



01/04/10

Technical Report for

Walsh Environmental

620-1 Pit Soil/900546.0001.050

Accutest Job Number: T44342

Sampling Date: 12/15/09

Report to:

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Total number of pages in report: **101**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

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Sample Summary

Walsh Environmental

Job No: T44342

620-1 Pit Soil/900546.0001.050

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
T44342-1	12/15/09	14:50 BC	12/17/09	SO	Soil	B-1
T44342-1A	12/15/09	14:50 BC	12/17/09	SO	Soil	B-1
T44342-1C	12/15/09	14:50 BC	12/17/09	SO	Soil	B-1
T44342-2	12/15/09	15:01 BC	12/17/09	SO	Soil	B-2
T44342-2A	12/15/09	15:01 BC	12/17/09	SO	Soil	B-2
T44342-2C	12/15/09	15:01 BC	12/17/09	SO	Soil	B-2
T44342-3	12/15/09	15:31 BC	12/17/09	SO	Soil	B-3
T44342-3A	12/15/09	15:31 BC	12/17/09	SO	Soil	B-3
T44342-3C	12/15/09	15:31 BC	12/17/09	SO	Soil	B-3
T44342-4	12/15/09	15:42 BC	12/17/09	SO	Soil	B-4
T44342-4A	12/15/09	15:42 BC	12/17/09	SO	Soil	B-4
T44342-4C	12/15/09	15:42 BC	12/17/09	SO	Soil	B-4
T44342-5	12/15/09	15:49 BC	12/17/09	SO	Soil	B-5

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



Sample Summary
(continued)

Walsh Environmental

Job No: T44342

620-1 Pit Soil/900546.0001.050

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
T44342-5A	12/15/09	15:49 BC	12/17/09	SO	Soil	B-5
T44342-5C	12/15/09	15:49 BC	12/17/09	SO	Soil	B-5
T44342-6	12/15/09	15:05 BC	12/17/09	SO	Soil	S-5
T44342-6A	12/15/09	15:05 BC	12/17/09	SO	Soil	S-5
T44342-6C	12/15/09	15:05 BC	12/17/09	SO	Soil	S-5
T44342-7	12/15/09	15:15 BC	12/17/09	SO	Soil	S-6
T44342-7A	12/15/09	15:15 BC	12/17/09	SO	Soil	S-6
T44342-7C	12/15/09	15:15 BC	12/17/09	SO	Soil	S-6
T44342-8	12/15/09	15:22 BC	12/17/09	SO	Soil	S-7
T44342-8A	12/15/09	15:22 BC	12/17/09	SO	Soil	S-7
T44342-8C	12/15/09	15:22 BC	12/17/09	SO	Soil	S-7

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	B-1		
Lab Sample ID:	T44342-1	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
		Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	23.9	0.64	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10865

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-1	Date Sampled:	12/15/09
Lab Sample ID:	T44342-1	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	87.7		%	1	12/21/09	AA	SM 2540 G
Specific Conductivity	480	1.0	umhos/cm	1	12/23/09 13:00	KD	EPA 120.1
pH	8.29		su	1	12/19/09 13:20	EV	SW846 9045C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-1	
Lab Sample ID:	T44342-1A	Date Sampled: 12/15/09
Matrix:	SO - Soil	Date Received: 12/17/09
		Percent Solids: 87.7
Project:	620-1 Pit Soil/900546.0001.050	

Hot Water Soluble Boron Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Boron	2.52	0.20	mg/l	1	12/21/09	12/21/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10870

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-1	Date Sampled:	12/15/09
Lab Sample ID:	T44342-1C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	228	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Magnesium	151	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Sodium	36.7	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4470
(2) Prep QC Batch: MP10897

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-1	Date Sampled:	12/15/09
Lab Sample ID:	T44342-1C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	0.463		ratio	1	12/31/09 04:37	NS	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-2		
Lab Sample ID:	T44342-2	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
		Percent Solids:	88.3
Project:	620-1 Pit Soil/900546.0001.050		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	15.7	0.67	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10865

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-2	Date Sampled:	12/15/09
Lab Sample ID:	T44342-2	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	88.3
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	88.3		%	1	12/21/09	AA	SM 2540 G
Specific Conductivity	297	1.0	umhos/cm	1	12/23/09 13:00	KD	EPA 120.1
pH	8.66		su	1	12/19/09 13:20	EV	SW846 9045C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-2	
Lab Sample ID:	T44342-2A	Date Sampled: 12/15/09
Matrix:	SO - Soil	Date Received: 12/17/09
		Percent Solids: 88.3
Project:	620-1 Pit Soil/900546.0001.050	

Hot Water Soluble Boron Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Boron	2.27	0.20	mg/l	1	12/21/09	12/21/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10870

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-2	Date Sampled:	12/15/09
Lab Sample ID:	T44342-2C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	88.3
Project:	620-1 Pit Soil/900546.0001.050		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	266	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Magnesium	109	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Sodium	70.9	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4470
(2) Prep QC Batch: MP10897

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-2		
Lab Sample ID:	T44342-2C	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
		Percent Solids:	88.3
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	0.925		ratio	1	12/31/09 04:44	NS	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-3		
Lab Sample ID:	T44342-3	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
		Percent Solids:	92.3
Project:	620-1 Pit Soil/900546.0001.050		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	8.9	0.61	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10865

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-3		
Lab Sample ID:	T44342-3	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
		Percent Solids:	92.3
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	92.3		%	1	12/21/09	AA	SM 2540 G
Specific Conductivity	319	1.0	umhos/cm	1	12/23/09 13:00	KD	EPA 120.1
pH	8.82		su	1	12/19/09 13:20	EV	SW846 9045C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-3		
Lab Sample ID:	T44342-3A	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
		Percent Solids:	92.3
Project:	620-1 Pit Soil/900546.0001.050		

Hot Water Soluble Boron Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Boron	0.746	0.20	mg/l	1	12/21/09	12/21/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10870

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-3	Date Sampled:	12/15/09
Lab Sample ID:	T44342-3C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	92.3
Project:	620-1 Pit Soil/900546.0001.050		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By		Method	Prep Method
Calcium	182	25	mg/l	5	12/29/09	12/31/09	NS	SW846 6010B ¹	LADNR 29B ²
Magnesium	59.3	25	mg/l	5	12/29/09	12/31/09	NS	SW846 6010B ¹	LADNR 29B ²
Sodium	149	25	mg/l	5	12/29/09	12/31/09	NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4470
(2) Prep QC Batch: MP10897

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-3	
Lab Sample ID:	T44342-3C	Date Sampled: 12/15/09
Matrix:	SO - Soil	Date Received: 12/17/09
		Percent Solids: 92.3
Project:	620-1 Pit Soil/900546.0001.050	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	2.45		ratio	1	12/31/09 04:50	NS	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-4	Date Sampled:	12/15/09
Lab Sample ID:	T44342-4	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	95.9
Project:	620-1 Pit Soil/900546.0001.050		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	6.3	0.60	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10865

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-4	Date Sampled:	12/15/09
Lab Sample ID:	T44342-4	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	95.9
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	95.9		%	1	12/21/09	AA	SM 2540 G
Specific Conductivity	425	1.0	umhos/cm	1	12/23/09 13:00	KD	EPA 120.1
pH	8.72		su	1	12/19/09 13:20	EV	SW846 9045C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-4	
Lab Sample ID:	T44342-4A	Date Sampled: 12/15/09
Matrix:	SO - Soil	Date Received: 12/17/09
		Percent Solids: 95.9
Project:	620-1 Pit Soil/900546.0001.050	

Hot Water Soluble Boron Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Boron	0.830	0.20	mg/l	1	12/21/09	12/21/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10870

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-4	Date Sampled:	12/15/09
Lab Sample ID:	T44342-4C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	95.9
Project:	620-1 Pit Soil/900546.0001.050		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	389	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Magnesium	126	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Sodium	312	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4470

(2) Prep QC Batch: MP10897

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-4	Date Sampled:	12/15/09
Lab Sample ID:	T44342-4C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	95.9
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	3.52		ratio	1	12/31/09 04:18	NS	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-5	
Lab Sample ID:	T44342-5	Date Sampled: 12/15/09
Matrix:	SO - Soil	Date Received: 12/17/09
		Percent Solids: 92.5
Project:	620-1 Pit Soil/900546.0001.050	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	16.7	0.61	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10865

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-5	Date Sampled:	12/15/09
Lab Sample ID:	T44342-5	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	92.5
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	92.5		%	1	12/21/09	AA	SM 2540 G
Specific Conductivity	2950	1.0	umhos/cm	1	12/23/09 13:00	KD	EPA 120.1
pH	8.34		su	1	12/19/09 13:20	EV	SW846 9045C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-5	
Lab Sample ID:	T44342-5A	Date Sampled: 12/15/09
Matrix:	SO - Soil	Date Received: 12/17/09
		Percent Solids: 92.5
Project:	620-1 Pit Soil/900546.0001.050	

Hot Water Soluble Boron Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Boron	4.21	0.20	mg/l	1	12/21/09	12/21/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10870

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-5	Date Sampled:	12/15/09
Lab Sample ID:	T44342-5C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	92.5
Project:	620-1 Pit Soil/900546.0001.050		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	1570	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Magnesium	671	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Sodium	1430	50	mg/l	10	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4470

(2) Prep QC Batch: MP10897

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B-5	Date Sampled:	12/15/09
Lab Sample ID:	T44342-5C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	92.5
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	7.61		ratio	1	12/31/09 10:47	NS	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-5		
Lab Sample ID:	T44342-6	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
Method:	SW846 8260B	Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0023152.D	1	12/21/09	JL	n/a	n/a	VM932
Run #2							

	Initial Weight	Final Volume
Run #1	5.25 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.4	0.76	ug/kg	
108-88-3	Toluene	ND	5.4	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.4	0.98	ug/kg	
1330-20-7	Xylene (total)	ND	16	2.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		70-121%
2037-26-5	Toluene-D8	120%		76-132%
460-00-4	4-Bromofluorobenzene	134%		73-165%
17060-07-0	1,2-Dichloroethane-D4	94%		57-122%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-5		
Lab Sample ID:	T44342-6	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
Method:	SW846 8270C BY SIM SW846 3550B	Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	H36407.D	1	12/22/09	SC	12/22/09	OP13725	EH1955
Run #2 ^a	H36413.D	10	12/22/09	SC	12/22/09	OP13725	EH1955

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2	30.1 g	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	7.6	1.3	ug/kg	
208-96-8	Acenaphthylene	ND	7.6	2.7	ug/kg	
120-12-7	Anthracene	ND	7.6	1.4	ug/kg	
56-55-3	Benzo(a)anthracene	ND	7.6	1.2	ug/kg	
50-32-8	Benzo(a)pyrene	ND	7.6	4.1	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	7.6	4.0	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	7.6	7.6	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	7.6	4.9	ug/kg	
218-01-9	Chrysene	ND	7.6	1.9	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	7.6	7.3	ug/kg	
206-44-0	Fluoranthene	ND	7.6	1.7	ug/kg	
86-73-7	Fluorene	ND	7.6	2.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	7.6	5.7	ug/kg	
90-12-0	1-Methylnaphthalene	2.3	7.6	1.4	ug/kg	J
91-57-6	2-Methylnaphthalene	6.3	7.6	1.3	ug/kg	J
91-20-3	Naphthalene	1.5	7.6	1.2	ug/kg	J
85-01-8	Phenanthrene	ND	7.6	1.1	ug/kg	
129-00-0	Pyrene	ND	7.6	2.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%	47%	10-127%
321-60-8	2-Fluorobiphenyl	47%	70%	11-133%
1718-51-0	Terphenyl-d14	179%	209% ^b	15-187%

(a) Internal standards are not within the advisory limits due to a matrix interference. Confirmed by reanalysis.

(b) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-5		
Lab Sample ID:	T44342-6	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
Method:	SW846 8015	Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE050654.D	1	12/22/09	FI	n/a	n/a	GEE2557
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.05 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	2.86	6.3	0.38	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	115%		46-127%
98-08-8	aaa-Trifluorotoluene	110%		44-120%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	S-5	
Lab Sample ID:	T44342-6	Date Sampled: 12/15/09
Matrix:	SO - Soil	Date Received: 12/17/09
Method:	SW846 8015 M SW846 3550B	Percent Solids: 87.7
Project:	620-1 Pit Soil/900546.0001.050	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IF193757.D	1	12/30/09	EM	12/22/09	OP13723	GIB922
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	25.9	9.4	3.1	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	59%		33-115%		

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-5	Date Sampled:	12/15/09
Lab Sample ID:	T44342-6	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	16.1	0.57	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Barium	391	11	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Cadmium	< 0.29	0.29	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Chromium	19.7	0.57	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Copper	22.2	1.4	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Lead	15.5	0.57	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Mercury	< 0.019	0.019	mg/kg	1	12/28/09	12/28/09 TW	SW846 7471A ²	SW846 7471A ⁴
Nickel	14.8	2.3	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Selenium	< 0.57	0.57	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Silver	< 0.57	0.57	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Zinc	56.2	1.1	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³

- (1) Instrument QC Batch: MA4457
- (2) Instrument QC Batch: MA4464
- (3) Prep QC Batch: MP10865
- (4) Prep QC Batch: MP10895

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-5	Date Sampled:	12/15/09
Lab Sample ID:	T44342-6	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 2.0	2.0	mg/kg	1	12/31/09 08:00	KD	SW846 3060/7196A
Solids, Percent	87.7		%	1	12/21/09	AA	SM 2540 G
Specific Conductivity	374	1.0	umhos/cm	1	12/23/09 13:00	KD	EPA 120.1
pH	9.30		su	1	12/19/09 13:20	EV	SW846 9045C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-5	Date Sampled:	12/15/09
Lab Sample ID:	T44342-6A	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

Hot Water Soluble Boron Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Boron	0.993	0.19	mg/l	1	12/21/09	12/21/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10870

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-5	Date Sampled:	12/15/09
Lab Sample ID:	T44342-6C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	76.6	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Magnesium	37.4	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Sodium	325	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4470

(2) Prep QC Batch: MP10897

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-5	Date Sampled:	12/15/09
Lab Sample ID:	T44342-6C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	87.7
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	7.61		ratio	1	12/31/09 05:03	NS	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-6						
Lab Sample ID:	T44342-7				Date Sampled:	12/15/09	
Matrix:	SO - Soil				Date Received:	12/17/09	
Method:	SW846 8260B				Percent Solids:	78.3	
Project:	620-1 Pit Soil/900546.0001.050						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0023153.D	1	12/21/09	JL	n/a	n/a	VM932
Run #2							

	Initial Weight	Final Volume
Run #1	5.53 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.8	0.81	ug/kg	
108-88-3	Toluene	ND	5.8	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.8	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	17	2.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		70-121%
2037-26-5	Toluene-D8	126%		76-132%
460-00-4	4-Bromofluorobenzene	147%		73-165%
17060-07-0	1,2-Dichloroethane-D4	97%		57-122%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-6		
Lab Sample ID:	T44342-7	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
Method:	SW846 8270C BY SIM SW846 3550B	Percent Solids:	78.3
Project:	620-1 Pit Soil/900546.0001.050		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	H36408.D	1	12/22/09	SC	12/22/09	OP13725	EH1955
Run #2 ^a	H36414.D	10	12/22/09	SC	12/22/09	OP13725	EH1955

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2	30.2 g	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	8.5	1.4	ug/kg	
208-96-8	Acenaphthylene	ND	8.5	3.0	ug/kg	
120-12-7	Anthracene	ND	8.5	1.6	ug/kg	
56-55-3	Benzo(a)anthracene	ND	8.5	1.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	8.5	4.5	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	8.5	4.5	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	8.5	8.5	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	8.5	5.5	ug/kg	
218-01-9	Chrysene	ND	8.5	2.1	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	8.5	8.2	ug/kg	
206-44-0	Fluoranthene	ND	8.5	1.9	ug/kg	
86-73-7	Fluorene	ND	8.5	3.0	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	8.5	6.3	ug/kg	
90-12-0	1-Methylnaphthalene	ND	8.5	1.6	ug/kg	
91-57-6	2-Methylnaphthalene	ND	8.5	1.5	ug/kg	
91-20-3	Naphthalene	3.3	8.5	1.3	ug/kg	J
85-01-8	Phenanthrene	ND	8.5	1.2	ug/kg	
129-00-0	Pyrene	ND	8.5	2.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%	50%	10-127%
321-60-8	2-Fluorobiphenyl	59%	72%	11-133%
1718-51-0	Terphenyl-d14	138%	193% ^b	15-187%

(a) Internal standards are not within the advisory limits due to a matrix interference. Confirmed by reanalysis.

(b) Outside control limits due to dilution.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-6						
Lab Sample ID:	T44342-7				Date Sampled:	12/15/09	
Matrix:	SO - Soil				Date Received:	12/17/09	
Method:	SW846 8015				Percent Solids:	78.3	
Project:	620-1 Pit Soil/900546.0001.050						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE050655.D	1	12/22/09	FI	n/a	n/a	GEE2557
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.05 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	7.7	0.46	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%		46-127%
98-08-8	aaa-Trifluorotoluene	110%		44-120%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	S-6	
Lab Sample ID:	T44342-7	Date Sampled: 12/15/09
Matrix:	SO - Soil	Date Received: 12/17/09
Method:	SW846 8015 M SW846 3550B	Percent Solids: 78.3
Project:	620-1 Pit Soil/900546.0001.050	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IF193758.D	1	12/30/09	EM	12/22/09	OP13723	GIF922
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	49.6	11	3.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	67%		33-115%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-6	Date Sampled: 12/15/09
Lab Sample ID: T44342-7	Date Received: 12/17/09
Matrix: SO - Soil	Percent Solids: 78.3
Project: 620-1 Pit Soil/900546.0001.050	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	21.5	0.65	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Barium	354	13	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Cadmium	< 0.33	0.33	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Chromium	24.6	0.65	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Copper	22.6	1.6	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Lead	11.2	0.65	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Mercury	< 0.020	0.020	mg/kg	1	12/28/09	12/28/09 TW	SW846 7471A ²	SW846 7471A ⁴
Nickel	16.2	2.6	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Selenium	0.89	0.65	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Silver	< 0.65	0.65	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Zinc	48.6	1.3	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³

(1) Instrument QC Batch: MA4457

(2) Instrument QC Batch: MA4464

(3) Prep QC Batch: MP10865

(4) Prep QC Batch: MP10895

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-6	Date Sampled:	12/15/09
Lab Sample ID:	T44342-7	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	78.3
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 2.0	2.0	mg/kg	1	12/31/09 08:00	KD	SW846 3060/7196A
Solids, Percent	78.3		%	1	12/21/09	AA	SM 2540 G
Specific Conductivity	622	1.0	umhos/cm	1	12/23/09 13:00	KD	EPA 120.1
pH	9.16		su	1	12/19/09 13:20	EV	SW846 9045C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-6	Date Sampled:	12/15/09
Lab Sample ID:	T44342-7A	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	78.3
Project:	620-1 Pit Soil/900546.0001.050		

Hot Water Soluble Boron Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Boron	1.71	0.19	mg/l	1	12/21/09	12/21/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10870

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-6	Date Sampled:	12/15/09
Lab Sample ID:	T44342-7C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	78.3
Project:	620-1 Pit Soil/900546.0001.050		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	131	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Magnesium	87.7	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²
Sodium	654	25	mg/l	5	12/29/09	12/31/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4470

(2) Prep QC Batch: MP10897

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-6	Date Sampled:	12/15/09
Lab Sample ID:	T44342-7C	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	78.3
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	10.8		ratio	1	12/31/09 05:10	NS	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-7		
Lab Sample ID:	T44342-8	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
Method:	SW846 8260B	Percent Solids:	90.0
Project:	620-1 Pit Soil/900546.0001.050		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0023154.D	1	12/21/09	JL	n/a	n/a	VM932
Run #2							

	Initial Weight	Final Volume
Run #1	5.15 g	5.0 ml
Run #2		

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.4	0.75	ug/kg	
108-88-3	Toluene	ND	5.4	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.4	0.97	ug/kg	
1330-20-7	Xylene (total)	ND	16	2.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-121%
2037-26-5	Toluene-D8	119%		76-132%
460-00-4	4-Bromofluorobenzene	133%		73-165%
17060-07-0	1,2-Dichloroethane-D4	106%		57-122%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-7		
Lab Sample ID:	T44342-8	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
Method:	SW846 8270C BY SIM SW846 3550B	Percent Solids:	90.0
Project:	620-1 Pit Soil/900546.0001.050		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	H36409.D	1	12/22/09	SC	12/22/09	OP13725	EH1955
Run #2							

	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	7.3	1.2	ug/kg	
208-96-8	Acenaphthylene	ND	7.3	2.5	ug/kg	
120-12-7	Anthracene	ND	7.3	1.4	ug/kg	
56-55-3	Benzo(a)anthracene	ND	7.3	1.2	ug/kg	
50-32-8	Benzo(a)pyrene	ND	7.3	3.9	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	7.3	3.9	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	7.3	7.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	7.3	4.7	ug/kg	
218-01-9	Chrysene	ND	7.3	1.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	7.3	7.0	ug/kg	
206-44-0	Fluoranthene	ND	7.3	1.6	ug/kg	
86-73-7	Fluorene	ND	7.3	2.6	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	7.3	5.5	ug/kg	
90-12-0	1-Methylnaphthalene	3.0	7.3	1.3	ug/kg	J
91-57-6	2-Methylnaphthalene	6.9	7.3	1.3	ug/kg	J
91-20-3	Naphthalene	ND	7.3	1.1	ug/kg	
85-01-8	Phenanthrene	2.9	7.3	1.0	ug/kg	J
129-00-0	Pyrene	ND	7.3	2.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	50%		10-127%
321-60-8	2-Fluorobiphenyl	46%		11-133%
1718-51-0	Terphenyl-d14	154%		15-187%

(a) Internal standards are not within the advisory limits due to a matrix interference. Confirmed by associated ms/msd.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-7		
Lab Sample ID:	T44342-8	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
Method:	SW846 8015	Percent Solids:	90.0
Project:	620-1 Pit Soil/900546.0001.050		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE050656.D	1	12/22/09	FI	n/a	n/a	GEE2557
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.51 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	1.61	5.6	0.34	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	111%		46-127%
98-08-8	aaa-Trifluorotoluene	112%		44-120%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-7		
Lab Sample ID:	T44342-8	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
Method:	SW846 8015 M SW846 3550B	Percent Solids:	90.0
Project:	620-1 Pit Soil/900546.0001.050		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IF193759.D	1	12/30/09	EM	12/22/09	OP13723	GIB922
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	53.3	9.1	3.0	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	67%		33-115%		

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-7	Date Sampled:	12/15/09
Lab Sample ID:	T44342-8	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	90.0
Project:	620-1 Pit Soil/900546.0001.050		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	15.4	0.58	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Barium	405	12	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Cadmium	< 0.29	0.29	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Chromium	21.8	0.58	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Copper	19.0	1.4	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Lead	14.0	0.58	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Mercury	0.031	0.017	mg/kg	1	12/28/09	12/28/09 TW	SW846 7471A ²	SW846 7471A ⁴
Nickel	16.5	2.3	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Selenium	< 0.58	0.58	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Silver	< 0.58	0.58	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³
Zinc	52.9	1.2	mg/kg	1	12/19/09	12/21/09 NS	SW846 6010B ¹	SW846 3050B ³

(1) Instrument QC Batch: MA4457

(2) Instrument QC Batch: MA4464

(3) Prep QC Batch: MP10865

(4) Prep QC Batch: MP10895

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-7	Date Sampled:	12/15/09
Lab Sample ID:	T44342-8	Date Received:	12/17/09
Matrix:	SO - Soil	Percent Solids:	90.0
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 2.0	2.0	mg/kg	1	12/31/09 08:00	KD	SW846 3060/7196A
Solids, Percent	90		%	1	12/21/09	AA	SM 2540 G
Specific Conductivity	691	1.0	umhos/cm	1	12/23/09 13:00	KD	EPA 120.1
pH	9.10		su	1	12/19/09 13:20	EV	SW846 9045C

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-7	
Lab Sample ID:	T44342-8A	Date Sampled: 12/15/09
Matrix:	SO - Soil	Date Received: 12/17/09
		Percent Solids: 90.0
Project:	620-1 Pit Soil/900546.0001.050	

Hot Water Soluble Boron Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Boron	1.04	0.20	mg/l	1	12/21/09	12/21/09 NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4457
(2) Prep QC Batch: MP10870

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-7		
Lab Sample ID:	T44342-8C	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
		Percent Solids:	90.0
Project:	620-1 Pit Soil/900546.0001.050		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By		Method	Prep Method
Calcium	206	25	mg/l	5	12/29/09	12/31/09	NS	SW846 6010B ¹	LADNR 29B ²
Magnesium	100	25	mg/l	5	12/29/09	12/31/09	NS	SW846 6010B ¹	LADNR 29B ²
Sodium	532	25	mg/l	5	12/29/09	12/31/09	NS	SW846 6010B ¹	LADNR 29B ²

(1) Instrument QC Batch: MA4470
(2) Prep QC Batch: MP10897

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-7		
Lab Sample ID:	T44342-8C	Date Sampled:	12/15/09
Matrix:	SO - Soil	Date Received:	12/17/09
		Percent Solids:	90.0
Project:	620-1 Pit Soil/900546.0001.050		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	7.61		ratio	1	12/31/09 05:35	NS	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



FED-EX Tracking # 7982 3031 6405	Bottle Order Control #
Accutest Quote #	Accutest Job # 744342

Client / Reporting Information				Project Information				Requested Analyses				Matrix Codes				
Company Name Walsh Environmental Scientists and Engineers				Project Name / No. 620-1 Pit 900546.0001.050												
Project Contact Blair Rollins E-Mail brollins@walshenv.com				Bill to Same as to left Invoice Attn.												
Address 535 Grand Avenue				Address												
City Grand Junction		State CO		Zip 81501		City		State		Zip						
Phone No. (970) 241-4636				Fax No. (970) 241-4312				Phone No.				Fax No.				
Samples Name Blair K. Rollins				Client Purchase Order #												
Accutest Sample #		Field ID / Point of Collection		Collection				Number of preserved bottles								
		Date	Time	Matrix	# of bottles	HCl	NH ₄ OH	NH ₄ SCN	NH ₄ SCN	ENIGOR	NH ₄ SCN	MEDH	NOIE			
1	B-1	12/15/09	2:50	SO	3											
2	B-2	" "	3:01	SO	3											
3	B-3	" "	3:31	SO	3											
4	B-4	" "	3:42	SO	3											
5	B-5	" "	3:49	SO	3											
6	S-5	" "	3:05	SO	3											
7	S-6	" "	3:15	SO	3											
8	SC-7	" "	3:22	SO	3											
		<i>BLK</i>						<i>BLK</i>				<i>12/16/09</i>				
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks								
<input type="checkbox"/> 10 Day STANDARD <input type="checkbox"/> 7 Day <input type="checkbox"/> 4 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY <input type="checkbox"/> Other _____				Approved By/ Date:				<input type="checkbox"/> Commercial "A" <input type="checkbox"/> Commercial "B" <input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> Full Data Package				<input type="checkbox"/> TRRP-13 <input type="checkbox"/> EDD Format <input type="checkbox"/> Other _____				
Real time analytical data available via Lablink				Commercial "A" = Results Only Commercial "B" = Results & Standard QC				Add True Barium per Blair Rollins <i>12-129</i>				Remove True Barium per Blair-Walsh <i>12-129</i>				
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																
Relinquished by Sampler: <i>Blair K Rollins</i>				Date Time: <i>12/16/09</i>				Received By: <i>Fed Ex</i>				Date Time: <i>09/15</i>				
Relinquished by:				Date Time:				Relinquished by:				Date Time:				
3				3				4				4				
Relinquished by:				Date Time:				Custody Seal #				Preserved where applicable				
5				5								On Ice Cooler Temp. <i>50 38</i>				

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3.1 3

SAMPLE RECEIPT LOG

JOB #: T44342 DATE/TIME RECEIVED: 12/17/09 0915
 CLIENT: Walsh Environmental Scientist INITIALS: FF

COOLER#	SAMPLE ID	FIELD ID	DATE	MATRIX	VOL	BOTTLE #	LOCATION	PRESERV	PH
1	1	B-1	12/15/09 2:50	5	Bag	1	2-39	2 3 4 5 6 7 8	<2 >12
					4oz	2-3	"	2 3 4 5 6 7 8	<2 >12
					4oz	4-5	VR	2 3 4 5 6 7 8	<2 >12
	2	B-2	12/15/09 7:01		Bag	1	2-39	2 3 4 5 6 7 8	<2 >12
					8oz	2	"	2 3 4 5 6 7 8	<2 >12
					4oz	3	VR	2 3 4 5 6 7 8	<2 >12
	3	B-3	12/15/09 7:11		Bag	1	2-39	2 3 4 5 6 7 8	<2 >12
					8oz	2	"	2 3 4 5 6 7 8	<2 >12
					4oz	3	VR	2 3 4 5 6 7 8	<2 >12
	4	B-4	12/15/09 7:42		Bag	1	2-39	2 3 4 5 6 7 8	<2 >12
					8oz	2	"	2 3 4 5 6 7 8	<2 >12
					4oz	3	VR	2 3 4 5 6 7 8	<2 >12
	5	B-5	12/15/09 3:49		Bag	1	2-39	2 3 4 5 6 7 8	<2 >12
					8oz	2	"	2 3 4 5 6 7 8	<2 >12
					4oz	3	VR	2 3 4 5 6 7 8	<2 >12
	6	S-5	12/15/09 7:05		Bag	1	2-39	2 3 4 5 6 7 8	<2 >12
					8oz	2	"	2 3 4 5 6 7 8	<2 >12
					4oz	3	VR	2 3 4 5 6 7 8	<2 >12
	7	S-6	12/15/09 7:15		Bag	1	2-39	2 3 4 5 6 7 8	<2 >12
					8oz	2	"	2 3 4 5 6 7 8	<2 >12
					4oz	3	VR	2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other

LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer

Rev 8/13/01 ewp

T44342: Chain of Custody

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3.1 3

CLIENT: Walsh Environmental Scientist INITIALS: YF

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other
 LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Solls) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer
 Rev 8/13/01 ewp

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GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T44342
Account: WALSCOGJ Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM932-MB	M0023137.D	1	12/21/09	JL	n/a	n/a	VM932

The QC reported here applies to the following samples: Method: SW846 8260B

T44342-6, T44342-7, T44342-8

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.70	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.90	ug/kg	
108-88-3	Toluene	ND	5.0	0.95	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	96% 70-121%
2037-26-5	Toluene-D8	116% 76-132%
460-00-4	4-Bromofluorobenzene	116% 73-165%
17060-07-0	1,2-Dichloroethane-D4	104% 57-122%

Blank Spike Summary

Job Number: T44342
Account: WALSCOGJ Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM932-BS	M0023135.D	1	12/21/09	JL	n/a	n/a	VM932

The QC reported here applies to the following samples: Method: SW846 8260B

T44342-6, T44342-7, T44342-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	48.1	96	70-114
100-41-4	Ethylbenzene	50	46.4	93	60-119
108-88-3	Toluene	50	46.1	92	68-115
1330-20-7	Xylene (total)	150	141	94	61-115

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	70-121%
2037-26-5	Toluene-D8	113%	76-132%
460-00-4	4-Bromofluorobenzene	115%	73-165%
17060-07-0	1,2-Dichloroethane-D4	110%	57-122%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T44342
Account: WALSCOGJ Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T44281-1MS	M0023142.D	1	12/21/09	JL	n/a	n/a	VM932
T44281-1MSD	M0023143.D	1	12/21/09	JL	n/a	n/a	VM932
T44281-1	M0023141.D	1	12/21/09	JL	n/a	n/a	VM932

The QC reported here applies to the following samples: Method: SW846 8260B

T44342-6, T44342-7, T44342-8

CAS No.	Compound	T44281-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	6.1	U	57.3	51.0	89	43.8	84	15	70-114/38
100-41-4	Ethylbenzene	6.1	U	57.3	53.3	93	43.2	83	21	60-119/40
108-88-3	Toluene	6.1	U	57.3	57.2	100	49.3	95	15	68-115/38
1330-20-7	Xylene (total)	18	U	172	169	98	141	90	18	61-115/39

CAS No.	Surrogate Recoveries	MS	MSD	T44281-1	Limits
1868-53-7	Dibromofluoromethane	91%	92%	95%	70-121%
2037-26-5	Toluene-D8	116%	117%	122%	76-132%
460-00-4	4-Bromofluorobenzene	118%	124%	125%	73-165%
17060-07-0	1,2-Dichloroethane-D4	106%	103%	102%	57-122%



GC/MS Semi-volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

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Job Number: T44342
Account: WALSCOGJ Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13725-MB	H36403.D	1	12/22/09	SC	12/22/09	OP13725	EH1955

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

T44342-6, T44342-7, T44342-8

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	6.7	1.1	ug/kg	
208-96-8	Acenaphthylene	ND	6.7	2.3	ug/kg	
120-12-7	Anthracene	ND	6.7	1.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	6.7	1.1	ug/kg	
50-32-8	Benzo(a)pyrene	ND	6.7	3.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	6.7	3.5	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	6.7	6.7	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	6.7	4.3	ug/kg	
218-01-9	Chrysene	ND	6.7	1.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	6.7	6.4	ug/kg	
206-44-0	Fluoranthene	ND	6.7	1.5	ug/kg	
86-73-7	Fluorene	ND	6.7	2.4	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	6.7	5.0	ug/kg	
90-12-0	1-Methylnaphthalene	ND	6.7	1.2	ug/kg	
91-57-6	2-Methylnaphthalene	ND	6.7	1.2	ug/kg	
91-20-3	Naphthalene	ND	6.7	1.0	ug/kg	
85-01-8	Phenanthrene	ND	6.7	0.93	ug/kg	
129-00-0	Pyrene	ND	6.7	2.3	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	48% 10-127%
321-60-8	2-Fluorobiphenyl	67% 11-133%
1718-51-0	Terphenyl-d14	77% 15-187%

Blank Spike Summary

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Job Number: T44342

Account: WALSCOGJ Walsh Environmental

Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13725-BS	H36404.D	1	12/22/09	SC	12/22/09	OP13725	EH1955

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

T44342-6, T44342-7, T44342-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	167	123	74	18-118
208-96-8	Acenaphthylene	167	137	82	35-125
120-12-7	Anthracene	167	101	61	24-116
56-55-3	Benzo(a)anthracene	167	130	78	32-132
50-32-8	Benzo(a)pyrene	167	115	69	36-130
205-99-2	Benzo(b)fluoranthene	167	141	85	35-134
191-24-2	Benzo(g,h,i)perylene	167	167	100	18-149
207-08-9	Benzo(k)fluoranthene	167	137	82	30-131
218-01-9	Chrysene	167	121	73	37-124
53-70-3	Dibenzo(a,h)anthracene	167	158	95	23-150
206-44-0	Fluoranthene	167	138	83	28-118
86-73-7	Fluorene	167	122	73	32-106
193-39-5	Indeno(1,2,3-cd)pyrene	167	161	97	18-150
90-12-0	1-Methylnaphthalene	167	92.3	55	10-128
91-57-6	2-Methylnaphthalene	167	82.1	49	28-113
91-20-3	Naphthalene	167	96.7	58	31-106
85-01-8	Phenanthrene	167	140	84	37-112
129-00-0	Pyrene	167	126	76	24-132

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	79%	10-127%
321-60-8	2-Fluorobiphenyl	68%	11-133%
1718-51-0	Terphenyl-d14	75%	15-187%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: T44342
Account: WALSCOGJ Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13725-MS	H36410.D	1	12/22/09	SC	12/22/09	OP13725	EH1955
OP13725-MSD	H36411.D	1	12/22/09	SC	12/22/09	OP13725	EH1955
T44342-8 ^a	H36409.D	1	12/22/09	SC	12/22/09	OP13725	EH1955

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

T44342-6, T44342-7, T44342-8

CAS No.	Compound	T44342-8 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		183	96.1	52	84.0	46	13	10-153/80
208-96-8	Acenaphthylene	ND		183	140	76	102	56	31	10-144/71
120-12-7	Anthracene	ND		183	162	88	195	106	18	10-176/57
56-55-3	Benzo(a)anthracene	ND		183	151	82	169	92	11	10-174/73
50-32-8	Benzo(a)pyrene	ND		183	140	76	143	78	2	10-182/74
205-99-2	Benzo(b)fluoranthene	ND		183	138	75	135	73	2	10-188/86
191-24-2	Benzo(g,h,i)perylene	ND		183	839	457*	895	487*	6	10-150/62
207-08-9	Benzo(k)fluoranthene	ND		183	122	67	124	67	2	10-170/94
218-01-9	Chrysene	ND		183	158	86	148	81	7	10-165/73
53-70-3	Dibenzo(a,h)anthracene	ND		183	858	468*	936	509*	9	10-192/74
206-44-0	Fluoranthene	ND		183	146	80	155	84	6	10-141/73
86-73-7	Fluorene	ND		183	103	56	98.8	54	4	10-164/72
193-39-5	Indeno(1,2,3-cd)pyrene	ND		183	733	400*	782	426*	6	10-150/73
90-12-0	1-Methylnaphthalene	3.0	J	183	122	65	73.3	38	50	10-154/82
91-57-6	2-Methylnaphthalene	6.9	J	183	130	67	82.7	41	44	10-171/75
91-20-3	Naphthalene	ND		183	129	70	77.9	42	49	10-138/82
85-01-8	Phenanthrene	2.9	J	183	155	83	150	80	3	10-191/77
129-00-0	Pyrene	ND		183	484	264*	476	259*	2	10-150/66

CAS No.	Surrogate Recoveries	MS	MSD	T44342-8	Limits
4165-60-0	Nitrobenzene-d5	87%	37%	50%	10-127%
321-60-8	2-Fluorobiphenyl	63%	47%	46%	11-133%
1718-51-0	Terphenyl-d14	257%*	253%*	154%	15-187%

(a) Internal standards are not within the advisory limits due to a matrix interference. Confirmed by associated ms/msd.



GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T44342
Account: WALSCOGJ Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE2557-MB	EE050653.D	1	12/22/09	FI	n/a	n/a	GEE2557

The QC reported here applies to the following samples: Method: SW846 8015

T44342-6, T44342-7, T44342-8

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	0.30	mg/kg	

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	100%
98-08-8	aaa-Trifluorotoluene	112%

Blank Spike Summary

Job Number: T44342
Account: WALSCOGJ Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE2557-BS	EE050649.D	1	12/22/09	FI	n/a	n/a	GEE2557

The QC reported here applies to the following samples: Method: SW846 8015

T44342-6, T44342-7, T44342-8

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	0.4	0.381	95	78-115

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	100%	46-127%
98-08-8	aaa-Trifluorotoluene	107%	44-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T44342
Account: WALSCOGJ Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T44342-7MS	EE050660.D	1	12/23/09	FI	n/a	n/a	GEE2557
T44342-7MSD	EE050661.D	1	12/23/09	FI	n/a	n/a	GEE2557
T44342-7	EE050655.D	1	12/22/09	FI	n/a	n/a	GEE2557

The QC reported here applies to the following samples: Method: SW846 8015

T44342-6, T44342-7, T44342-8

CAS No.	Compound	T44342-7 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		30.8	37.8	123*	30.0	97	23*	78-115/14

CAS No.	Surrogate Recoveries	MS	MSD	T44342-7	Limits
460-00-4	4-Bromofluorobenzene	116%	105%	104%	46-127%
98-08-8	aaa-Trifluorotoluene	120%	115%	110%	44-120%



GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T44342
Account: WALSCOGJ Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13723-MB	CC217221.D	1	12/30/09	SS	12/22/09	OP13723	GCC1028

The QC reported here applies to the following samples: Method: SW846 8015 M

T44342-6, T44342-7, T44342-8

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	8.3	2.7	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	60% 33-115%

Blank Spike Summary

Job Number: T44342
Account: WALSCOGJ Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13723-BS	CC217222.D	1	12/30/09	SS	12/22/09	OP13723	GCC1028

The QC reported here applies to the following samples: Method: SW846 8015 M

T44342-6, T44342-7, T44342-8

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C10-C28)	33.3	30.1	90	45-107

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	56%	33-115%

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7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T44342
Account: WALSCOGJ Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13723-MS	CC217223.D	50	12/30/09	SS	12/22/09	OP13723	GCC1028
OP13723-MSD	CC217224.D	50	12/30/09	SS	12/22/09	OP13723	GCC1028
T44471-3	IF193748.D	50	12/30/09	EM	12/22/09	OP13723	GIF922

The QC reported here applies to the following samples: Method: SW846 8015 M

T44342-6, T44342-7, T44342-8

CAS No.	Compound	T44471-3 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	8930		35.4	11400	6976* ^a	10700	5057* ^a	6	45-107/34

CAS No.	Surrogate Recoveries	MS	MSD	T44471-3	Limits
84-15-1	o-Terphenyl	0% * ^b	0% * ^b	0% * ^b	33-115%

(a) Outside control limits due to high level in sample relative to spike amount.
(b) Outside control limits due to dilution.



Metals Analysis

QC Data Summaries

∞

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T44342
Account: WALSCOGJ - Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10865
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 12/19/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.82	2.2		
Antimony	0.50	.11	.14		
Arsenic	0.50	.089	.1	0.0010	<0.50
Barium	10	.007	.03	0.0020	<10
Beryllium	0.25	.0055	.01		
Boron	5.0	.054	.11		
Cadmium	0.25	.013	.05	-0.0015	<0.25
Calcium	250	.27	.86		
Chromium	0.50	.055	.035	0.010	<0.50
Cobalt	2.5	.025	.09		
Copper	1.3	.029	.065	-0.014	<1.3
Iron	5.0	.65	1.1		
Lead	0.50	.079	.2	0.0	<0.50
Magnesium	250	.34	.58		
Manganese	0.75	.01	.035		
Molybdenum	0.50	.048	.075		
Nickel	2.0	.048	.065	-0.039	<2.0
Potassium	250	2.7	16		
Selenium	0.50	.16	.12	0.033	<0.50
Silver	0.50	.043	.04	-0.0025	<0.50
Sodium	250	6.5	13		
Strontium	1.0	.0085	.025		
Thallium	0.50	.16	.25		
Tin	1.0	.09	.12		
Titanium	1.0	.015	.045		
Vanadium	2.5	.03	.06		
Zinc	1.0	.025	.2	0.0030	<1.0

Associated samples MP10865: T44342-1, T44342-2, T44342-3, T44342-4, T44342-5, T44342-6, T44342-7, T44342-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T44342
Account: WALSCOGJ - Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10865
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 12/19/09

12/19/09

Metal	T44280-1 Original	DUP	RPD	QC Limits	T44280-1 Original	MS	Spikelot MPTW4	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic	7.2	6.4	11.8	0-20	7.2	33.4	28	93.5	80-120
Barium	131	151	14.2	0-20	131	168	28	132.1(a)	80-120
Beryllium									
Boron									
Cadmium	0.66	0.70	5.9	0-20	0.66	25.6	28	89.0	80-120
Calcium									
Chromium	15.6	14.0	10.8	0-20	15.6	41.2	28	91.4	80-120
Cobalt									
Copper	21.0	20.0	4.9	0-20	21.0	49.1	28	100.3	80-120
Iron									
Lead	90.5	104	13.9	0-20	90.5	134	28	155.3N	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel	9.6	9.4	2.1	0-20	9.6	35.0	28	90.7	80-120
Potassium									
Selenium	0.68	0.63	7.6	0-20	0.68	26.1	28	90.7	80-120
Silver	0.17	0.17	0.0	0-20	0.17	27.2	28	96.5	80-120
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc	224	206	8.4	0-20	224	234	28	35.7 (a)	80-120

Associated samples MP10865: T44342-1, T44342-2, T44342-3, T44342-4, T44342-5, T44342-6, T44342-7, T44342-8

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T44342
Account: WALSCOGJ - Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10865
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 12/19/09

Metal	T44280-1 Original	MSD	Spikelot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	7.2	32.5	27.2	93.1	2.7	20
Barium	131	154	27.2	84.6	8.7	20
Beryllium						
Boron						
Cadmium	0.66	26.2	27.2	93.9	2.3	20
Calcium						
Chromium	15.6	38.3	27.2	83.5	7.3	20
Cobalt						
Copper	21.0	46.1	27.2	92.3	6.3	20
Iron						
Lead	90.5	100	27.2	34.9N	29.1 (a)	20
Magnesium						
Manganese						
Molybdenum						
Nickel	9.6	33.0	27.2	86.1	5.9	20
Potassium						
Selenium	0.68	25.9	27.2	92.8	0.8	20
Silver	0.17	26.6	27.2	97.2	2.2	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	224	271	27.2	172.9(b)	14.7	20

Associated samples MP10865: T44342-1, T44342-2, T44342-3, T44342-4, T44342-5, T44342-6, T44342-7, T44342-8

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) High RPD due to possible matrix interference.

(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T44342

Account: WALSCOGJ - Walsh Environmental

Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10865

Methods: SW846 6010B

Matrix Type: SOLID

Units: mg/kg

Prep Date: 12/19/09

Metal	LCS Result	Spikelot MPLCD054	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	155	158	98.1	82-118
Barium	372	348	106.9	81-119
Beryllium				
Boron				
Cadmium	187	187	100.0	82-118
Calcium				
Chromium	99.4	89.5	111.1	79-121
Cobalt				
Copper	142	129	110.1	84-117
Iron				
Lead	162	172	94.2	79-120
Magnesium				
Manganese				
Molybdenum				
Nickel	104	99	105.1	81-119
Potassium				
Selenium	148	148	100.0	78-121
Silver	66.3	66	100.5	66-134
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	393	394	99.7	80-119

Associated samples MP10865: T44342-1, T44342-2, T44342-3, T44342-4, T44342-5, T44342-6, T44342-7, T44342-8

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: T44342
 Account: WALSCOGJ - Walsh Environmental
 Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10865
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 12/19/09

Metal	T44280-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	104	107	3.3	0-10
Barium	1890	1950	3.1	0-10
Beryllium				
Boron				
Cadmium	9.57	9.27	3.1	0-10
Calcium				
Chromium	225	239	6.3	0-10
Cobalt				
Copper	303	301	0.8	0-10
Iron				
Lead	1300	1400	7.4	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	138	142	3.1	0-10
Potassium				
Selenium	9.82	0.00	100.0(a)	0-10
Silver	2.52	0.00	100.0(a)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	3230	3560	10.4*(b)	0-10

Associated samples MP10865: T44342-1, T44342-2, T44342-3, T44342-4, T44342-5, T44342-6, T44342-7, T44342-8

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T44342
Account: WALSCOGJ - Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10870
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/21/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	400	33	34		
Antimony	10	4.5	6		
Arsenic	10	3.5	4		
Barium	400	.28	5.4		
Beryllium	10	.22	.4		
Boron	200	2.2	4.2	-29	<200
Cadmium	8.0	.5	.6		
Calcium	10000	11	70		
Chromium	20	2.2	3.8		
Cobalt	100	1	1.6		
Copper	50	1.2	12		
Iron	200	26	26		
Lead	6.0	3.2	3.4		
Magnesium	10000	13	16		
Manganese	30	.4	15		
Molybdenum	20	1.9	2.6		
Nickel	80	1.9	6.4		
Potassium	10000	110	110		
Selenium	10	6.5	6.4		
Silver	20	1.7	1.6		
Sodium	10000	260	270		
Strontium	40	.34	.8		
Thallium	20	6.5	5.2		
Tin	40	3.6	5.8		
Titanium	40	.6	.6		
Vanadium	100	1.2	1.2		
Zinc	40	.98	8.2		

Associated samples MP10870: T44342-1A, T44342-2A, T44342-3A, T44342-4A, T44342-5A, T44342-6A, T44342-7A, T44342-8A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T44342
 Account: WALSCOGJ - Walsh Environmental
 Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10870
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date:

12/21/09

12/21/09

Metal	T44342-5A Original	DUP	RPD	QC Limits	T44342-5A Original	MS	Spikelot MPTW4	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Boron	4210	4080	3.1	0-20	4210	6780	1000	130.1N	80-120
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

Associated samples MP10870: T44342-1A, T44342-2A, T44342-3A, T44342-4A, T44342-5A, T44342-6A, T44342-7A, T44342-8A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T44342
 Account: WALSCOGJ - Walsh Environmental
 Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10870
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 12/21/09

Metal	T44342-5A Original MSD	Spikelot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron	4210	6260	1000	105.4	8.0
Cadmium					20
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP10870: T44342-1A, T44342-2A, T44342-3A, T44342-4A, T44342-5A, T44342-6A, T44342-7A, T44342-8A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: T44342
 Account: WALSCOGJ - Walsh Environmental
 Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10870
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 12/21/09

Metal	T44342-5A		QC	
	Original	SDL 1:5	%DIF	Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron	2130	2070	3.0	0-10
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP10870: T44342-1A, T44342-2A, T44342-3A, T44342-4A, T44342-5A, T44342-6A, T44342-7A, T44342-8A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

8.2.4
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BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T44342
Account: WALSCOGJ - Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10895
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 12/28/09

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.017	.0041	.00066	-0.0088	<0.017

Associated samples MP10895: T44342-6, T44342-7, T44342-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.3.1

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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T44342
 Account: WALSCOGJ - Walsh Environmental
 Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10895
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 12/28/09

12/28/09

Metal	T44344-26		RPD	QC Limits	T44344-26		Spikelot HGTXWS1	% Rec	QC Limits
	Original	DUP			Original	MS			
Mercury	0.0	0.0	NC	0-20	0.0	0.25	0.257	97.1	75-125

Associated samples MP10895: T44342-6, T44342-7, T44342-8

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

8.3.2

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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T44342
 Account: WALSCOGJ - Walsh Environmental
 Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10895
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 12/28/09

Metal	T44344-26 Original MSD	Spikelot HGTXWS1	% Rec	MSD RPD	QC Limit
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Mercury	0.0	0.24	0.256	93.8	4.1
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Associated samples MP10895: T44342-6, T44342-7, T44342-8

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

8.3.2

8

Login Number: T44342
Account: WALSCOGJ - Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Methods: SW846 7471A
Units: mg/kg

Metal	LCS Result	Spikelot HGLCD054 % Rec	QC Limits
Mercury	7.2	7.34	98.1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T44342
Account: WALSCOGJ - Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10897
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 12/29/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	16	17		
Antimony	5.0	2.3	3		
Arsenic	5.0	1.8	2		
Barium	200	.14	2.7		
Beryllium	5.0	.11	.2		
Boron	100	1.1	2.1		
Cadmium	4.0	.25	.3		
Calcium	5000	5.4	35	96.4	<5000
Chromium	10	1.1	1.9		
Cobalt	50	.5	.8		
Copper	25	.58	5.9		
Iron	100	13	13		
Lead	3.0	1.6	1.7		
Magnesium	5000	6.7	7.8	5.3	<5000
Manganese	15	.2	7.6		
Molybdenum	10	.96	1.3		
Nickel	40	.95	3.2		
Potassium	5000	53	53		
Selenium	5.0	3.2	3.2		
Silver	10	.85	.8		
Sodium	5000	130	130	1270	<5000
Strontium	20	.17	.4		
Thallium	10	3.2	2.6		
Tin	20	1.8	2.9		
Titanium	20	.3	.3		
Vanadium	50	.6	.6		
Zinc	20	.49	4.1		

Associated samples MP10897: T44342-1C, T44342-2C, T44342-3C, T44342-4C, T44342-5C, T44342-6C, T44342-7C, T44342-8C

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T44342
 Account: WALSCOGJ - Walsh Environmental
 Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10897
 Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
 Units: ug/l

Prep Date: 12/29/09

Metal	T44342-4C Original DUP		RPD	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	389000	373000	4.2	0-20
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium	126000	122000	3.2	0-20
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium	312000	308000	1.3	0-20
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP10897: T44342-1C, T44342-2C, T44342-3C, T44342-4C, T44342-5C, T44342-6C, T44342-7C, T44342-8C

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: T44342
 Account: WALSCOGJ - Walsh Environmental
 Project: 620-1 Pit Soil/900546.0001.050

QC Batch ID: MP10897
 Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
 Units: ug/l

Prep Date: 12/29/09

Metal	T44342-4C			QC	
	Original	SDL 5:25	%DIF	Limits	
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	389000	383000	1.6	0-10	
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium	126000	124000	1.8	0-10	
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium	312000	298000	4.7	0-10	
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP10897: T44342-1C, T44342-2C, T44342-3C, T44342-4C, T44342-5C, T44342-6C, T44342-7C, T44342-8C

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

8.4.3
8



General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T44342
Account: WALSCOGJ - Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GN19854	2.0	<2.0	mg/kg	40	40.8	102.1	80-120%
Specific Conductivity	GN19748	1.0	<1.0	umhos/cm				

Associated Samples:
Batch GN19748: T44342-1, T44342-2, T44342-3, T44342-4, T44342-5, T44342-6, T44342-7, T44342-8
Batch GN19854: T44342-6, T44342-7, T44342-8
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T44342
Account: WALSCOGJ - Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GN19854	T44342-6	mg/kg	<2.0	<2.0	1.5	0-20%
Solids, Percent	GN19701	T44446-17	%	64.4	61.6	4.4	0-5%
Specific Conductivity	GN19748	T44342-1	umhos/cm	480	481	0.2	0-20%
pH	GN19657	T44430-17	su	7.54	7.54	0.0	0-20%

Associated Samples:

Batch GN19657: T44342-1, T44342-2, T44342-3, T44342-4, T44342-5, T44342-6, T44342-7, T44342-8

Batch GN19701: T44342-1, T44342-2, T44342-3, T44342-4, T44342-5, T44342-6, T44342-7, T44342-8

Batch GN19748: T44342-1, T44342-2, T44342-3, T44342-4, T44342-5, T44342-6, T44342-7, T44342-8

Batch GN19854: T44342-6, T44342-7, T44342-8

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T44342
Account: WALSCOGJ - Walsh Environmental
Project: 620-1 Pit Soil/900546.0001.050

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GN19854	T44342-6	mg/kg	<2.0	40	36.7	89.0	75-125%

Associated Samples:
Batch GN19854: T44342-6, T44342-7, T44342-8
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits