceptable percent differences except where the target analyte was not detected. In this case the duplicate relative percent difference calculation is not meaningful and is typically not applied.

9. Chain-of-Custody: ACCEPTABLE

Chain-of-Custody procedures were followed for all samples and are considered acceptable.

References

Pacific Groundwater Group, June 2006. T-108 Groundwater and Shoreline Soil Investigation Final Work Plan. Consultant's report to the Port of Seattle.

USEPA, October 2004. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. OSWER 9240.1-45 EPA 540-R-04-004

June 14, 2007

Inger Jackson
Pacific Groundwater Group
2377 Eastlake Ave. E.
Seattle, WA 98102

RE: T-108

Enclosed are the results of analyses for samples received by the laboratory on 05/29/07 15:30.
The following list is a summary of the Work Orders contained in this report, generated on 06/14/07
17:15.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BQE0502	T-108	JK0410

TestAmerica - Seattle, WA



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Pacific Groundwater Group 2377 Eastlake Ave. E. Seattle, WA 98102	Project Name:	T-108	Report Created:
	Project Number:	JK0410	06/14/07 17:15
	Project Manager:	Inger Jackson	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PGG-7	BQE0502-01	Water	05/29/07 11:00	05/29/07 15:30

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/14/07 17:15

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0502-01 (PGG-7)		Water			Sampled: 05/29/07 11:00					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	50.0	ug/l	1x	7F06022	06/06/07 10:09	06/06/07 15:16	
Benzene	"	ND	----	0.500	"	"	"	"	"	"
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
<i>Surrogate(s): 4-BFB (FID)</i>			85.5%		58 - 144 %	"				"
<i>4-BFB (PID)</i>			97.7%		68 - 140 %	"				"
BQE0502-01RE1 (PGG-7)		Water			Sampled: 05/29/07 11:00					
Xylenes (total)	NWTPH-Gx/802 1B	ND	----	1.00	ug/l	1x	7F08025	06/07/07 11:10	06/08/07 21:37	
<i>Surrogate(s): 4-BFB (PID)</i>			98.8%		68 - 140 %	"				"

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Pacific Groundwater Group 2377 Eastlake Ave. E. Seattle, WA 98102	Project Name: T-108	Report Created: 06/14/07 17:15
	Project Number: JK0410	
	Project Manager: Inger Jackson	

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0502-01 (PGG-7)		Water			Sampled: 05/29/07 11:00					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.236	mg/l	1x	7F01013	06/01/07 09:29	06/05/07 01:49	
Lube Oil Range Hydrocarbons	"	ND	----	0.472	"	"	"	"	"	C
<i>Surrogate(s): 2-FBP</i>				75.4%	53 - 125 %	"			"	
<i>Octacosane</i>				99.6%	68 - 125 %	"			"	

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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/14/07 17:15
Seattle, WA 98102	Project Manager: Inger Jackson	

Total Metals by EPA 6000/7000 Series Methods
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0502-01 (PGG-7)		Water			Sampled: 05/29/07 11:00					
Arsenic	EPA 6020	0.00150	----	0.00100	mg/l	1x	7F01026	06/01/07 10:21	06/04/07 11:00	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	"
Chromium	"	ND	----	0.00100	"	"	"	"	"	"
Copper	"	ND	----	0.00100	"	"	"	"	"	"
Lead	"	ND	----	0.00100	"	"	"	"	"	"
Zinc	"	ND	----	0.0100	"	"	"	"	"	"
BQE0502-01RE1 (PGG-7)		Water			Sampled: 05/29/07 11:00					
Nickel	EPA 6020	ND	----	0.00100	mg/l	1x	7F04056	06/04/07 15:38	06/05/07 13:12	

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Pacific Groundwater Group 2377 Eastlake Ave. E. Seattle, WA 98102	Project Name: T-108	Report Created: 06/14/07 17:15
	Project Number: JK0410	
	Project Manager: Inger Jackson	

Dissolved Metals by EPA 6000/7000 Series Methods
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0502-01 (PGG-7)		Water			Sampled: 05/29/07 11:00					
Arsenic	EPA 6020 - Diss	0.00107	----	0.00100	mg/l	1x	7E31041	05/31/07 11:54	05/31/07 19:30	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	"
Chromium	"	0.00138	----	0.00100	"	"	"	"	"	"
Copper	"	ND	----	0.00100	"	"	"	"	"	"
Lead	"	ND	----	0.00100	"	"	"	"	"	"
Nickel	"	ND	----	0.00100	"	"	"	"	"	"
Zinc	"	ND	----	0.0100	"	"	"	"	"	"

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/14/07 17:15

Polychlorinated Biphenyls by EPA 8082 Modified with Micro-Extraction
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0502-01 (PGG-7)		Water			Sampled: 05/29/07 11:00					
Aroclor 1016	EPA 8082 Mod.	ND	----	0.100	ug/l	1x	7F05008	06/05/07 08:35	06/08/07 05:46	
Aroclor 1221	"	ND	----	0.100	"	"	"	"	"	"
Aroclor 1232	"	ND	----	0.100	"	"	"	"	"	"
Aroclor 1242	"	ND	----	0.100	"	"	"	"	"	"
Aroclor 1248	"	ND	----	0.100	"	"	"	"	"	"
Aroclor 1254	"	ND	----	0.100	"	"	"	"	"	"
Aroclor 1260	"	ND	----	0.100	"	"	"	"	"	"
Aroclor 1262	"	ND	----	0.100	"	"	"	"	"	"
Aroclor 1268	"	ND	----	0.100	"	"	"	"	"	"
<i>Surrogate(s): TCX</i>			105%		58 - 132 %	"				"
<i>Decachlorobiphenyl</i>			70.6%		19 - 152 %	"				"

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/14/07 17:15

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0502-01 (PGG-7)		Water			Sampled: 05/29/07 11:00					
Acenaphthene	EPA 8270C-HVI	ND	----	0.0943	ug/l	1x	7F01011	06/01/07 09:24	06/05/07 19:13	
Acenaphthylene	"	ND	----	0.0943	"	"	"	"	"	"
Anthracene	"	ND	----	0.0943	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.00943	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.00943	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.00943	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.00943	"	"	"	"	"	"
Benzo (ghi) perylene	"	ND	----	0.0943	"	"	"	"	"	"
Chrysene	"	ND	----	0.00943	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.00943	"	"	"	"	"	"
Fluoranthene	"	ND	----	0.0943	"	"	"	"	"	"
Fluorene	"	ND	----	0.0943	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00943	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.0943	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.0943	"	"	"	"	"	"
Naphthalene	"	ND	----	0.0943	"	"	"	"	"	"
Phenanthrene	"	ND	----	0.0943	"	"	"	"	"	"
Pyrene	"	ND	----	0.0943	"	"	"	"	"	"
<i>Surrogate(s): Benzo (a) pyrene-d12</i>				58.9%		20 - 125 %	"			"
<i>1-Methylnaphthalene-d10</i>				63.1%		39 - 125 %	"			"

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Pacific Groundwater Group 2377 Eastlake Ave. E. Seattle, WA 98102	Project Name: T-108	Report Created:
	Project Number: JK0410	06/14/07 17:15
	Project Manager: Inger Jackson	

Dissolved Mercury per EPA Method 1631E
TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0502-01 (PGG-7)		Water			Sampled: 05/29/07 11:00					
Mercury	EPA 1631E	ND	----	0.00500	ug/l	1x	7060170	06/05/07 15:58	06/06/07 09:56	

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Pacific Groundwater Group 2377 Eastlake Ave. E. Seattle, WA 98102	Project Name: T-108	Report Created:
	Project Number: JK0410	06/14/07 17:15
	Project Manager: Inger Jackson	

Mercury per EPA Method 1631E
TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0502-01 (PGG-7)		Water			Sampled: 05/29/07 11:00					
Mercury	EPA 1631E	ND	----	0.00500	ug/l	1x	7060171	06/05/07 15:59	06/06/07 11:41	

TestAmerica - Seattle, WA



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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/14/07 17:15
Seattle, WA 98102	Project Manager: Inger Jackson	

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F06022 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (7F06022-BLK1)

Extracted: 06/06/07 10:09

Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	06/06/07 13:40	
Benzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (FID)		Recovery:	86.2%	Limits: 58-144%		"							06/06/07 13:40	
4-BFB (PID)			98.0%	68-140%		"							"	

LCS (7F06022-BS1)

Extracted: 06/06/07 10:09

Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	971	---	50.0	ug/l	1x	--	1000	97.1%	(80-120)	--	--	06/06/07 14:12	
Surrogate(s): 4-BFB (FID)		Recovery:	96.7%	Limits: 58-144%		"							06/06/07 14:12	

LCS (7F06022-BS2)

Extracted: 06/06/07 10:09

Benzene	NWTPH-Gx/ 8021B	27.6	---	0.500	ug/l	1x	--	30.0	92.0%	(80-120)	--	--	06/06/07 14:44	
Toluene	"	26.1	---	0.500	"	"	--	"	87.0%	"	--	--	"	
Ethylbenzene	"	27.0	---	0.500	"	"	--	"	90.0%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery:	99.7%	Limits: 68-140%		"							06/06/07 14:44	

Duplicate (7F06022-DUP1)

QC Source: BQE0502-01

Extracted: 06/06/07 10:09

Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	50.0	ug/l	1x	ND	--	--	--	(25)		06/06/07 15:48	R4
Benzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	13.2%	"	"	R4
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Surrogate(s): 4-BFB (FID)		Recovery:	80.2%	Limits: 58-144%		"							06/06/07 15:48	
4-BFB (PID)			97.5%	68-140%		"							"	

Duplicate (7F06022-DUP2)

QC Source: BQF0026-01

Extracted: 06/06/07 10:09

Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	50.0	ug/l	1x	ND	--	--	--	19.8% (25)		06/06/07 16:52	R4
Benzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	4.85%	"	"	R4
Surrogate(s): 4-BFB (FID)		Recovery:	85.3%	Limits: 58-144%		"							06/06/07 16:52	
4-BFB (PID)			98.0%	68-140%		"							"	

TestAmerica - Seattle, WA



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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/14/07 17:15
Seattle, WA 98102	Project Manager: Inger Jackson	

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F06022 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike (7F06022-MS1)			QC Source: BQE0502-01				Extracted: 06/06/07 10:09							
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	861	---	50.0	ug/l	1x	ND	1000	86.1%	(75-131)	--	--	06/06/07 17:56	
Toluene	"	58.9	---	0.500	"	"	0.153	85.5	68.7%	(60-124)	--	--	"	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.2%</i>		<i>Limits: 58-144%</i>		<i>"</i>						<i>06/06/07 17:56</i>		
<i>4-BFB (PID)</i>		<i>86.7%</i>		<i>68-140%</i>		<i>"</i>						<i>"</i>		
Matrix Spike (7F06022-MS2)			QC Source: BQF0026-01				Extracted: 06/06/07 10:09							
Benzene	NWTPH-Gx/ 8021B	30.8	---	0.500	ug/l	1x	ND	30.0	103%	(46-130)	--	--	06/07/07 07:13	
Ethylbenzene	"	29.7	---	0.500	"	"	0.169	"	98.4%	(56-141)	--	--	"	
<i>Surrogate(s): 4-BFB (PID)</i>		<i>Recovery: 99.8%</i>		<i>Limits: 68-140%</i>		<i>"</i>						<i>06/07/07 07:13</i>		
Matrix Spike Dup (7F06022-MSD1)			QC Source: BQE0502-01				Extracted: 06/06/07 10:09							
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	1010	---	50.0	ug/l	1x	ND	1000	101%	(75-131)	15.9%	(25)	06/06/07 18:28	
Toluene	"	63.3	---	0.500	"	"	0.153	85.5	73.9%	(60-124)	7.20%	(40)	"	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 95.7%</i>		<i>Limits: 58-144%</i>		<i>"</i>						<i>06/06/07 18:28</i>		
<i>4-BFB (PID)</i>		<i>87.7%</i>		<i>68-140%</i>		<i>"</i>						<i>"</i>		
Matrix Spike Dup (7F06022-MSD2)			QC Source: BQF0026-01				Extracted: 06/06/07 10:09							
Benzene	NWTPH-Gx/ 8021B	30.0	---	0.500	ug/l	1x	ND	30.0	100%	(46-130)	2.63%	(40)	06/07/07 07:44	
Ethylbenzene	"	29.1	---	0.500	"	"	0.169	"	96.4%	(56-141)	2.04%	"	"	
<i>Surrogate(s): 4-BFB (PID)</i>		<i>Recovery: 100%</i>		<i>Limits: 68-140%</i>		<i>"</i>						<i>06/07/07 07:44</i>		

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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/14/07 17:15
Seattle, WA 98102	Project Manager: Inger Jackson	

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F08025 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (7F08025-BLK1)													Extracted: 06/08/07 11:45			
Xylenes (total)	NWTPH-Gx/ 8021B	ND	---	1.00	ug/l	1x	--	--	--	--	--	--	06/08/07 13:56			
<i>Surrogate(s): 4-BFB (PID)</i>		<i>Recovery: 95.3%</i>											<i>06/08/07 13:56</i>			
LCS (7F08025-BS1)													Extracted: 06/08/07 11:45			
Xylenes (total)	NWTPH-Gx/ 8021B	94.8	---	1.00	ug/l	1x	--	90.0	105%	(80-120)	--	--	06/08/07 15:02			
<i>Surrogate(s): 4-BFB (PID)</i>		<i>Recovery: 97.5%</i>											<i>06/08/07 15:02</i>			
LCS Dup (7F08025-BSD1)													Extracted: 06/08/07 11:45			
Xylenes (total)	NWTPH-Gx/ 8021B	95.6	---	1.00	ug/l	1x	--	90.0	106%	(80-120)	0.840%	(25)	06/09/07 06:33			
<i>Surrogate(s): 4-BFB (PID)</i>		<i>Recovery: 97.8%</i>											<i>06/09/07 06:33</i>			
Duplicate (7F08025-DUP1)													QC Source: BQE0484-10RE1		Extracted: 06/08/07 11:45	
Xylenes (total)	NWTPH-Gx/ 8021B	3.30	---	1.00	ug/l	1x	3.56	--	--	--	7.58%	(25)	06/08/07 18:59			
<i>Surrogate(s): 4-BFB (PID)</i>		<i>Recovery: 98.2%</i>											<i>06/08/07 18:59</i>			
Duplicate (7F08025-DUP2)													QC Source: BQF0026-01RE1		Extracted: 06/08/07 11:45	
Xylenes (total)	NWTPH-Gx/ 8021B	ND	---	1.00	ug/l	1x	ND	--	--	--	14.6%	(25)	06/09/07 01:49	R4		
<i>Surrogate(s): 4-BFB (PID)</i>		<i>Recovery: 93.7%</i>											<i>06/09/07 01:49</i>			

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/14/07 17:15

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F01013 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7F01013-BLK1)								Extracted: 06/01/07 09:29						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.250	mg/l	1x	--	--	--	--	--	--	06/04/07 19:15	
Lube Oil Range Hydrocarbons	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery:</i>	<i>77.2%</i>	<i>Limits: 53-125%</i>		<i>"</i>							<i>06/04/07 19:15</i>	
<i>Octacosane</i>		<i>100%</i>		<i>68-125%</i>		<i>"</i>							<i>"</i>	
LCS (7F01013-BS1)								Extracted: 06/01/07 09:29						
Diesel Range Hydrocarbons	NWTPH-Dx	1.79	---	0.250	mg/l	1x	--	2.00	89.5%	(61-132)	--	--	06/04/07 19:41	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery:</i>	<i>92.4%</i>	<i>Limits: 53-125%</i>		<i>"</i>							<i>06/04/07 19:41</i>	
<i>Octacosane</i>		<i>98.4%</i>		<i>68-125%</i>		<i>"</i>							<i>"</i>	
Matrix Spike (7F01013-MS1)								QC Source: BQE0535-02				Extracted: 06/01/07 09:29		
Diesel Range Hydrocarbons	NWTPH-Dx	1.67	---	0.236	mg/l	1x	ND	1.89	88.4%	(32-143)	--	--	06/04/07 20:08	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery:</i>	<i>92.4%</i>	<i>Limits: 53-125%</i>		<i>"</i>							<i>06/04/07 20:08</i>	
<i>Octacosane</i>		<i>95.3%</i>		<i>68-125%</i>		<i>"</i>							<i>"</i>	
Matrix Spike Dup (7F01013-MSD1)								QC Source: BQE0535-02				Extracted: 06/01/07 09:29		
Diesel Range Hydrocarbons	NWTPH-Dx	1.65	---	0.236	mg/l	1x	ND	1.89	87.3%	(32-143)	1.20%	(50)	06/04/07 20:34	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery:</i>	<i>96.2%</i>	<i>Limits: 53-125%</i>		<i>"</i>							<i>06/04/07 20:34</i>	
<i>Octacosane</i>		<i>104%</i>		<i>68-125%</i>		<i>"</i>							<i>"</i>	

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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/14/07 17:15
Seattle, WA 98102	Project Manager: Inger Jackson	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F01026	Water Preparation Method: EPA 3020A
--------------------------	--

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (7F01026-BLK1)

Extracted: 06/01/07 10:21

Lead	EPA 6020	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	06/04/07 10:01	
Arsenic	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Zinc	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Copper	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	

LCS (7F01026-BS1)

Extracted: 06/01/07 10:21

Lead	EPA 6020	0.0770	---	0.00100	mg/l	1x	--	0.0800	96.2%	(80-120)	--	--	06/04/07 10:19	
Cadmium	"	0.0792	---	0.00100	"	"	--	"	99.0%	"	--	--	"	
Chromium	"	0.0848	---	0.00100	"	"	--	"	106%	"	--	--	"	
Arsenic	"	0.0748	---	0.00100	"	"	--	"	93.5%	"	--	--	"	
Copper	"	0.0846	---	0.00100	"	"	--	"	106%	"	--	--	"	
Zinc	"	0.0734	---	0.0100	"	"	--	"	91.8%	"	--	--	"	

Duplicate (7F01026-DUP1)

QC Source: BQE0535-02

Extracted: 06/01/07 10:21

Arsenic	EPA 6020	0.00124	---	0.00100	mg/l	1x	0.00120	--	--	--	3.28% (20)	--	06/04/07 10:42	
Lead	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	
Chromium	"	ND	---	0.00100	"	"	ND	--	--	--	2.53%	"	"	R4
Copper	"	0.00115	---	0.00100	"	"	0.00122	--	--	--	5.91%	"	"	
Cadmium	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	
Zinc	"	ND	---	0.0100	"	"	ND	--	--	--	18.9%	"	"	R4

Matrix Spike (7F01026-MS1)

QC Source: BQE0535-02

Extracted: 06/01/07 10:21

Arsenic	EPA 6020	0.0807	---	0.00100	mg/l	1x	0.00120	0.0800	99.4%	(75-125)	--	--	06/04/07 10:31	
Lead	"	0.0826	---	0.00100	"	"	ND	"	103%	(80-120)	--	--	"	
Zinc	"	0.0780	---	0.0100	"	"	0.00503	"	91.2%	(68-128)	--	--	"	
Copper	"	0.0854	---	0.00100	"	"	0.00122	"	105%	(70-125)	--	--	"	
Chromium	"	0.0878	---	0.00100	"	"	0.000800	"	109%	(80-120)	--	--	"	
Cadmium	"	0.0802	---	0.00100	"	"	ND	"	100%	"	--	--	"	

Matrix Spike Dup (7F01026-MSD1)

QC Source: BQE0535-02

Extracted: 06/01/07 10:21

Lead	EPA 6020	0.0832	---	0.00100	mg/l	1x	ND	0.0800	104%	(80-120)	0.724% (20)	--	06/04/07 10:37	
Chromium	"	0.0889	---	0.00100	"	"	0.000800	"	110%	"	1.25%	"	"	
Copper	"	0.0858	---	0.00100	"	"	0.00122	"	106%	(70-125)	0.467%	"	"	
Zinc	"	0.0759	---	0.0100	"	"	0.00503	"	88.6%	(68-128)	2.73%	"	"	
Cadmium	"	0.0809	---	0.00100	"	"	ND	"	101%	(80-120)	0.869%	"	"	
Arsenic	"	0.0817	---	0.00100	"	"	0.00120	"	101%	(75-125)	1.23%	"	"	

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/14/07 17:15

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F04056 Water Preparation Method: EPA 3020A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7F04056-BLK1)								Extracted: 06/04/07 15:38						
Nickel	EPA 6020	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	06/05/07 12:25	
LCS (7F04056-BS1)								Extracted: 06/04/07 15:38						
Nickel	EPA 6020	0.0914	---	0.00100	mg/l	1x	--	0.0800	114%	(80-120)	--	--	06/05/07 12:30	
Duplicate (7F04056-DUP1)				QC Source: BQE0535-02RE1				Extracted: 06/04/07 15:38						
Nickel	EPA 6020	0.00155	---	0.00100	mg/l	1x	0.00159	--	--	--	2.55% (20)	--	06/05/07 13:06	
Matrix Spike (7F04056-MS1)				QC Source: BQE0535-02RE1				Extracted: 06/04/07 15:38						
Nickel	EPA 6020	0.0878	---	0.00100	mg/l	1x	0.00159	0.0800	108%	(77-120)	--	--	06/05/07 12:54	
Matrix Spike Dup (7F04056-MSD1)				QC Source: BQE0535-02RE1				Extracted: 06/04/07 15:38						
Nickel	EPA 6020	0.0875	---	0.00100	mg/l	1x	0.00159	0.0800	107%	(77-120)	0.342% (20)	--	06/05/07 13:00	

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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/14/07 17:15
Seattle, WA 98102	Project Manager: Inger Jackson	

Dissolved Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7E31041 Water Preparation Method: EPA 3005A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (7E31041-BLK1)

Extracted: 05/31/07 11:54

Nickel	EPA 6020 - Diss	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	05/31/07 18:55	
Copper	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Lead	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Zinc	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	

LCS (7E31041-BS1)

Extracted: 05/31/07 11:54

Copper	EPA 6020 - Diss	0.204	---	0.00100	mg/l	1x	--	0.200	102%	(80-120)	--	--	05/31/07 19:00	
Lead	"	0.203	---	0.00100	"	"	--	"	102%	"	--	--	"	
Nickel	"	0.208	---	0.00100	"	"	--	"	104%	"	--	--	"	
Arsenic	"	0.201	---	0.00100	"	"	--	"	100%	"	--	--	"	
Cadmium	"	0.204	---	0.00100	"	"	--	"	102%	"	--	--	"	
Chromium	"	0.210	---	0.00100	"	"	--	"	105%	"	--	--	"	
Zinc	"	0.207	---	0.0100	"	"	--	"	104%	"	--	--	"	

Duplicate (7E31041-DUP1)

QC Source: BQE0483-02

Extracted: 05/31/07 11:54

Arsenic	EPA 6020 - Diss	0.00342	---	0.00100	mg/l	1x	0.00335	--	--	--	2.07%	(20)	05/31/07 19:12	
Nickel	"	0.125	---	0.00100	"	"	0.126	--	--	--	0.797%	"	"	
Lead	"	ND	---	0.00100	"	"	ND	--	--	--	6.45%	"	"	
Chromium	"	ND	---	0.00100	"	"	ND	--	--	--	6.37%	"	"	
Zinc	"	ND	---	0.0100	"	"	ND	--	--	--	7.84%	"	"	
Cadmium	"	0.00131	---	0.00100	"	"	0.00135	--	--	--	3.01%	"	"	
Copper	"	0.00479	---	0.00100	"	"	0.00481	--	--	--	0.417%	"	"	

Matrix Spike (7E31041-MS1)

QC Source: BQE0483-02

Extracted: 05/31/07 11:54

Lead	EPA 6020 - Diss	0.0931	---	0.00100	mg/l	1x	0.000300	0.100	92.8%	(77-120)	--	--	05/31/07 19:06	
Cadmium	"	0.103	---	0.00100	"	"	0.00135	"	102%	(68-125)	--	--	"	
Arsenic	"	0.111	---	0.00100	"	"	0.00335	0.0995	108%	(80-128)	--	--	"	
Nickel	"	0.224	---	0.00100	"	"	0.126	"	98.5%	(55-130)	--	--	"	
Zinc	"	0.104	---	0.0100	"	"	0.00245	0.100	102%	(77-120)	--	--	"	
Copper	"	0.105	---	0.00100	"	"	0.00481	"	100%	(68-120)	--	--	"	
Chromium	"	0.103	---	0.00100	"	"	0.000760	"	102%	(75-125)	--	--	"	

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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/14/07 17:15
Seattle, WA 98102	Project Manager: Inger Jackson	

Polychlorinated Biphenyls by EPA 8082 Modified with Micro-Extraction - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F05008 Water Preparation Method: Solvent Extraction

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7F05008-BLK1)										Extracted: 06/05/07 08:35				
Aroclor 1016	EPA 8082 Mod.	ND	---	0.100	ug/l	1x	--	--	--	--	--	--	06/08/07 04:35	
Aroclor 1221	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1232	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1242	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1248	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1254	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1260	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1262	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1268	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): TCX</i>		<i>Recovery: 99.4%</i>		<i>Limits: 58-132%</i>		<i>"</i>						<i>06/08/07 04:35</i>		
<i>Decachlorobiphenyl</i>		<i>50.8%</i>		<i>19-152%</i>		<i>"</i>						<i>"</i>		
LCS (7F05008-BS1)										Extracted: 06/05/07 08:35				
Aroclor 1016	EPA 8082 Mod.	5.37	---	0.100	ug/l	1x	--	5.00	107%	(53-141)	--	--	06/08/07 04:53	
Aroclor 1260	"	5.16	---	0.100	"	"	--	"	103%	(34-161)	--	--	"	
<i>Surrogate(s): TCX</i>		<i>Recovery: 106%</i>		<i>Limits: 58-132%</i>		<i>"</i>						<i>06/08/07 04:53</i>		
<i>Decachlorobiphenyl</i>		<i>82.4%</i>		<i>19-152%</i>		<i>"</i>						<i>"</i>		
Matrix Spike (7F05008-MS1)										QC Source: BQE0535-02		Extracted: 06/05/07 08:35		
Aroclor 1016	EPA 8082 Mod.	4.83	---	0.100	ug/l	1x	ND	5.00	96.6%	(33-155)	--	--	06/08/07 05:10	
Aroclor 1260	"	4.13	---	0.100	"	"	ND	"	82.6%	(27-165)	--	--	"	
<i>Surrogate(s): TCX</i>		<i>Recovery: 97.6%</i>		<i>Limits: 58-132%</i>		<i>"</i>						<i>06/08/07 05:10</i>		
<i>Decachlorobiphenyl</i>		<i>68.2%</i>		<i>19-152%</i>		<i>"</i>						<i>"</i>		
Matrix Spike Dup (7F05008-MSD1)										QC Source: BQE0535-02		Extracted: 06/05/07 08:35		
Aroclor 1016	EPA 8082 Mod.	4.91	---	0.100	ug/l	1x	ND	5.00	98.2%	(33-155)	1.64%	(35)	06/08/07 05:28	
Aroclor 1260	"	3.66	---	0.100	"	"	ND	"	73.2%	(27-165)	12.1%	"	"	
<i>Surrogate(s): TCX</i>		<i>Recovery: 106%</i>		<i>Limits: 58-132%</i>		<i>"</i>						<i>06/08/07 05:28</i>		
<i>Decachlorobiphenyl</i>		<i>51.6%</i>		<i>19-152%</i>		<i>"</i>						<i>"</i>		

TestAmerica - Seattle, WA



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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/14/07 17:15
Seattle, WA 98102	Project Manager: Inger Jackson	

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F01011 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7F01011-BLK2)													Extracted: 06/01/07 09:24	
Acenaphthene	EPA 8270C-HVI	ND	---	0.100	ug/l	1x	--	--	--	--	--	--	06/05/07 13:00	
Acenaphthylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Dibenz (a,h) anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery: 60.6%</i>		<i>Limits: 20-125%</i>		<i>"</i>							<i>06/05/07 13:00</i>	
<i>1-Methylnaphthalene-d10</i>		<i>68.3%</i>		<i>39-125%</i>		<i>"</i>							<i>"</i>	

LCS (7F01011-BS2)													Extracted: 06/01/07 09:24	
Acenaphthene	EPA 8270C-HVI	13.4	---	1.00	ug/l	10x	--	20.0	67.0%	(44-125)	--	--	06/05/07 13:31	
Acenaphthylene	"	14.7	---	1.00	"	"	--	"	73.5%	(51-125)	--	--	"	
Anthracene	"	14.1	---	1.00	"	"	--	"	70.5%	(50-125)	--	--	"	
Benzo (a) anthracene	"	14.7	---	0.100	"	"	--	"	73.5%	"	--	--	"	
Benzo (a) pyrene	"	13.9	---	0.100	"	"	--	"	69.5%	(47-125)	--	--	"	
Benzo (b) fluoranthene	"	14.9	---	0.100	"	"	--	"	74.5%	(50-125)	--	--	"	
Benzo (k) fluoranthene	"	11.9	---	0.100	"	"	--	"	59.5%	(46-125)	--	--	"	
Benzo (ghi) perylene	"	14.3	---	1.00	"	"	--	"	71.5%	(49-125)	--	--	"	
Chrysene	"	14.4	---	0.100	"	"	--	"	72.0%	(53-125)	--	--	"	
Dibenz (a,h) anthracene	"	14.1	---	0.100	"	"	--	"	70.5%	(47-125)	--	--	"	
Fluoranthene	"	14.0	---	1.00	"	"	--	"	70.0%	(55-125)	--	--	"	
Fluorene	"	12.5	---	1.00	"	"	--	"	62.5%	(52-125)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	14.2	---	0.100	"	"	--	"	71.0%	(49-125)	--	--	"	
1-Methylnaphthalene	"	10.8	---	1.00	"	"	--	"	54.0%	(37-125)	--	--	"	
2-Methylnaphthalene	"	11.8	---	1.00	"	"	--	"	59.0%	(40-125)	--	--	"	
Naphthalene	"	13.8	---	1.00	"	"	--	"	69.0%	(42-125)	--	--	"	

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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/14/07 17:15
Seattle, WA 98102	Project Manager: Inger Jackson	

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F01011 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (7F01011-BS2)													Extracted: 06/01/07 09:24	
Phenanthrene	EPA 8270C-HVI	13.5	---	1.00	ug/l	10x	--	20.0	67.5%	(47-125)	--	--	06/05/07 13:31	
Pyrene	"	14.1	---	1.00	"	"	--	"	70.5%	"	--	--	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery: 90.0%</i>		<i>Limits: 20-125%</i>		<i>"</i>							<i>06/05/07 13:31</i>	
<i>1-Methylnaphthalene-d10</i>		<i>42.6%</i>		<i>39-125%</i>		<i>"</i>							<i>"</i>	

Matrix Spike (7F01011-MS2)													QC Source: BQE0535-02		Extracted: 06/01/07 09:24	
Acenaphthene	EPA 8270C-HVI	12.1	---	1.00	ug/l	10x	ND	20.0	60.5%	(45-125)	--	--	06/05/07 20:46			
Acenaphthylene	"	12.8	---	1.00	"	"	ND	"	64.0%	"	--	--	"			
Anthracene	"	12.8	---	1.00	"	"	0.0221	"	63.9%	"	--	--	"			
Benzo (a) anthracene	"	12.9	---	0.100	"	"	ND	"	64.5%	"	--	--	"			
Benzo (a) pyrene	"	12.0	---	0.100	"	"	ND	"	60.0%	"	--	--	"			
Benzo (b) fluoranthene	"	11.7	---	0.100	"	"	ND	"	58.5%	"	--	--	"			
Benzo (k) fluoranthene	"	12.3	---	0.100	"	"	ND	"	61.5%	"	--	--	"			
Benzo (ghi) perylene	"	11.7	---	1.00	"	"	ND	"	58.5%	"	--	--	"			
Chrysene	"	13.2	---	0.100	"	"	ND	"	66.0%	"	--	--	"			
Dibenz (a,h) anthracene	"	11.9	---	0.100	"	"	ND	"	59.5%	"	--	--	"			
Fluoranthene	"	13.4	---	1.00	"	"	ND	"	67.0%	(47-125)	--	--	"			
Fluorene	"	12.0	---	1.00	"	"	ND	"	60.0%	(45-125)	--	--	"			
Indeno (1,2,3-cd) pyrene	"	11.7	---	0.100	"	"	ND	"	58.5%	"	--	--	"			
1-Methylnaphthalene	"	10.8	---	1.00	"	"	ND	"	54.0%	"	--	--	"			
2-Methylnaphthalene	"	10.8	---	1.00	"	"	ND	"	54.0%	"	--	--	"			
Naphthalene	"	13.1	---	1.00	"	"	ND	"	65.5%	"	--	--	"			
Phenanthrene	"	12.6	---	1.00	"	"	0.00677	"	63.0%	"	--	--	"			
Pyrene	"	12.5	---	1.00	"	"	ND	"	62.5%	"	--	--	"			
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery: 67.4%</i>		<i>Limits: 20-125%</i>		<i>"</i>							<i>06/05/07 20:46</i>			
<i>1-Methylnaphthalene-d10</i>		<i>39.4%</i>		<i>39-125%</i>		<i>"</i>							<i>"</i>			

Matrix Spike Dup (7F01011-MSD2)													QC Source: BQE0535-02		Extracted: 06/01/07 09:24	
Acenaphthene	EPA 8270C-HVI	12.7	---	1.00	ug/l	10x	ND	20.0	63.5%	(45-125)	4.84% (40)		06/05/07 21:17			
Acenaphthylene	"	13.4	---	1.00	"	"	ND	"	67.0%	"	4.58%	"	"			
Anthracene	"	13.2	---	1.00	"	"	0.0221	"	65.9%	"	3.08%	"	"			
Benzo (a) anthracene	"	13.6	---	0.100	"	"	ND	"	68.0%	"	5.28%	"	"			
Benzo (a) pyrene	"	12.0	---	0.100	"	"	ND	"	60.0%	"	0.00%	"	"			
Benzo (b) fluoranthene	"	12.3	---	0.100	"	"	ND	"	61.5%	"	5.00%	"	"			
Benzo (k) fluoranthene	"	12.0	---	0.100	"	"	ND	"	60.0%	"	2.47%	"	"			
Benzo (ghi) perylene	"	11.9	---	1.00	"	"	ND	"	59.5%	"	1.69%	"	"			
Chrysene	"	13.4	---	0.100	"	"	ND	"	67.0%	"	1.50%	"	"			
Dibenz (a,h) anthracene	"	12.0	---	0.100	"	"	ND	"	60.0%	"	0.837%	"	"			

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/14/07 17:15

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection - Laboratory Quality Control Results
TestAmerica - Seattle, WA

QC Batch: 7F01011 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (7F01011-MSD2)			QC Source: BQE0535-02				Extracted: 06/01/07 09:24							
Fluoranthene	EPA 8270C-HVI	13.8	---	1.00	ug/l	10x	ND	20.0	69.0%	(47-125)	2.94% (40)		06/05/07 21:17	
Fluorene	"	12.4	---	1.00	"	"	ND	"	62.0%	(45-125)	3.28%	"	"	"
Indeno (1,2,3-cd) pyrene	"	11.9	---	0.100	"	"	ND	"	59.5%	"	1.69%	"	"	"
1-Methylnaphthalene	"	13.6	---	1.00	"	"	ND	"	68.0%	"	23.0%	"	"	"
2-Methylnaphthalene	"	14.7	---	1.00	"	"	ND	"	73.5%	"	30.6%	"	"	"
Naphthalene	"	17.4	---	1.00	"	"	ND	"	87.0%	"	28.2%	"	"	"
Phenanthrene	"	13.2	---	1.00	"	"	0.00677	"	66.0%	"	4.65%	"	"	"
Pyrene	"	12.7	---	1.00	"	"	ND	"	63.5%	"	1.59%	"	"	"
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery:</i>	<i>69.2%</i>	<i>Limits: 20-125%</i>		<i>"</i>								<i>06/05/07 21:17</i>
<i>1-Methylnaphthalene-d10</i>			<i>58.2%</i>	<i>39-125%</i>		<i>"</i>								<i>"</i>

TestAmerica - Seattle, WA



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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/14/07 17:15

Dissolved Mercury per EPA Method 1631E - Laboratory Quality Control Results
 TestAmerica - Portland, OR

QC Batch: 7060170 Water Preparation Method: EPA 1631

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7060170-BLK1)								Extracted: 06/05/07 15:58						
Mercury	EPA 1631E	ND	---	0.00500	ug/l	1x	--	--	--	--	--	--	06/06/07 09:32	
LCS (7060170-BS1)								Extracted: 06/05/07 15:58						
Mercury	EPA 1631E	0.0493	---	0.00500	ug/l	1x	--	0.0500	98.6%	(85-115)	--	--	06/06/07 09:35	
LCS Dup (7060170-BSD1)								Extracted: 06/05/07 15:58						
Mercury	EPA 1631E	0.0491	---	0.00500	ug/l	1x	--	0.0500	98.2%	(85-115)	0.407% (20)		06/06/07 09:38	
Duplicate (7060170-DUP1)				QC Source: PQF0038-02				Extracted: 06/05/07 15:58						
Mercury	EPA 1631E	ND	---	0.00500	ug/l	1x	ND	--	--	--	NR (20)		06/06/07 09:42	
Matrix Spike (7060170-MS1)				QC Source: PQF0038-02				Extracted: 06/05/07 15:58						
Mercury	EPA 1631E	0.0421	---	0.00500	ug/l	1x	ND	0.0500	84.2%	(75-125)	--	--	06/06/07 09:44	
Matrix Spike Dup (7060170-MSD1)				QC Source: PQF0038-02				Extracted: 06/05/07 15:58						
Mercury	EPA 1631E	0.0409	---	0.00500	ug/l	1x	ND	0.0500	81.8%	(75-125)	2.89% (20)		06/06/07 09:48	

TestAmerica - Seattle, WA



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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/14/07 17:15

Mercury per EPA Method 1631E - Laboratory Quality Control Results
 TestAmerica - Portland, OR

QC Batch: 7060171 Water Preparation Method: EPA 1631

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7060171-BLK1)								Extracted: 06/05/07 15:59						
Mercury	EPA 1631E	ND	---	0.00500	ug/l	1x	--	--	--	--	--	--	06/06/07 10:52	
LCS (7060171-BS1)								Extracted: 06/05/07 15:59						
Mercury	EPA 1631E	0.0500	---	0.00500	ug/l	1x	--	0.0500	100%	(85-115)	--	--	06/06/07 10:55	
LCS Dup (7060171-BSD1)								Extracted: 06/05/07 15:59						
Mercury	EPA 1631E	0.0491	---	0.00500	ug/l	1x	--	0.0500	98.2%	(85-115)	1.82% (20)		06/06/07 10:58	
Duplicate (7060171-DUP1)								QC Source: PQE1141-02		Extracted: 06/05/07 15:59				
Mercury	EPA 1631E	ND	---	0.00500	ug/l	1x	ND	--	--	--	33.7% (20)		06/06/07 11:02	R4
Matrix Spike (7060171-MS1)								QC Source: PQE1141-02		Extracted: 06/05/07 15:59				
Mercury	EPA 1631E	0.0424	---	0.00500	ug/l	1x	0.000473	0.0500	83.9%	(71-125)	--	--	06/06/07 11:04	
Matrix Spike (7060171-MS2)								QC Source: PQF0038-02		Extracted: 06/05/07 15:59				
Mercury	EPA 1631E	0.0404	---	0.00500	ug/l	1x	ND	0.0500	80.8%	(71-125)	--	--	06/06/07 11:10	
Matrix Spike Dup (7060171-MSD1)								QC Source: PQE1141-02		Extracted: 06/05/07 15:59				
Mercury	EPA 1631E	0.0412	---	0.00500	ug/l	1x	0.000473	0.0500	81.5%	(71-125)	2.87% (20)		06/06/07 11:07	
Matrix Spike Dup (7060171-MSD2)								QC Source: PQF0038-02		Extracted: 06/05/07 15:59				
Mercury	EPA 1631E	0.0402	---	0.00500	ug/l	1x	ND	0.0500	80.4%	(71-125)	0.496% (20)		06/06/07 11:14	

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Pacific Groundwater Group

2377 Eastlake Ave. E.
Seattle, WA 98102

Project Name: **T-108**
Project Number: JK0410
Project Manager: Inger Jackson

Report Created:
06/14/07 17:15

Notes and Definitions

Report Specific Notes:

- C - Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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CHAIN OF CUSTODY REPORT

Work Order #: **B0E0502**

CLIENT: **Pacific Groundwater Group / Port Seattle** INVOICE TO: **Port of Seattle**
 REPORT TO: **Inger Jackson** PM: **Roy Kuroiwa**
 ADDRESS: **2371 Eastlake Ave E Seattle, WA 98102**
 PHONE: **206-329-0141** FAX: **206-329-6968**
 PROJECT NAME: **T108 / Port of Seattle**
 PROJECT NUMBER: **JK040.03**
 SAMPLED BY: **I. Jackson**

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	REQUESTED ANALYSES	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	TA WO ID
1. P66-7	5/29/07 11:00	1. Total metal 2. Dissolved metal 3. Total Hg (LL) 4. Dissolved metals (500 mL HDPE) and dissolved Hg (LL)			(in 500 mL HDPE) Note: Total metal = dissolved metals: As, Cd, Cr, Pb, Cu, Ni, Zn Total = dissolved Hg (LL) = low level, target reporting limit 0.005 - 0.006 µg/L (Portland lab) Dissolved metals (500 mL HDPE) and dissolved Hg (LL) field filtered @ 0.45 µm.	
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

TURNAROUND REQUEST in Business Days *
 Organic & Inorganic Analyses: 7 5 4 3 2 1 <1
 Petroleum Hydrocarbon Analyses: 5 4 3 2 1 <1
 STD.

OTHER Specify: _____

* Turnaround Request less than standard may incur Rush Charge.

RECEIVED BY: **Inger Jackson** DATE: **5/29/07**
 PRINT NAME: **Inger Jackson** FIRM: **RGS** TIME: **1450**
 RECEIVED BY: **Francisco Lura, Jr.** DATE: **5/29/07**
 PRINT NAME: **Francisco Lura, Jr.** FIRM: **TA-S** TIME: **1450**
 RECEIVED BY: _____ DATE: _____
 PRINT NAME: _____ FIRM: _____ TIME: _____

ADDITIONAL REMARKS: **@ Lab 1530 v/o 7.1 °C**

COC REV 08/2006

June 15, 2007

Inger Jackson
Pacific Groundwater Group
2377 Eastlake Ave. E.
Seattle, WA 98102

RE: T-108

Enclosed are the results of analyses for samples received by the laboratory on 05/30/07 16:45.
The following list is a summary of the Work Orders contained in this report, generated on 06/15/07
09:12.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BQE0535	T-108	JK0410

TestAmerica - Seattle, WA



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Pacific Groundwater Group 2377 Eastlake Ave. E. Seattle, WA 98102	Project Name: T-108	Report Created:
	Project Number: JK0410	06/15/07 09:12
	Project Manager: Inger Jackson	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PGG-5	BQE0535-01	Water	05/30/07 11:00	05/30/07 16:45
PGG-6	BQE0535-02	Water	05/30/07 12:20	05/30/07 16:45

TestAmerica - Seattle, WA



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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/15/07 09:12
Seattle, WA 98102	Project Manager: Inger Jackson	

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0535-01 (PGG-5)		Water					Sampled: 05/30/07 11:00			
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	50.0	ug/l	1x	7F07024	06/07/07 11:17	06/08/07 00:36	
Benzene	"	ND	----	0.500	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	C

Surrogate(s): 4-BFB (FID) 86.7% 58 - 144 % "
4-BFB (PID) 99.8% 68 - 140 % "

BQE0535-02 (PGG-6)		Water					Sampled: 05/30/07 12:20			
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	50.0	ug/l	1x	7F07024	06/07/07 11:17	06/08/07 01:08	
Benzene	"	ND	----	0.500	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	C

Surrogate(s): 4-BFB (FID) 84.7% 58 - 144 % "
4-BFB (PID) 97.8% 68 - 140 % "

TestAmerica - Seattle, WA



Kortland Orr, PM

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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/15/07 09:12
Seattle, WA 98102	Project Manager: Inger Jackson	

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0535-01 (PGG-5)		Water				Sampled: 05/30/07 11:00				
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.236	mg/l	1x	7F01013	06/01/07 09:29	06/05/07 02:16	
Lube Oil Range Hydrocarbons	"	ND	----	0.472	"	"	"	"	"	C
<i>Surrogate(s): 2-FBP</i>			80.1%		53 - 125 %	"			"	
<i>Octacosane</i>			94.9%		68 - 125 %	"			"	
BQE0535-02 (PGG-6)		Water				Sampled: 05/30/07 12:20				
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.236	mg/l	1x	7F01013	06/01/07 09:29	06/05/07 02:42	
Lube Oil Range Hydrocarbons	"	ND	----	0.472	"	"	"	"	"	C
<i>Surrogate(s): 2-FBP</i>			75.8%		53 - 125 %	"			"	
<i>Octacosane</i>			96.2%		68 - 125 %	"			"	

TestAmerica - Seattle, WA



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Pacific Groundwater Group 2377 Eastlake Ave. E. Seattle, WA 98102	Project Name: T-108	Report Created: 06/15/07 09:12
	Project Number: JK0410	
	Project Manager: Inger Jackson	

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0535-01 (PGG-5)		Water			Sampled: 05/30/07 11:00					
Arsenic	EPA 6020	0.00164	----	0.00100	mg/l	1x	7F01026	06/01/07 10:21	06/04/07 10:48	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	"
Chromium	"	0.0120	----	0.00100	"	"	"	"	"	"
Copper	"	0.00136	----	0.00100	"	"	"	"	"	"
Lead	"	ND	----	0.00100	"	"	"	"	"	"
Zinc	"	ND	----	0.0100	"	"	"	"	"	"
BQE0535-01RE1 (PGG-5)		Water			Sampled: 05/30/07 11:00					
Nickel	EPA 6020	0.00119	----	0.00100	mg/l	1x	7F04056	06/04/07 15:38	06/05/07 13:41	
BQE0535-02 (PGG-6)		Water			Sampled: 05/30/07 12:20					
Arsenic	EPA 6020	0.00120	----	0.00100	mg/l	1x	7F01026	06/01/07 10:21	06/04/07 10:54	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	"
Chromium	"	ND	----	0.00100	"	"	"	"	"	"
Copper	"	0.00122	----	0.00100	"	"	"	"	"	"
Lead	"	ND	----	0.00100	"	"	"	"	"	"
Zinc	"	ND	----	0.0100	"	"	"	"	"	"
BQE0535-02RE1 (PGG-6)		Water			Sampled: 05/30/07 12:20					
Nickel	EPA 6020	0.00159	----	0.00100	mg/l	1x	7F04056	06/04/07 15:38	06/05/07 13:47	

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/15/07 09:12

Dissolved Metals by EPA 6000/7000 Series Methods
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0535-01 (PGG-5)		Water			Sampled: 05/30/07 11:00					
Arsenic	EPA 6020 - Diss	0.00161	----	0.00100	mg/l	1x	7F01002	06/01/07 06:19	06/01/07 08:06	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.0118	----	0.00100	"	"	"	"	"	
Copper	"	0.00100	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Nickel	"	ND	----	0.00100	"	"	"	"	"	
Zinc	"	ND	----	0.0100	"	"	"	"	"	

BQE0535-02 (PGG-6)		Water			Sampled: 05/30/07 12:20					
Arsenic	EPA 6020 - Diss	0.00132	----	0.00100	mg/l	1x	7F01002	06/01/07 06:19	06/01/07 08:24	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00161	----	0.00100	"	"	"	"	"	
Copper	"	ND	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Nickel	"	0.00136	----	0.00100	"	"	"	"	"	
Zinc	"	ND	----	0.0100	"	"	"	"	"	

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/15/07 09:12

Polychlorinated Biphenyls by EPA 8082 Modified with Micro-Extraction
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0535-01 (PGG-5)		Water				Sampled: 05/30/07 11:00				
Aroclor 1016	EPA 8082 Mod.	ND	----	0.100	ug/l	1x	7F05008	06/05/07 08:35	06/08/07 06:03	
Aroclor 1221	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1232	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1242	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1248	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1254	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1260	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1262	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1268	"	ND	----	0.100	"	"	"	"	"	
<i>Surrogate(s): TCX</i>			96.2%		58 - 132 %	"				"
<i>Decachlorobiphenyl</i>			32.2%		19 - 152 %	"				"

BQE0535-02 (PGG-6)		Water				Sampled: 05/30/07 12:20				
Aroclor 1016	EPA 8082 Mod.	ND	----	0.100	ug/l	1x	7F05008	06/05/07 08:35	06/08/07 06:21	
Aroclor 1221	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1232	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1242	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1248	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1254	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1260	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1262	"	ND	----	0.100	"	"	"	"	"	
Aroclor 1268	"	ND	----	0.100	"	"	"	"	"	
<i>Surrogate(s): TCX</i>			109%		58 - 132 %	"				"
<i>Decachlorobiphenyl</i>			50.8%		19 - 152 %	"				"

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Pacific Groundwater Group 2377 Eastlake Ave. E. Seattle, WA 98102	Project Name:	T-108	Report Created:
	Project Number:	JK0410	06/15/07 09:12
	Project Manager:	Inger Jackson	

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
BQE0535-01 (PGG-5)		Water					Sampled: 05/30/07 11:00				RL1
Acenaphthene	EPA 8270C-HVI	ND	----	0.472	ug/l	5x	7F01011	06/01/07 09:24	06/05/07 20:15		
Acenaphthylene	"	ND	----	0.472	"	"	"	"	"		
Anthracene	"	ND	----	0.472	"	"	"	"	"		
Benzo (a) anthracene	"	ND	----	0.0472	"	"	"	"	"		
Benzo (a) pyrene	"	ND	----	0.0472	"	"	"	"	"		
Benzo (b) fluoranthene	"	ND	----	0.0472	"	"	"	"	"		
Benzo (k) fluoranthene	"	ND	----	0.0472	"	"	"	"	"		
Benzo (ghi) perylene	"	ND	----	0.472	"	"	"	"	"		
Chrysene	"	ND	----	0.0472	"	"	"	"	"		
Dibenz (a,h) anthracene	"	ND	----	0.0472	"	"	"	"	"		
Fluoranthene	"	ND	----	0.472	"	"	"	"	"		
Fluorene	"	ND	----	0.472	"	"	"	"	"		
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0472	"	"	"	"	"		
1-Methylnaphthalene	"	ND	----	0.472	"	"	"	"	"		
2-Methylnaphthalene	"	ND	----	0.472	"	"	"	"	"		
Naphthalene	"	ND	----	0.472	"	"	"	"	"		
Phenanthrene	"	ND	----	0.472	"	"	"	"	"		
Pyrene	"	ND	----	0.472	"	"	"	"	"		
<i>Surrogate(s): Benzo (a) pyrene-d12</i>				59.7%		20 - 125 %	"			"	
<i>1-Methylnaphthalene-d10</i>				56.9%		39 - 125 %	"			"	

BQE0535-02 (PGG-6)		Water					Sampled: 05/30/07 12:20			
Acenaphthene	EPA 8270C-HVI	ND	----	0.0943	ug/l	1x	7F01011	06/01/07 09:24	06/05/07 19:44	
Acenaphthylene	"	ND	----	0.0943	"	"	"	"	"	
Anthracene	"	ND	----	0.0943	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00943	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00943	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00943	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00943	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0943	"	"	"	"	"	
Chrysene	"	ND	----	0.00943	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00943	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0943	"	"	"	"	"	
Fluorene	"	ND	----	0.0943	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00943	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0943	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0943	"	"	"	"	"	
Naphthalene	"	ND	----	0.0943	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0943	"	"	"	"	"	
Pyrene	"	ND	----	0.0943	"	"	"	"	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>				63.1%		20 - 125 %	"			"

TestAmerica - Seattle, WA



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Pacific Groundwater Group 2377 Eastlake Ave. E. Seattle, WA 98102	Project Name: T-108	Report Created:
	Project Number: JK0410	06/15/07 09:12
	Project Manager: Inger Jackson	

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0535-02	(PGG-6)			Water				Sampled: 05/30/07 12:20		
<i>1-Methylnaphthalene-d10</i>		<i>61.0%</i>			<i>39 - 125 %</i>	<i>1x</i>			<i>06/05/07 19:44</i>	

TestAmerica - Seattle, WA



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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/15/07 09:12
Seattle, WA 98102	Project Manager: Inger Jackson	

Dissolved Mercury per EPA Method 1631E
TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0535-01 (PGG-5)		Water			Sampled: 05/30/07 11:00					
Mercury	EPA 1631E	ND	----	0.00500	ug/l	1x	7060170	06/05/07 15:58	06/06/07 09:51	
BQE0535-02 (PGG-6)		Water			Sampled: 05/30/07 12:20					
Mercury	EPA 1631E	ND	----	0.00500	ug/l	1x	7060170	06/05/07 15:58	06/06/07 09:53	

TestAmerica - Seattle, WA



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Pacific Groundwater Group 2377 Eastlake Ave. E. Seattle, WA 98102	Project Name: T-108	Report Created:
	Project Number: JK0410	06/15/07 09:12
	Project Manager: Inger Jackson	

Mercury per EPA Method 1631E
TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQE0535-01 (PGG-5)		Water			Sampled: 05/30/07 11:00					
Mercury	EPA 1631E	ND	----	0.00500	ug/l	1x	7060171	06/05/07 15:59	06/06/07 11:47	P1
BQE0535-02 (PGG-6)		Water			Sampled: 05/30/07 12:20					
Mercury	EPA 1631E	ND	----	0.00500	ug/l	1x	7060171	06/05/07 15:59	06/06/07 11:17	

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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/15/07 09:12
Seattle, WA 98102	Project Manager: Inger Jackson	

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F07024 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (7F07024-BLK1)

Extracted: 06/07/07 11:17

Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	06/07/07 14:17	
Benzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (FID)		Recovery:	83.2%	Limits: 58-144%		"						06/07/07 14:17		
4-BFB (PID)		Recovery:	98.7%	Limits: 68-140%		"						"		

LCS (7F07024-BS1)

Extracted: 06/07/07 11:17

Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	992	---	50.0	ug/l	1x	--	1000	99.2%	(80-120)	--	--	06/07/07 14:57	
Surrogate(s): 4-BFB (FID)		Recovery:	94.3%	Limits: 58-144%		"						06/07/07 14:57		

LCS (7F07024-BS2)

Extracted: 06/07/07 11:17

Benzene	NWTPH-Gx/ 8021B	27.0	---	0.500	ug/l	1x	--	30.0	90.0%	(80-120)	--	--	06/07/07 15:29	
Toluene	"	26.4	---	0.500	"	"	--	"	88.0%	"	--	--	"	
Ethylbenzene	"	26.0	---	0.500	"	"	--	"	86.7%	"	--	--	"	
Xylenes (total)	"	83.7	---	1.00	"	"	--	90.0	93.0%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery:	98.8%	Limits: 68-140%		"						06/07/07 15:29		

Duplicate (7F07024-DUP1)

QC Source: BQE0505-01

Extracted: 06/07/07 11:17

Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	50.0	ug/l	1x	ND	--	--	--	20.3% (25)		06/07/07 16:39	R4
Benzene	"	ND	---	0.500	"	"	ND	--	--	--	12.7%	"	"	R4
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	31.5%	"	"	R4
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Xylenes (total)	"	ND	---	1.00	"	"	ND	--	--	--	NR	"	"	
Surrogate(s): 4-BFB (FID)		Recovery:	85.2%	Limits: 58-144%		"						06/07/07 16:39		
4-BFB (PID)		Recovery:	99.3%	Limits: 68-140%		"						"		

Duplicate (7F07024-DUP2)

QC Source: BQF0014-01

Extracted: 06/07/07 11:17

Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	50.0	ug/l	1x	ND	--	--	--	25.6% (25)		06/08/07 06:28	R4
Benzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Xylenes (total)	"	ND	---	1.00	"	"	ND	--	--	--	NR	"	"	C
Surrogate(s): 4-BFB (FID)		Recovery:	83.7%	Limits: 58-144%		"						06/08/07 06:28		
4-BFB (PID)		Recovery:	98.3%	Limits: 68-140%		"						"		

TestAmerica - Seattle, WA



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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/15/07 09:12
Seattle, WA 98102	Project Manager: Inger Jackson	

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F07024 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Matrix Spike (7F07024-MS1)		QC Source: BQE0535-02				Extracted: 06/07/07 11:17								
Gasoline Range Hydrocarbons	NWTPH-Gx/8021B	1040	---	50.0	ug/l	1x	17.2	1000	102%	(75-131)	--	--	06/08/07 01:40	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 93.8%</i>		<i>Limits: 58-144%</i>		<i>"</i>						<i>06/08/07 01:40</i>		

Matrix Spike (7F07024-MS2)		QC Source: BQE0535-02				Extracted: 06/07/07 11:17								
Benzene	NWTPH-Gx/8021B	30.4	---	0.500	ug/l	1x	ND	30.0	101%	(46-130)	--	--	06/08/07 04:19	
Toluene	"	28.7	---	0.500	"	"	ND	"	95.7%	(60-124)	--	--	"	
Ethylbenzene	"	29.4	---	0.500	"	"	ND	"	98.0%	(56-141)	--	--	"	
Xylenes (total)	"	93.3	---	1.00	"	"	ND	90.0	104%	(66-132)	--	--	"	C8
<i>Surrogate(s): 4-BFB (PID)</i>		<i>Recovery: 100%</i>		<i>Limits: 68-140%</i>		<i>"</i>						<i>06/08/07 04:19</i>		

Matrix Spike Dup (7F07024-MSD1)		QC Source: BQE0535-02				Extracted: 06/07/07 11:17								
Gasoline Range Hydrocarbons	NWTPH-Gx/8021B	1020	---	50.0	ug/l	1x	17.2	1000	100%	(75-131)	1.94%	(25)	06/08/07 02:12	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.8%</i>		<i>Limits: 58-144%</i>		<i>"</i>						<i>06/08/07 02:12</i>		

Matrix Spike Dup (7F07024-MSD2)		QC Source: BQE0535-02				Extracted: 06/07/07 11:17								
Benzene	NWTPH-Gx/8021B	30.3	---	0.500	ug/l	1x	ND	30.0	101%	(46-130)	0.329%	(40)	06/08/07 04:51	
Toluene	"	28.8	---	0.500	"	"	ND	"	96.0%	(60-124)	0.348%	"	"	
Ethylbenzene	"	29.4	---	0.500	"	"	ND	"	98.0%	(56-141)	0.00%	"	"	
Xylenes (total)	"	93.3	---	1.00	"	"	ND	90.0	104%	(66-132)	0.00%	"	"	C8
<i>Surrogate(s): 4-BFB (PID)</i>		<i>Recovery: 102%</i>		<i>Limits: 68-140%</i>		<i>"</i>						<i>06/08/07 04:51</i>		

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/15/07 09:12

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F01013 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7F01013-BLK1)								Extracted: 06/01/07 09:29						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.250	mg/l	1x	--	--	--	--	--	--	06/04/07 19:15	
Lube Oil Range Hydrocarbons	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery:</i>	<i>77.2%</i>	<i>Limits: 53-125%</i>		<i>"</i>							<i>06/04/07 19:15</i>	
<i>Octacosane</i>		<i>100%</i>		<i>68-125%</i>		<i>"</i>							<i>"</i>	
LCS (7F01013-BS1)								Extracted: 06/01/07 09:29						
Diesel Range Hydrocarbons	NWTPH-Dx	1.79	---	0.250	mg/l	1x	--	2.00	89.5%	(61-132)	--	--	06/04/07 19:41	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery:</i>	<i>92.4%</i>	<i>Limits: 53-125%</i>		<i>"</i>							<i>06/04/07 19:41</i>	
<i>Octacosane</i>		<i>98.4%</i>		<i>68-125%</i>		<i>"</i>							<i>"</i>	
Matrix Spike (7F01013-MS1)								QC Source: BQE0535-02				Extracted: 06/01/07 09:29		
Diesel Range Hydrocarbons	NWTPH-Dx	1.67	---	0.236	mg/l	1x	ND	1.89	88.4%	(32-143)	--	--	06/04/07 20:08	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery:</i>	<i>92.4%</i>	<i>Limits: 53-125%</i>		<i>"</i>							<i>06/04/07 20:08</i>	
<i>Octacosane</i>		<i>95.3%</i>		<i>68-125%</i>		<i>"</i>							<i>"</i>	
Matrix Spike Dup (7F01013-MSD1)								QC Source: BQE0535-02				Extracted: 06/01/07 09:29		
Diesel Range Hydrocarbons	NWTPH-Dx	1.65	---	0.236	mg/l	1x	ND	1.89	87.3%	(32-143)	1.20%	(50)	06/04/07 20:34	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery:</i>	<i>96.2%</i>	<i>Limits: 53-125%</i>		<i>"</i>							<i>06/04/07 20:34</i>	
<i>Octacosane</i>		<i>104%</i>		<i>68-125%</i>		<i>"</i>							<i>"</i>	

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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/15/07 09:12
Seattle, WA 98102	Project Manager: Inger Jackson	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F01026	Water Preparation Method: EPA 3020A
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (7F01026-BLK1)

Extracted: 06/01/07 10:21

Lead	EPA 6020	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	06/04/07 10:01	
Arsenic	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Zinc	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Copper	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	

LCS (7F01026-BS1)

Extracted: 06/01/07 10:21

Arsenic	EPA 6020	0.0748	---	0.00100	mg/l	1x	--	0.0800	93.5%	(80-120)	--	--	06/04/07 10:19	
Cadmium	"	0.0792	---	0.00100	"	"	--	"	99.0%	"	--	--	"	
Chromium	"	0.0848	---	0.00100	"	"	--	"	106%	"	--	--	"	
Copper	"	0.0846	---	0.00100	"	"	--	"	106%	"	--	--	"	
Zinc	"	0.0734	---	0.0100	"	"	--	"	91.8%	"	--	--	"	
Lead	"	0.0770	---	0.00100	"	"	--	"	96.2%	"	--	--	"	

Duplicate (7F01026-DUP1)

QC Source: BQE0535-02

Extracted: 06/01/07 10:21

Cadmium	EPA 6020	ND	---	0.00100	mg/l	1x	ND	--	--	--	NR (20)	--	06/04/07 10:42	
Arsenic	"	0.00124	---	0.00100	"	"	0.00120	--	--	--	3.28%	"	"	
Lead	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	
Zinc	"	ND	---	0.0100	"	"	ND	--	--	--	18.9%	"	"	R4
Copper	"	0.00115	---	0.00100	"	"	0.00122	--	--	--	5.91%	"	"	
Chromium	"	ND	---	0.00100	"	"	ND	--	--	--	2.53%	"	"	R4

Matrix Spike (7F01026-MS1)

QC Source: BQE0535-02

Extracted: 06/01/07 10:21

Chromium	EPA 6020	0.0878	---	0.00100	mg/l	1x	0.000800	0.0800	109%	(80-120)	--	--	06/04/07 10:31	
Zinc	"	0.0780	---	0.0100	"	"	0.00503	"	91.2%	(68-128)	--	--	"	
Cadmium	"	0.0802	---	0.00100	"	"	ND	"	100%	(80-120)	--	--	"	
Arsenic	"	0.0807	---	0.00100	"	"	0.00120	"	99.4%	(75-125)	--	--	"	
Lead	"	0.0826	---	0.00100	"	"	ND	"	103%	(80-120)	--	--	"	
Copper	"	0.0854	---	0.00100	"	"	0.00122	"	105%	(70-125)	--	--	"	

Matrix Spike Dup (7F01026-MSD1)

QC Source: BQE0535-02

Extracted: 06/01/07 10:21

Chromium	EPA 6020	0.0889	---	0.00100	mg/l	1x	0.000800	0.0800	110%	(80-120)	1.25% (20)	--	06/04/07 10:37	
Copper	"	0.0858	---	0.00100	"	"	0.00122	"	106%	(70-125)	0.467%	"	"	
Zinc	"	0.0759	---	0.0100	"	"	0.00503	"	88.6%	(68-128)	2.73%	"	"	
Arsenic	"	0.0817	---	0.00100	"	"	0.00120	"	101%	(75-125)	1.23%	"	"	
Lead	"	0.0832	---	0.00100	"	"	ND	"	104%	(80-120)	0.724%	"	"	
Cadmium	"	0.0809	---	0.00100	"	"	ND	"	101%	"	0.869%	"	"	

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/15/07 09:12

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F04056	Water Preparation Method: EPA 3020A
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7F04056-BLK1)								Extracted: 06/04/07 15:38						
Nickel	EPA 6020	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	06/05/07 12:25	
LCS (7F04056-BS1)								Extracted: 06/04/07 15:38						
Nickel	EPA 6020	0.0914	---	0.00100	mg/l	1x	--	0.0800	114%	(80-120)	--	--	06/05/07 12:30	
Duplicate (7F04056-DUP1)				QC Source: BQE0535-02RE1				Extracted: 06/04/07 15:38						
Nickel	EPA 6020	0.00155	---	0.00100	mg/l	1x	0.00159	--	--	--	2.55% (20)	--	06/05/07 13:06	
Matrix Spike (7F04056-MS1)				QC Source: BQE0535-02RE1				Extracted: 06/04/07 15:38						
Nickel	EPA 6020	0.0878	---	0.00100	mg/l	1x	0.00159	0.0800	108%	(77-120)	--	--	06/05/07 12:54	
Matrix Spike Dup (7F04056-MSD1)				QC Source: BQE0535-02RE1				Extracted: 06/04/07 15:38						
Nickel	EPA 6020	0.0875	---	0.00100	mg/l	1x	0.00159	0.0800	107%	(77-120)	0.342% (20)	--	06/05/07 13:00	

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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/15/07 09:12
Seattle, WA 98102	Project Manager: Inger Jackson	

Dissolved Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F01002 Water Preparation Method: EPA 3005A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (7F01002-BLK1) Extracted: 06/01/07 06:19

Cadmium	EPA 6020 - Diss	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	06/01/07 07:37	
Nickel	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Lead	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Zinc	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Copper	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	

LCS (7F01002-BS1) Extracted: 06/01/07 06:19

Cadmium	EPA 6020 - Diss	0.201	---	0.00100	mg/l	1x	--	0.200	100%	(80-120)	--	--	06/01/07 07:43	
Chromium	"	0.195	---	0.00100	"	"	--	"	97.5%	"	--	--	"	
Copper	"	0.199	---	0.00100	"	"	--	"	99.5%	"	--	--	"	
Nickel	"	0.195	---	0.00100	"	"	--	"	97.5%	"	--	--	"	
Lead	"	0.206	---	0.00100	"	"	--	"	103%	"	--	--	"	
Zinc	"	0.203	---	0.0100	"	"	--	"	102%	"	--	--	"	
Arsenic	"	0.203	---	0.00100	"	"	--	"	102%	"	--	--	"	

Duplicate (7F01002-DUP1) QC Source: BQE0535-02 Extracted: 06/01/07 06:19

Lead	EPA 6020 - Diss	ND	---	0.00100	mg/l	1x	ND	--	--	--	(20)	--	06/01/07 08:01	R4
Arsenic	"	0.00129	---	0.00100	"	"	0.00132	--	--	--	2.30%	"	"	
Cadmium	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	R4
Chromium	"	0.00167	---	0.00100	"	"	0.00161	--	--	--	3.66%	"	"	
Copper	"	ND	---	0.00100	"	"	ND	--	--	--	0.00%	"	"	R4
Nickel	"	0.00136	---	0.00100	"	"	0.00136	--	--	--	0.00%	"	"	
Zinc	"	ND	---	0.0100	"	"	ND	--	--	--	0.00%	"	"	R4

Matrix Spike (7F01002-MS1) QC Source: BQE0535-02 Extracted: 06/01/07 06:19

Lead	EPA 6020 - Diss	0.105	---	0.00100	mg/l	1x	ND	0.100	105%	(77-120)	--	--	06/01/07 07:49	
Nickel	"	0.0942	---	0.00100	"	"	0.00136	0.0995	93.3%	(55-130)	--	--	"	
Copper	"	0.0984	---	0.00100	"	"	0.000990	0.100	97.4%	(68-120)	--	--	"	
Chromium	"	0.0978	---	0.00100	"	"	0.00161	"	96.2%	(75-125)	--	--	"	
Cadmium	"	0.0995	---	0.00100	"	"	ND	"	99.5%	(68-125)	--	--	"	
Zinc	"	0.103	---	0.0100	"	"	0.00283	"	100%	(77-120)	--	--	"	
Arsenic	"	0.115	---	0.00100	"	"	0.00132	0.0995	114%	(80-128)	--	--	"	

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/15/07 09:12

Dissolved Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
TestAmerica - Seattle, WA

QC Batch: 7F01002 Water Preparation Method: EPA 3005A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (7F01002-MSD1)				QC Source: BQE0535-02			Extracted: 06/01/07 06:19							
Cadmium	EPA 6020 - Diss	0.104	---	0.00100	mg/l	1x	ND	0.100	104%	(68-125)	4.42%	(20)	06/01/07 07:55	
Arsenic	"	0.120	---	0.00100	"	"	0.00132	0.0995	119%	(80-128)	4.26%	"	"	
Copper	"	0.103	---	0.00100	"	"	0.000990	0.100	102%	(68-120)	4.57%	"	"	
Nickel	"	0.0978	---	0.00100	"	"	0.00136	0.0995	96.9%	(55-130)	3.75%	"	"	
Chromium	"	0.101	---	0.00100	"	"	0.00161	0.100	99.4%	(75-125)	3.22%	"	"	
Lead	"	0.109	---	0.00100	"	"	ND	"	109%	(77-120)	3.74%	"	"	
Zinc	"	0.106	---	0.0100	"	"	0.00283	"	103%	"	2.87%	"	"	

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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/15/07 09:12
Seattle, WA 98102	Project Manager: Inger Jackson	

Polychlorinated Biphenyls by EPA 8082 Modified with Micro-Extraction - Laboratory Quality Control Results
TestAmerica - Seattle, WA

QC Batch: 7F05008 Water Preparation Method: Solvent Extraction

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7F05008-BLK1)										Extracted: 06/05/07 08:35				
Aroclor 1016	EPA 8082 Mod.	ND	---	0.100	ug/l	1x	--	--	--	--	--	--	06/08/07 04:35	
Aroclor 1221	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1232	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1242	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1248	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1254	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1260	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1262	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Aroclor 1268	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): TCX</i>		<i>Recovery: 99.4%</i>		<i>Limits: 58-132%</i>		<i>"</i>							<i>06/08/07 04:35</i>	
<i>Decachlorobiphenyl</i>		<i>50.8%</i>		<i>19-152%</i>		<i>"</i>							<i>"</i>	
LCS (7F05008-BS1)										Extracted: 06/05/07 08:35				
Aroclor 1016	EPA 8082 Mod.	5.37	---	0.100	ug/l	1x	--	5.00	107%	(53-141)	--	--	06/08/07 04:53	
Aroclor 1260	"	5.16	---	0.100	"	"	--	"	103%	(34-161)	--	--	"	
<i>Surrogate(s): TCX</i>		<i>Recovery: 106%</i>		<i>Limits: 58-132%</i>		<i>"</i>							<i>06/08/07 04:53</i>	
<i>Decachlorobiphenyl</i>		<i>82.4%</i>		<i>19-152%</i>		<i>"</i>							<i>"</i>	
Matrix Spike (7F05008-MS1)										QC Source: BQE0535-02 Extracted: 06/05/07 08:35				
Aroclor 1016	EPA 8082 Mod.	4.83	---	0.100	ug/l	1x	ND	5.00	96.6%	(33-155)	--	--	06/08/07 05:10	
Aroclor 1260	"	4.13	---	0.100	"	"	ND	"	82.6%	(27-165)	--	--	"	
<i>Surrogate(s): TCX</i>		<i>Recovery: 97.6%</i>		<i>Limits: 58-132%</i>		<i>"</i>							<i>06/08/07 05:10</i>	
<i>Decachlorobiphenyl</i>		<i>68.2%</i>		<i>19-152%</i>		<i>"</i>							<i>"</i>	
Matrix Spike Dup (7F05008-MSD1)										QC Source: BQE0535-02 Extracted: 06/05/07 08:35				
Aroclor 1016	EPA 8082 Mod.	4.91	---	0.100	ug/l	1x	ND	5.00	98.2%	(33-155)	1.64% (35)		06/08/07 05:28	
Aroclor 1260	"	3.66	---	0.100	"	"	ND	"	73.2%	(27-165)	12.1% "		"	
<i>Surrogate(s): TCX</i>		<i>Recovery: 106%</i>		<i>Limits: 58-132%</i>		<i>"</i>							<i>06/08/07 05:28</i>	
<i>Decachlorobiphenyl</i>		<i>51.6%</i>		<i>19-152%</i>		<i>"</i>							<i>"</i>	

TestAmerica - Seattle, WA



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Pacific Groundwater Group	Project Name: T-108	Report Created:
2377 Eastlake Ave. E.	Project Number: JK0410	06/15/07 09:12
Seattle, WA 98102	Project Manager: Inger Jackson	

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F01011 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7F01011-BLK2)													Extracted: 06/01/07 09:24	
Acenaphthene	EPA 8270C-HVI	ND	---	0.100	ug/l	1x	--	--	--	--	--	--	06/05/07 13:00	
Acenaphthylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Dibenz (a,h) anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery: 60.6%</i>		<i>Limits: 20-125%</i>		<i>"</i>							<i>06/05/07 13:00</i>	
<i>1-Methylnaphthalene-d10</i>		<i>68.3%</i>		<i>39-125%</i>		<i>"</i>							<i>"</i>	

LCS (7F01011-BS2)													Extracted: 06/01/07 09:24	
Acenaphthene	EPA 8270C-HVI	13.4	---	1.00	ug/l	10x	--	20.0	67.0%	(44-125)	--	--	06/05/07 13:31	
Acenaphthylene	"	14.7	---	1.00	"	"	--	"	73.5%	(51-125)	--	--	"	
Anthracene	"	14.1	---	1.00	"	"	--	"	70.5%	(50-125)	--	--	"	
Benzo (a) anthracene	"	14.7	---	0.100	"	"	--	"	73.5%	"	--	--	"	
Benzo (a) pyrene	"	13.9	---	0.100	"	"	--	"	69.5%	(47-125)	--	--	"	
Benzo (b) fluoranthene	"	14.9	---	0.100	"	"	--	"	74.5%	(50-125)	--	--	"	
Benzo (k) fluoranthene	"	11.9	---	0.100	"	"	--	"	59.5%	(46-125)	--	--	"	
Benzo (ghi) perylene	"	14.3	---	1.00	"	"	--	"	71.5%	(49-125)	--	--	"	
Chrysene	"	14.4	---	0.100	"	"	--	"	72.0%	(53-125)	--	--	"	
Dibenz (a,h) anthracene	"	14.1	---	0.100	"	"	--	"	70.5%	(47-125)	--	--	"	
Fluoranthene	"	14.0	---	1.00	"	"	--	"	70.0%	(55-125)	--	--	"	
Fluorene	"	12.5	---	1.00	"	"	--	"	62.5%	(52-125)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	14.2	---	0.100	"	"	--	"	71.0%	(49-125)	--	--	"	
1-Methylnaphthalene	"	10.8	---	1.00	"	"	--	"	54.0%	(37-125)	--	--	"	
2-Methylnaphthalene	"	11.8	---	1.00	"	"	--	"	59.0%	(40-125)	--	--	"	
Naphthalene	"	13.8	---	1.00	"	"	--	"	69.0%	(42-125)	--	--	"	

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/15/07 09:12

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection - Laboratory Quality Control Results
TestAmerica - Seattle, WA

QC Batch: 7F01011 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (7F01011-BS2)													Extracted: 06/01/07 09:24	
Phenanthrene	EPA 8270C-HVI	13.5	---	1.00	ug/l	10x	--	20.0	67.5%	(47-125)	--	--	06/05/07 13:31	
Pyrene	"	14.1	---	1.00	"	"	--	"	70.5%	"	--	--	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery:</i>	<i>90.0%</i>	<i>Limits:</i>	<i>20-125%</i>	<i>"</i>							<i>06/05/07 13:31</i>	
<i>1-Methylnaphthalene-d10</i>		<i>42.6%</i>		<i>39-125%</i>	<i>"</i>								<i>"</i>	

Matrix Spike (7F01011-MS2)													QC Source: BQE0535-02		Extracted: 06/01/07 09:24	
Acenaphthene	EPA 8270C-HVI	12.1	---	1.00	ug/l	10x	ND	20.0	60.5%	(45-125)	--	--	06/05/07 20:46			
Acenaphthylene	"	12.8	---	1.00	"	"	ND	"	64.0%	"	--	--	"			
Anthracene	"	12.8	---	1.00	"	"	0.0221	"	63.9%	"	--	--	"			
Benzo (a) anthracene	"	12.9	---	0.100	"	"	ND	"	64.5%	"	--	--	"			
Benzo (a) pyrene	"	12.0	---	0.100	"	"	ND	"	60.0%	"	--	--	"			
Benzo (b) fluoranthene	"	11.7	---	0.100	"	"	ND	"	58.5%	"	--	--	"			
Benzo (k) fluoranthene	"	12.3	---	0.100	"	"	ND	"	61.5%	"	--	--	"			
Benzo (ghi) perylene	"	11.7	---	1.00	"	"	ND	"	58.5%	"	--	--	"			
Chrysene	"	13.2	---	0.100	"	"	ND	"	66.0%	"	--	--	"			
Dibenz (a,h) anthracene	"	11.9	---	0.100	"	"	ND	"	59.5%	"	--	--	"			
Fluoranthene	"	13.4	---	1.00	"	"	ND	"	67.0%	(47-125)	--	--	"			
Fluorene	"	12.0	---	1.00	"	"	ND	"	60.0%	(45-125)	--	--	"			
Indeno (1,2,3-cd) pyrene	"	11.7	---	0.100	"	"	ND	"	58.5%	"	--	--	"			
1-Methylnaphthalene	"	10.8	---	1.00	"	"	ND	"	54.0%	"	--	--	"			
2-Methylnaphthalene	"	10.8	---	1.00	"	"	ND	"	54.0%	"	--	--	"			
Naphthalene	"	13.1	---	1.00	"	"	ND	"	65.5%	"	--	--	"			
Phenanthrene	"	12.6	---	1.00	"	"	0.00677	"	63.0%	"	--	--	"			
Pyrene	"	12.5	---	1.00	"	"	ND	"	62.5%	"	--	--	"			
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery:</i>	<i>67.4%</i>	<i>Limits:</i>	<i>20-125%</i>	<i>"</i>							<i>06/05/07 20:46</i>			
<i>1-Methylnaphthalene-d10</i>		<i>39.4%</i>		<i>39-125%</i>	<i>"</i>								<i>"</i>			

Matrix Spike Dup (7F01011-MSD2)													QC Source: BQE0535-02		Extracted: 06/01/07 09:24	
Acenaphthene	EPA 8270C-HVI	12.7	---	1.00	ug/l	10x	ND	20.0	63.5%	(45-125)	4.84% (40)		06/05/07 21:17			
Acenaphthylene	"	13.4	---	1.00	"	"	ND	"	67.0%	"	4.58%	"	"			
Anthracene	"	13.2	---	1.00	"	"	0.0221	"	65.9%	"	3.08%	"	"			
Benzo (a) anthracene	"	13.6	---	0.100	"	"	ND	"	68.0%	"	5.28%	"	"			
Benzo (a) pyrene	"	12.0	---	0.100	"	"	ND	"	60.0%	"	0.00%	"	"			
Benzo (b) fluoranthene	"	12.3	---	0.100	"	"	ND	"	61.5%	"	5.00%	"	"			
Benzo (k) fluoranthene	"	12.0	---	0.100	"	"	ND	"	60.0%	"	2.47%	"	"			
Benzo (ghi) perylene	"	11.9	---	1.00	"	"	ND	"	59.5%	"	1.69%	"	"			
Chrysene	"	13.4	---	0.100	"	"	ND	"	67.0%	"	1.50%	"	"			
Dibenz (a,h) anthracene	"	12.0	---	0.100	"	"	ND	"	60.0%	"	0.837%	"	"			

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/15/07 09:12

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7F01011 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (7F01011-MSD2)			QC Source: BQE0535-02				Extracted: 06/01/07 09:24							
Fluoranthene	EPA 8270C-HVI	13.8	---	1.00	ug/l	10x	ND	20.0	69.0%	(47-125)	2.94%	(40)	06/05/07 21:17	
Fluorene	"	12.4	---	1.00	"	"	ND	"	62.0%	(45-125)	3.28%	"	"	
Indeno (1,2,3-cd) pyrene	"	11.9	---	0.100	"	"	ND	"	59.5%	"	1.69%	"	"	
1-Methylnaphthalene	"	13.6	---	1.00	"	"	ND	"	68.0%	"	23.0%	"	"	
2-Methylnaphthalene	"	14.7	---	1.00	"	"	ND	"	73.5%	"	30.6%	"	"	
Naphthalene	"	17.4	---	1.00	"	"	ND	"	87.0%	"	28.2%	"	"	
Phenanthrene	"	13.2	---	1.00	"	"	0.00677	"	66.0%	"	4.65%	"	"	
Pyrene	"	12.7	---	1.00	"	"	ND	"	63.5%	"	1.59%	"	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery:</i>	<i>69.2%</i>	<i>Limits: 20-125%</i>		<i>"</i>								<i>06/05/07 21:17</i>
<i>1-Methylnaphthalene-d10</i>			<i>58.2%</i>	<i>39-125%</i>		<i>"</i>								<i>"</i>

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/15/07 09:12

Dissolved Mercury per EPA Method 1631E - Laboratory Quality Control Results
 TestAmerica - Portland, OR

QC Batch: 7060170 Water Preparation Method: EPA 1631

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7060170-BLK1)								Extracted: 06/05/07 15:58						
Mercury	EPA 1631E	ND	---	0.00500	ug/l	1x	--	--	--	--	--	--	06/06/07 09:32	
LCS (7060170-BS1)								Extracted: 06/05/07 15:58						
Mercury	EPA 1631E	0.0493	---	0.00500	ug/l	1x	--	0.0500	98.6%	(85-115)	--	--	06/06/07 09:35	
LCS Dup (7060170-BSD1)								Extracted: 06/05/07 15:58						
Mercury	EPA 1631E	0.0491	---	0.00500	ug/l	1x	--	0.0500	98.2%	(85-115)	0.407% (20)		06/06/07 09:38	
Duplicate (7060170-DUP1)								QC Source: BQE0535-02		Extracted: 06/05/07 15:58				
Mercury	EPA 1631E	ND	---	0.00500	ug/l	1x	ND	--	--	--	NR (20)		06/06/07 09:42	
Matrix Spike (7060170-MS1)								QC Source: BQE0535-02		Extracted: 06/05/07 15:58				
Mercury	EPA 1631E	0.0421	---	0.00500	ug/l	1x	ND	0.0500	84.2%	(75-125)	--	--	06/06/07 09:44	
Matrix Spike Dup (7060170-MSD1)								QC Source: BQE0535-02		Extracted: 06/05/07 15:58				
Mercury	EPA 1631E	0.0409	---	0.00500	ug/l	1x	ND	0.0500	81.8%	(75-125)	2.89% (20)		06/06/07 09:48	

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Pacific Groundwater Group	Project Name: T-108	
2377 Eastlake Ave. E.	Project Number: JK0410	Report Created:
Seattle, WA 98102	Project Manager: Inger Jackson	06/15/07 09:12

Mercury per EPA Method 1631E - Laboratory Quality Control Results
 TestAmerica - Portland, OR

QC Batch: 7060171 Water Preparation Method: EPA 1631

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7060171-BLK1)								Extracted: 06/05/07 15:59						
Mercury	EPA 1631E	ND	---	0.00500	ug/l	1x	--	--	--	--	--	--	06/06/07 10:52	
LCS (7060171-BS1)								Extracted: 06/05/07 15:59						
Mercury	EPA 1631E	0.0500	---	0.00500	ug/l	1x	--	0.0500	100%	(85-115)	--	--	06/06/07 10:55	
LCS Dup (7060171-BSD1)								Extracted: 06/05/07 15:59						
Mercury	EPA 1631E	0.0491	---	0.00500	ug/l	1x	--	0.0500	98.2%	(85-115)	1.82% (20)		06/06/07 10:58	
Duplicate (7060171-DUP1)								QC Source: PQE1141-02		Extracted: 06/05/07 15:59				
Mercury	EPA 1631E	ND	---	0.00500	ug/l	1x	ND	--	--	--	33.7% (20)		06/06/07 11:02	R4
Matrix Spike (7060171-MS1)								QC Source: PQE1141-02		Extracted: 06/05/07 15:59				
Mercury	EPA 1631E	0.0424	---	0.00500	ug/l	1x	0.000473	0.0500	83.9%	(71-125)	--	--	06/06/07 11:04	
Matrix Spike (7060171-MS2)								QC Source: BQE0535-02		Extracted: 06/05/07 15:59				
Mercury	EPA 1631E	0.0404	---	0.00500	ug/l	1x	ND	0.0500	80.8%	(71-125)	--	--	06/06/07 11:10	
Matrix Spike Dup (7060171-MSD1)								QC Source: PQE1141-02		Extracted: 06/05/07 15:59				
Mercury	EPA 1631E	0.0412	---	0.00500	ug/l	1x	0.000473	0.0500	81.5%	(71-125)	2.87% (20)		06/06/07 11:07	
Matrix Spike Dup (7060171-MSD2)								QC Source: BQE0535-02		Extracted: 06/05/07 15:59				
Mercury	EPA 1631E	0.0402	---	0.00500	ug/l	1x	ND	0.0500	80.4%	(71-125)	0.496% (20)		06/06/07 11:14	

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Pacific Groundwater Group 2377 Eastlake Ave. E. Seattle, WA 98102	Project Name:	T-108	Report Created:
	Project Number:	JK0410	06/15/07 09:12
	Project Manager:	Inger Jackson	

Notes and Definitions

Report Specific Notes:

- C - Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- C8 - Calibration Verification recovery was above the method control limit for this analyte. A high bias may be indicated.
- P1 - Sample received and analyzed without chemical preservation.
- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- RL1 - Reporting limit raised due to sample matrix effects.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Seattle, WA



Kortland Orr, PM

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TestAmerica

ANALYTICAL TESTING CORPORATION

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244
 425-420-9200 FAX 420-9210
 11922 E. First Ave, Spokane, WA 99206-5302
 509-924-9200 FAX 924-9290
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145
 503-906-9200 FAX 906-9210
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: **60E0535**

CLIENT: Pacific Groundwater Group / Port of Seattle

REPORT TO: Inger Jackson
 ADDRESS: 2379 Edslake Ave E
 Seattle, WA 98102
 PHONE: 206-329-0141 FAX: 206-329-6968

INVOICE TO: Port of Seattle
 PM: Roy Kuroiwa

PROJECT NAME: T108 - Port of Seattle
 PROJECT NUMBER: JK0410.03

SAMPLED BY: I. Jackson / J.G. Mutti

CLIENT SAMPLE IDENTIFICATION

SAMPLING DATE/TIME

1	PEG-5	5/30/07	1100
2	PEG-6	5/30/07	1220
3	PEG-6 MS	5/30/07	1230
4	PEG-6 MSD	5/30/07	1230

PRESERVATIVE

①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩

REQUESTED ANAL

As, Cd, Cr, Pb, Cu, Ni, Zn
 Dissolved metals & dissolved Hg (LL)
 Total & dissolved Hg (LL)
 target reporting limit 0.005 - 0.006 µg/L

Notes: ① Metals: As, Cd, Cr, Pb, Cu, Ni, Zn

② Dissolved metals & dissolved Hg (LL) field filtered @ 0.45 µm

③ Total & dissolved Hg (LL): analysis in Portland, target reporting limit 0.005 - 0.006 µg/L

TURNAROUND REQUEST

in Business Days *

Organic & Inorganic Analyses
 7 5 4 3 2 1 <1

Petroleum Hydrocarbon Analyses
 5 4 3 2 1 <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	TA WO ID
			01
			02
			↓

RELEASED BY: Inger Jackson
 PRINT NAME: Inger Jackson PEG
 DATE: 5/30/07
 TIME: 1505
 RECEIVED BY: [Signature]
 PRINT NAME: Francisco Luna, Jr.
 DATE: 5/30/07
 TIME: 1505

RELEASER BY: [Signature]
 PRINT NAME: [Signature]
 DATE: [Signature]
 TIME: [Signature]

ADDITIONAL REMARKS: @ Lab 1645 w/o

FIRM: TA-S

DATE: 5/30/07

TIME: 1505

TEMP: 18.0°C

PAGE OF