Mountain States ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

03/12/10

Technical Report for

KRW Consulting, Inc.

18-12

1003-01

Accutest Job Number: D11538

Sampling Date: 03/04/10

Report to:

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Total number of pages in report: **85**

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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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Laboratory Director

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Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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Sample Summary

KRW Consulting, Inc.

Job No: D11538

18-12
Project No: 1003-01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D11538-1	03/04/10	13:00	MR	03/05/10	SO	Soil	18-12 1A
D11538-2	03/04/10	13:50	MR	03/05/10	SO	Soil	18-12 1B
D11538-3	03/04/10	14:05	MR	03/05/10	SO	Soil	18-12 2A
D11538-4	03/04/10	14:20	MR	03/05/10	SO	Soil	18-12 2B
D11538-5	03/04/10	14:40	MR	03/05/10	SO	Soil	18-12 3A
D11538-6	03/04/10	14:10	MR	03/05/10	SO	Soil	18-12 7A
D11538-7	03/04/10	14:50	MR	03/05/10	SO	Soil	18-12 4A
D11538-8	03/04/10	14:00	MR	03/05/10	SO	Soil	18-12 6A
D11538-9	03/04/10	14:55	MR	03/05/10	SO	Soil	18-12 5A
D11538-10	03/04/10	14:30	MR	03/05/10	SO	Soil	18-12 8A
D11538-11	03/04/10	14:15	MR	03/05/10	SO	Soil	18-12 WC

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	KRW Consulting, Inc.	**Job No**	D11538
Site:	18-12	**Report Dat**	3/12/2010 4:17:55 PM

On 03/05/2010, 11 Samples were received at Accutest Laboratories at a temperature of 5.8°C. The samples were intact and properly preserved, unless noted below. An Accutest Job Number of D11538 was assigned to the project. The laboratory sample IDs, client sample IDs, and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GC By Method SW846 8015B

Matrix SO **Batch ID:** GGA304

- All samples were analyzed within the recommended method holding time.
- Samples D11538-1MS and D11538-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Samples D11538-1 through D11538-10, D11538-1MS and D11538-1MSD have surrogates outside control limits. Probable cause due to matrix interference.

Volatiles by GC By Method SW846 8021B

Matrix LEACHATE **Batch ID:** OP1538

- All samples were extracted and analyzed within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D11538-1 through D11538-10, D11538-1MS and D11538-1MSD have surrogates outside control limits. Probable cause due to matrix interference.

Matrix SO **Batch ID:** GTA304

- All samples were analyzed within the recommended method holding time.
- Samples D11538-1MS and D11538-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Samples D11538-1 through D11538-10, D11538-1MS and D11538-1MSD have surrogates outside control limits. Probable cause due to matrix interference.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP1522

- All samples were extracted and analyzed within the recommended method holding time.
- Samples D11538-1MSD, D11538-1MS, and D11538-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The matrix spike (MS) recovery for TPH-DRO (C10-C28) is outside control limits. Outside control limits due to high level in sample relative to spike amount.
- Samples D11538-1 through D11538-4, D11538-6, D11538-8, D11538-9, OP1522-MS, and OP1522-MSD have surrogates outside control limits. Probable cause due to matrix interference.

Metals By Method SW846 6010B

Matrix	AQ	Batch ID:	MP1435

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D11538-7DUP and D11538-7MS were used as the QC samples for metals.

Wet Chemistry By Method LADNR29B

Matrix	SO	Batch ID:	MP1435

- Sodium Adsorption Ratio: Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+(Mg meq/L)/2]

Wet Chemistry By Method SM19 2540B M

Matrix	SO	Batch ID:	GN3506

- The data for SM19 2540B M meets quality control requirements.

Wet Chemistry By Method SW846 1010, PM CC

Matrix	ALL	Batch ID:	GN3518

- The data for SW846 1010, PM CC meets quality control requirements.
- D11538-11 for Flashpoint At 620 mm Hg: Not ignitable

Wet Chemistry By Method SW846 7.2

Matrix	SO	Batch ID:	GN3492

- D11538-11 for Corrosivity as pH: Non Corrosive

Wet Chemistry By Method SW846 9073/418.1M

Matrix	SO	Batch ID:	GP1592

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample D11538-11DUP was used as the QC samples for Petroleum Hydrocarbons.

Wet Chemistry By Method SW846 9095

Matrix	SO	Batch ID:	GN3519

- The data for SW846 9095 meets quality control requirements.
- D11538-11 for Paint Filter Test: No free liquids.

Wet Chemistry By Method SW846 CHAP 7.3

Matrix	SO	Batch ID:	GP1582

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method SW846 CHAP7

Matrix	SO	Batch ID:	GP1581

- All samples were prepared analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	18-12 1A		
Lab Sample ID:	D11538-1	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8015B	**Percent Solids:**	82.1
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA5500.D	1	03/08/10	LAC	n/a	n/a	GGA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	10.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	5500	270	270	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	181% [a]		60-140%

(a) Outside control limits due to matrix interference.

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:	18-12 1A		
Lab Sample ID:	D11538-1	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8021B	**Percent Solids:**	82.1
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA5500.D	1	03/08/10	LAC	n/a	n/a	GTA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	10.0 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	3630	1300	ug/kg	
108-88-3	Toluene	65300	2700	ug/kg	
100-41-4	Ethylbenzene	12100	2700	ug/kg	
	m,p-Xylene	363000	2700	ug/kg	
95-47-6	o-Xylene	74100	2700	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	181% [a]		60-140%

(a) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 1A		
Lab Sample ID:	D11538-1	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	82.1
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FC1996.D	10	03/09/10	CP	03/08/10	OP1522	GFC117
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	9690	410	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-06-6	t-Butylbenzene	492% [a]		39-130%

(a) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 1A		
Lab Sample ID:	D11538-1	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	82.1
Project:	18-12		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By		Method	Prep Method
Calcium	21.6	2.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]
Magnesium	5.56	1.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]
Sodium	112	2.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA479
(2) Prep QC Batch: MP1435

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 1A		
Lab Sample ID:	D11538-1	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	82.1
Project:	18-12		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	5.56		ratio	1	03/11/10 19:04	JM	LADNR29B
Solids, Percent	82.1		%	1	03/08/10	SWT	SM19 2540B M
Specific Conductivity	541	1.0	umhos/cm	1	03/10/10	JD	DEPT.OF AG, BOOK N9
pH	9.37		su	1	03/05/10 12:00	JK	SW846 9045C

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 1B		
Lab Sample ID:	D11538-2	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8015B	**Percent Solids:**	81.7
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA5504.D	1	03/08/10	LAC	n/a	n/a	GGA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	40.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	2870	67	67	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	364% [a]		60-140%

(a) Outside control limits due to matrix interference.

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:	18-12 1B		
Lab Sample ID:	D11538-2	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8021B	**Percent Solids:**	81.7
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA5504.D	1	03/08/10	LAC	n/a	n/a	GTA304
Run #2	TA5503.D	1	03/08/10	LAC	n/a	n/a	GTA304

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	40.0 ul
Run #2	5.0 g	10.0 ml	10.0 ul

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	1640	330	ug/kg	
108-88-3	Toluene	31000	670	ug/kg	
100-41-4	Ethylbenzene	3830	670	ug/kg	
	m,p-Xylene	210000 [a]	2700	ug/kg	
95-47-6	o-Xylene	40900	670	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	271% [b]	157% [b]	60-140%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 1B		
Lab Sample ID:	D11538-2	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	81.7
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FC2014.D	5	03/09/10	CP	03/08/10	OP1522	GFC117
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	6710	82	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-06-6	t-Butylbenzene	220% [a]		39-130%

(a) Outside control limits due to matrix interference

ND = Not detected
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:	18-12 1B		
Lab Sample ID:	D11538-2	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	81.7
Project:	18-12		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By		Method	Prep Method
Calcium	10.9	2.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]
Magnesium	3.31	1.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]
Sodium	89.4	2.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA479
(2) Prep QC Batch: MP1435

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 1B		
Lab Sample ID:	D11538-2	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	81.7
Project:	18-12		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	6.08		ratio	1	03/11/10 19:10	JM	LADNR29B
Solids, Percent	81.7		%	1	03/08/10	SWT	SM19 2540B M
Specific Conductivity	444	1.0	umhos/cm	1	03/10/10	JD	DEPT.OF AG, BOOK N9
pH	9.57		su	1	03/05/10 12:00	JK	SW846 9045C

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 2A		
Lab Sample ID:	D11538-3	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8015B	**Percent Solids:**	93.5
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA5506.D	1	03/08/10	LAC	n/a	n/a	GGA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	20.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	5040	110	110	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	342% [a]		60-140%

(a) Outside control limits due to matrix interference.

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:	18-12 2A		
Lab Sample ID:	D11538-3	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8021B	**Percent Solids:**	93.5
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA5506.D	1	03/08/10	LAC	n/a	n/a	GTA304
Run #2	TA5505.D	1	03/08/10	LAC	n/a	n/a	GTA304

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	20.0 ul
Run #2	5.0 g	10.0 ml	2.0 ul

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	3800	550	ug/kg	
108-88-3	Toluene	96500	1100	ug/kg	
100-41-4	Ethylbenzene	12000	1100	ug/kg	
	m,p-Xylene	451000 [a]	11000	ug/kg	
95-47-6	o-Xylene	80200	1100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	241% [b]	126%	60-140%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 2A		
Lab Sample ID:	D11538-3	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	93.5
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FC2015.D	5	03/09/10	CP	03/08/10	OP1522	GFC117
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	10100	71	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-06-6	t-Butylbenzene	647% [a]		39-130%

(a) Oustide control limits due to matrix interference

ND = Not detected
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:	18-12 2A		
Lab Sample ID:	D11538-3	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	93.5
Project:	18-12		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By		Method	Prep Method
Calcium	27.1	2.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]
Magnesium	4.02	1.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]
Sodium	117	2.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA479
(2) Prep QC Batch: MP1435

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 2A		
Lab Sample ID:	D11538-3	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	93.5
Project:	18-12		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	5.54		ratio	1	03/11/10 19:16	JM	LADNR29B
Solids, Percent	93.5		%	1	03/08/10	SWT	SM19 2540B M
Specific Conductivity	664	1.0	umhos/cm	1	03/10/10	JD	DEPT.OF AG, BOOK N9
pH	9.41		su	1	03/05/10 12:00	JK	SW846 9045C

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 2B		
Lab Sample ID:	D11538-4	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8015B	**Percent Solids:**	87.7
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA5507.D	1	03/08/10	LAC	n/a	n/a	GGA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	10.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	2740	240	240	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	165% [a]		60-140%

(a) Outside control limits due to matrix interference.

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:	18-12 2B		
Lab Sample ID:	D11538-4	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8021B	**Percent Solids:**	87.7
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA5507.D	1	03/08/10	LAC	n/a	n/a	GTA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	10.0 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	2470	1200	ug/kg	
108-88-3	Toluene	56500	2400	ug/kg	
100-41-4	Ethylbenzene	3120	2400	ug/kg	
	m,p-Xylene	208000	2400	ug/kg	
95-47-6	o-Xylene	41700	2400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	151% [a]		60-140%

(a) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 2B		
Lab Sample ID:	D11538-4	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	87.7
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FC2016.D	5	03/09/10	CP	03/08/10	OP1522	GFC117
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	5010	76	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-06-6	t-Butylbenzene	346% [a]		39-130%

(a) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 2B		
Lab Sample ID:	D11538-4	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	87.7
Project:	18-12		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By		Method	Prep Method
Calcium	5.24	2.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]
Magnesium	< 1.0	1.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]
Sodium	208	2.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA479
(2) Prep QC Batch: MP1435

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 2B		
Lab Sample ID:	D11538-4	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	87.7
Project:	18-12		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	22.0		ratio	1	03/11/10 19:22	JM	LADNR29B
Solids, Percent	87.7		%	1	03/08/10	SWT	SM19 2540B M
Specific Conductivity	882	1.0	umhos/cm	1	03/10/10	JD	DEPT.OF AG, BOOK N9
pH	9.62		su	1	03/05/10 12:00	JK	SW846 9045C

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 3A		
Lab Sample ID:	D11538-5	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8015B	**Percent Solids:**	77.2
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA5508.D	1	03/08/10	LAC	n/a	n/a	GGA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	562	29	29	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	634% [a]		60-140%

(a) Outside control limits due to matrix interference.

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:	18-12 3A		
Lab Sample ID:	D11538-5	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8021B	**Percent Solids:**	77.2
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA5508.D	1	03/08/10	LAC	n/a	n/a	GTA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	140	ug/kg	
108-88-3	Toluene	ND	290	ug/kg	
100-41-4	Ethylbenzene	761	290	ug/kg	
	m,p-Xylene	15300	290	ug/kg	
95-47-6	o-Xylene	4070	290	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	392% [a]		60-140%

(a) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 3A		
Lab Sample ID:	D11538-5	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	77.2
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FC2017.D	1	03/09/10	CP	03/08/10	OP1522	GFC117
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	2410	17	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-06-6	t-Butylbenzene	103%		39-130%

ND = Not detected
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:	18-12 3A		
Lab Sample ID:	D11538-5	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	77.2
Project:	18-12		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By		Method	Prep Method
Calcium	7.99	2.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [3]
Magnesium	2.08	1.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [3]
Sodium	118	2.0	mg/l	1	03/10/10	03/12/10	JM	SW846 6010B [2]	EPA 200.7 [3]

(1) Instrument QC Batch: MA479
(2) Instrument QC Batch: MA484
(3) Prep QC Batch: MP1435

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 3A		
Lab Sample ID:	D11538-5	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	77.2
Project:	18-12		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	9.61		ratio	1	03/12/10 09:35	JM	LADNR29B
Solids, Percent	77.2		%	1	03/08/10	SWT	SM19 2540B M
Specific Conductivity	551	1.0	umhos/cm	1	03/10/10	JD	DEPT.OF AG, BOOK N9
pH	9.77		su	1	03/05/10 12:00	JK	SW846 9045C

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 7A		
Lab Sample ID:	D11538-6	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8015B	**Percent Solids:**	91.3
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA5511.D	1	03/08/10	LAC	n/a	n/a	GGA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	594	23	23	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	613% [a]		60-140%

(a) Outside control limits due to matrix interference.

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:	18-12 7A		
Lab Sample ID:	D11538-6	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8021B	**Percent Solids:**	91.3
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA5511.D	1	03/08/10	LAC	n/a	n/a	GTA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	110	ug/kg	
108-88-3	Toluene	430	230	ug/kg	
100-41-4	Ethylbenzene	707	230	ug/kg	
	m,p-Xylene	25100	230	ug/kg	
95-47-6	o-Xylene	8170	230	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	402% [a]		60-140%

(a) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 7A		
Lab Sample ID:	D11538-6	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	91.3
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FC2018.D	5	03/09/10	CP	03/08/10	OP1522	GFC117
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	4920	73	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-06-6	t-Butylbenzene	158% [a]		39-130%

(a) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 7A		
Lab Sample ID:	D11538-6	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	91.3
Project:	18-12		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	16.9	2.0	mg/l	1	03/10/10	03/11/10 JM	SW846 6010B [1]	EPA 200.7 [3]
Magnesium	4.79	1.0	mg/l	1	03/10/10	03/11/10 JM	SW846 6010B [1]	EPA 200.7 [3]
Sodium	133	2.0	mg/l	1	03/10/10	03/12/10 JM	SW846 6010B [2]	EPA 200.7 [3]

(1) Instrument QC Batch: MA479
(2) Instrument QC Batch: MA484
(3) Prep QC Batch: MP1435

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 7A		
Lab Sample ID:	D11538-6	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	91.3
Project:	18-12		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	7.35		ratio	1	03/12/10 09:41	JM	LADNR29B
Solids, Percent	91.3		%	1	03/08/10	SWT	SM19 2540B M
Specific Conductivity	687	1.0	umhos/cm	1	03/10/10	JD	DEPT.OF AG, BOOK N9
pH	9.67		su	1	03/05/10 12:00	JK	SW846 9045C

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 4A		
Lab Sample ID:	D11538-7	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8015B	**Percent Solids:**	79.0
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA5512.D	1	03/08/10	LAC	n/a	n/a	GGA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	36.9	28	28	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	166% [a]		60-140%

(a) Outside control limits due to matrix interference.

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:	18-12 4A		
Lab Sample ID:	D11538-7	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8021B	**Percent Solids:**	79.0
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA5512.D	1	03/08/10	LAC	n/a	n/a	GTA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	140	ug/kg	
108-88-3	Toluene	ND	280	ug/kg	
100-41-4	Ethylbenzene	ND	280	ug/kg	
	m,p-Xylene	ND	280	ug/kg	
95-47-6	o-Xylene	ND	280	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	146% [a]		60-140%

(a) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 4A		
Lab Sample ID:	D11538-7	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	79.0
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FC2023.D	1	03/10/10	CP	03/08/10	OP1522	GFC117
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	401	17	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-06-6	t-Butylbenzene	54%		39-130%

ND = Not detected
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:	18-12 4A		
Lab Sample ID:	D11538-7	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	79.0
Project:	18-12		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	2.06	2.0	mg/l	1	03/10/10	03/11/10 JM	SW846 6010B [1]	EPA 200.7 [2]
Magnesium	< 1.0	1.0	mg/l	1	03/10/10	03/11/10 JM	SW846 6010B [1]	EPA 200.7 [2]
Sodium	116	2.0	mg/l	1	03/10/10	03/11/10 JM	SW846 6010B [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA479
(2) Prep QC Batch: MP1435

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 4A		
Lab Sample ID:	D11538-7	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	79.0
Project:	18-12		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	17.4		ratio	1	03/11/10 18:47	JM	LADNR29B
Solids, Percent	79		%	1	03/08/10	SWT	SM19 2540B M
Specific Conductivity	497	1.0	umhos/cm	1	03/10/10	JD	DEPT.OF AG, BOOK N9
pH	9.96		su	1	03/05/10 12:00	JK	SW846 9045C

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 6A		
Lab Sample ID:	D11538-8	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8015B	**Percent Solids:**	91.6
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA5514.D	1	03/08/10	LAC	n/a	n/a	GGA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	1350	23	23	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	924% [a]		60-140%

(a) Outside control limits due to matrix interference.

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:	18-12 6A		
Lab Sample ID:	D11538-8	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8021B	**Percent Solids:**	91.6
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA5514.D	1	03/08/10	LAC	n/a	n/a	GTA304
Run #2	TA5513.D	1	03/08/10	LAC	n/a	n/a	GTA304

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	100 ul
Run #2	5.0 g	10.0 ml	20.0 ul

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	110	ug/kg	
108-88-3	Toluene	3880	230	ug/kg	
100-41-4	Ethylbenzene	3290	230	ug/kg	
	m,p-Xylene	79400 [a]	1100	ug/kg	
95-47-6	o-Xylene	19700	230	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	564% [b]	210% [b]	60-140%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 6A		
Lab Sample ID:	D11538-8	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	91.6
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FC2035.D	10	03/10/10	CP	03/08/10	OP1522	GFC118
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	14800	360	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-06-6	t-Butylbenzene	403% [a]		39-130%

(a) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 6A		
Lab Sample ID:	D11538-8	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	91.6
Project:	18-12		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By		Method	Prep Method
Calcium	6.80	2.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [3]
Magnesium	1.35	1.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [3]
Sodium	79.0	2.0	mg/l	1	03/10/10	03/12/10	JM	SW846 6010B [2]	EPA 200.7 [3]

(1) Instrument QC Batch: MA479
(2) Instrument QC Batch: MA484
(3) Prep QC Batch: MP1435

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 6A		
Lab Sample ID:	D11538-8	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	91.6
Project:	18-12		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	7.24		ratio	1	03/12/10 09:47	JM	LADNR29B
Solids, Percent	91.6		%	1	03/08/10	SWT	SM19 2540B M
Specific Conductivity	367	1.0	umhos/cm	1	03/10/10	JD	DEPT.OF AG, BOOK N9
pH	9.68		su	1	03/05/10 12:00	JK	SW846 9045C

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 5A		
Lab Sample ID:	D11538-9	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8015B	**Percent Solids:**	90.6
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA5515.D	1	03/08/10	LAC	n/a	n/a	GGA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	5.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	4620	460	460	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	219% [a]		60-140%

(a) Outside control limits due to matrix interference.

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:	18-12 5A		
Lab Sample ID:	D11538-9	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8021B	**Percent Solids:**	90.6
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA5516.D	1	03/09/10	LAC	n/a	n/a	GTA304
Run #2	TA5515.D	1	03/08/10	LAC	n/a	n/a	GTA304

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	100 ul
Run #2	5.0 g	10.0 ml	5.0 ul

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	192	120	ug/kg	
108-88-3	Toluene	21100	230	ug/kg	
100-41-4	Ethylbenzene	16500	230	ug/kg	
	m,p-Xylene	272000 [a]	4600	ug/kg	
95-47-6	o-Xylene	55900 [a]	4600	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	811% [b]	179% [b]	60-140%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 5A		
Lab Sample ID:	D11538-9	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	90.6
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FC2036.D	10	03/10/10	CP	03/08/10	OP1522	GFC118
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	17600	370	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-06-6	t-Butylbenzene	793% [a]		39-130%

(a) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 5A		
Lab Sample ID:	D11538-9	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	90.6
Project:	18-12		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By		Method	Prep Method
Calcium	19.0	2.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [3]
Magnesium	4.98	1.0	mg/l	1	03/10/10	03/11/10	JM	SW846 6010B [1]	EPA 200.7 [3]
Sodium	181	2.0	mg/l	1	03/10/10	03/12/10	JM	SW846 6010B [2]	EPA 200.7 [3]

(1) Instrument QC Batch: MA479
(2) Instrument QC Batch: MA484
(3) Prep QC Batch: MP1435

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 5A		
Lab Sample ID:	D11538-9	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	90.6
Project:	18-12		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	9.55		ratio	1	03/12/10 09:53	JM	LADNR29B
Solids, Percent	90.6		%	1	03/08/10	SWT	SM19 2540B M
Specific Conductivity	860	1.0	umhos/cm	1	03/10/10	JD	DEPT.OF AG, BOOK N9
pH	9.84		su	1	03/05/10 12:00	JK	SW846 9045C

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 8A		
Lab Sample ID:	D11538-10	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8015B	**Percent Solids:**	76.5
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA5518.D	1	03/09/10	LAC	n/a	n/a	GGA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	87.3	29	29	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	470%		60-140%

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:	18-12 8A		
Lab Sample ID:	D11538-10	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8021B	**Percent Solids:**	76.5
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA5518.D	1	03/09/10	LAC	n/a	n/a	GTA304
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	10.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	150	ug/kg	
108-88-3	Toluene	ND	290	ug/kg	
100-41-4	Ethylbenzene	ND	290	ug/kg	
	m,p-Xylene	905	290	ug/kg	
95-47-6	o-Xylene	296	290	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	308% [a]		60-140%

(a) Outside control limits due to matrix interference.

ND = Not detected
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:	18-12 8A		
Lab Sample ID:	D11538-10	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	76.5
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FC2024.D	1	03/10/10	CP	03/08/10	OP1522	GFC117
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	2250	17	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-06-6	t-Butylbenzene	64%		39-130%

ND = Not detected
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:	18-12 8A		
Lab Sample ID:	D11538-10	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	76.5
Project:	18-12		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	3.46	2.0	mg/l	1	03/10/10	03/11/10 JM	SW846 6010B [1]	EPA 200.7 [3]
Magnesium	< 1.0	1.0	mg/l	1	03/10/10	03/11/10 JM	SW846 6010B [1]	EPA 200.7 [3]
Sodium	100	2.0	mg/l	1	03/10/10	03/12/10 JM	SW846 6010B [2]	EPA 200.7 [3]

(1) Instrument QC Batch: MA479
(2) Instrument QC Batch: MA484
(3) Prep QC Batch: MP1435

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 8A		
Lab Sample ID:	D11538-10	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	76.5
Project:	18-12		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	12.2		ratio	1	03/12/10 09:59	JM	LADNR29B
Solids, Percent	76.5		%	1	03/08/10	SWT	SM19 2540B M
Specific Conductivity	417	1.0	umhos/cm	1	03/10/10	JD	DEPT.OF AG, BOOK N9
pH	10.06		su	1	03/05/10 12:00	JK	SW846 9045C

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	18-12 WC		
Lab Sample ID:	D11538-11	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
Method:	SW846 8021B SW846 1311	**Percent Solids:**	93.7
Project:	18-12		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB3501.D	10	03/10/10	LAC	03/10/10	OP1538	GTB182
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
71-43-2	Benzene	0.0137	D018	0.50	0.010	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	96%		60-140%

ND = Not detected
MCL = Maximum Contamination Level (40 CFR 261 6/96)
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:	18-12 WC		
Lab Sample ID:	D11538-11	**Date Sampled:**	03/04/10
Matrix:	SO - Soil	**Date Received:**	03/05/10
		Percent Solids:	93.7
Project:	18-12		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH [a]	9.57		su	1	03/05/10 12:00	JK	SW846 7.2
Cyanide Reactivity	< 1.5	1.5	mg/kg	1	03/08/10	CJ	SW846 CHAP7
Flashpoint At 620 mm Hg [b]	> 140		Deg. F	1	03/08/10	JJ	SW846 1010, PM CC
Paint Filter Test [c]	< 1.0	1.0	ml/100g	1	03/08/10	JJ	SW846 9095
Petroleum Hydrocarbons	13700	1000	mg/kg	50	03/10/10	SWT	SW846 9073/418.1M
Solids, Percent	93.7		%	1	03/08/10	SWT	SM19 2540B M
Sulfide Reactivity	< 10	10	mg/kg	1	03/08/10	CJ	SW846 CHAP 7.3

(a) Non Corrosive
(b) Not ignitable
(c) No free liquids.

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield Street, Wheat Ridge, Colorado 80033
TEL. 303-425-6021; 877-737-4521 FAX: 303-425-6854
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: D11538

Client / Reporting Information

Company Name: KRW Consulting
Street Address: 8000 W. 14th Ave. Ste 200
City / State / Zip: Lakewood CO 80214
Project Contact: Joe Hess — E-mail: jhess@krwconsulting.com
Phone #: 303-239-9011 — Fax #: 303 239-0745
Sampler(s) Name(s): M. Remaso, D. Knudson — Phone #: 970-756-2793, 970-756-4880

Project Information

Project Name: 18-12
Street:
City / State:
Project #: 1003-01
Client Purchase Order #:
Project Manager: Joe Hess

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

TEPH - DRO; TVPH - GRO; BTEX; EC; pH; SAR; TCLP Benzene, TRPH; Corrosivity, Reactivity, Paint Filter, Ignitability

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	LAB USE ONLY
	18-12 1A		3/4/10	1300	DK		2									01
	18-12 1B		3/4/10	1350	MR		2									02
	18-12 2A		3/4/10	1405	MR		2									03
	18-12 2B		3/4/10	1420	MR		2									04
	18-12 3A		3/4/10	1440	DK		2									05
	18-12 7A		3/4/10	1410	DK		2									06
	18-12 4A		3/4/10	1450	DK		2									07
	18-12 6A		3/4/10	1400	DK		2									08
	18-12 5A		3/4/10	1455	MR		2									09
	18-12 8A		3/4/10	1430	DK		2									10
	18-12 WC		3/4/10	1415	JH		2									11

18-12 ONLY

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [ ] UST Analysis 3-5 Days
- [ ] 6 - 9 Day *RUSH*
- [x] 3 - 5 Day *RUSH*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Level 1
- [ ] Level 2
- [ ] Level 3
- [ ] Level 4
- [ ] PDF
- [ ] EDD Format
- [ ] Other

Level 1 = Results Only
Level 2 = Results + QC Summary + Case Narrative
Level 3 = Results + QC Summary + Partial Raw data
Level 4 = Full Deliverable

Comments / Special Instructions

Copy the following on results
gknell@krwconsulting.com
dknudson@krwconsulting.com

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		3/4/10 1560	3/4/10 1560	2	3/5 945	2
3		3-4-10 1560	3 3/5/10	4	3/5 11:00	4 3/5/10 11:00
5	Relinquished by:	Date Time:	Received By: 5			

Custody Seal #: [ ] Intact [x] Not intact
Preserved where applicable: [ ] N/A
On Ice: [x]
Cooler Temp.: 5.8

4.1 4

D11538: Chain of Custody
Page 1 of 1

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: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA304-MB	GA5498.D	1	03/08/10	LAC	n/a	n/a	GGA304

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

D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.20	mg/kg	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	97%	60-140%

Method Blank Summary

Job Number: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1538-MB	TB3499.D	10	03/10/10	LAC	03/10/10	OP1538	GTB182

The QC reported here applies to the following samples: **Method:** SW846 8021B

D11538-11

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	10	ug/l	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	99%	60-140%

Method Blank Summary

Job Number: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA304-MB	TA5498.D	1	03/08/10	LAC	n/a	n/a	GTA304

The QC reported here applies to the following samples: **Method:** SW846 8021B

D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	ug/kg	
108-88-3	Toluene	ND	2.0	ug/kg	
95-47-6	o-Xylene	ND	2.0	ug/kg	
	m,p-Xylene	ND	2.0	ug/kg	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	106%	60-140%

Blank Spike Summary

Job Number: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA304-BS	GA5499.D	1	03/08/10	LAC	n/a	n/a	GGA304

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

D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	2.2	2.27	103	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	129%	60-140%

Blank Spike Summary

Job Number: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1538-BS	TB3500.D	10	03/10/10	LAC	03/10/10	OP1538	GTB182

The QC reported here applies to the following samples: **Method:** SW846 8021B

D11538-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	272	237	87	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	108%	60-140%

Blank Spike Summary

Job Number: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA304-BS	TA5499.D	1	03/08/10	LAC	n/a	n/a	GTA304

The QC reported here applies to the following samples: **Method:** SW846 8021B

D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	27.2	26.9	99	70-130
100-41-4	Ethylbenzene	45.6	45.2	99	70-130
108-88-3	Toluene	212	192	91	70-130
95-47-6	o-Xylene	65.9	66.6	101	70-130
	m,p-Xylene	150	146	97	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	120%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D11538-1MS	GA5501.D	1	03/08/10	LAC	n/a	n/a	GGA304
D11538-1MSD	GA5502.D	1	03/08/10	LAC	n/a	n/a	GGA304
D11538-1	GA5500.D	1	03/08/10	LAC	n/a	n/a	GGA304

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

D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

CAS No.	Compound	D11538-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	5500		2920	8420	100	8090	89	4	62-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D11538-1	Limits
120-82-1	1,2,4-Trichlorobenzene	209%* [a]	261%* [a]	181%* [a]	60-140%

(a) Outside control limits due to matrix interference.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D11538-1MS	TA5501.D	1	03/08/10	LAC	n/a	n/a	GTA304
D11538-1MSD	TA5502.D	1	03/08/10	LAC	n/a	n/a	GTA304
D11538-1	TA5500.D	1	03/08/10	LAC	n/a	n/a	GTA304

The QC reported here applies to the following samples: **Method:** SW846 8021B

D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

CAS No.	Compound	D11538-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	3630		36100	40200	101	40200	101	0	70-130/30
100-41-4	Ethylbenzene	12100		60500	78600	110	79200	111	1	62-130/30
108-88-3	Toluene	65300		281000	324000	92	328000	94	1	70-130/30
95-47-6	o-Xylene	74100		87500	163000	102	166000	105	2	65-135/30
	m,p-Xylene	363000		199000	549000	93	560000	99	2	60-140/30

CAS No.	Surrogate Recoveries	MS	MSD	D11538-1	Limits
120-82-1	1,2,4-Trichlorobenzene	192%* [a]	199%* [a]	181%* [a]	60-140%

(a) Outside control limits due to matrix interference.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D11538-11MS	TB3502.D	10	03/10/10	LAC	n/a	n/a	GTB182
D11538-11MSD	TB3503.D	10	03/10/10	LAC	n/a	n/a	GTB182
D11538-11	TB3501.D	10	03/10/10	LAC	03/10/10	OP1538	GTB182

The QC reported here applies to the following samples: **Method:** SW846 8021B

D11538-11

CAS No.	Compound	D11538-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	13.7		272	252	88	245	85	3	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D11538-11	Limits
120-82-1	1,2,4-Trichlorobenzene	97%	96%	96%	60-140%

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: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1522-MB	FC1992.D	1	03/09/10	CP	03/08/10	OP1522	GFC117

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

D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (C10-C28)	ND	13	mg/kg	

CAS No.	Surrogate Recoveries		Limits
98-06-6	t-Butylbenzene	49%	39-130%

Blank Spike Summary

Job Number: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1522-BS	FC1993.D	1	03/09/10	CP	03/08/10	OP1522	GFC117

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

D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	482	72	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
98-06-6	t-Butylbenzene	57%	39-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D11538
Account: KRWCCOL KRW Consulting, Inc.
Project: 18-12

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1522-MS	FC1997.D	10	03/09/10	CP	03/08/10	OP1522	GFC117
OP1522-MSD	FC1998.D	10	03/09/10	CP	03/08/10	OP1522	GFC117
D11538-1	FC1996.D	10	03/09/10	CP	03/08/10	OP1522	GFC117

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

D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

CAS No.	Compound	D11538-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	9690		810	11600	236* [a]	13200	434* [a]	13	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D11538-1	Limits
98-06-6	t-Butylbenzene	534%* [b]	605%* [b]	492%* [b]	39-130%

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

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: D11538
Account: KRWCCOL - KRW Consulting, Inc.
Project: 18-12

QC Batch ID: MP1435
Matrix Type: AQUEOUS

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

Prep Date: 03/10/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	160	250		
Antimony	150	68	65		
Arsenic	130	35	33		
Barium	50	1	12		
Beryllium	50	17	22		
Boron	250	17	93		
Cadmium	50	3.7	6		
Calcium	2000	9	46	5.5	<2000
Chromium	50	3	8		
Cobalt	25	3	1.5		
Copper	25	9	14		
Iron	350	28	50		
Lead	250	17	16		
Lithium	10		8		
Magnesium	1000	3.1	62	59.5	<1000
Manganese	25	.5	3.5		
Molybdenum	50	7.5	6		
Nickel	150	4.1	3		
Phosphorus	500	230	270		
Potassium	5000	57	2700		
Selenium	250	25	36		
Silicon	250	48	100		
Silver	150	1.5	1.5		
Sodium	2000	17	110	-830	<2000
Strontium	25		17		
Thallium	50	7	11		
Tin	250	13	22		
Titanium	50	.65	3.5		
Uranium	250	22	20		
Vanadium	50	3.4	1.5		
Zinc	150	2.6	8.5		

Associated samples MP1435: D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

Results < IDL are shown as zero for calculation purposes

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D11538
Account: KRWCCOL - KRW Consulting, Inc.
Project: 18-12

QC Batch ID: MP1435
Matrix Type: AQUEOUS

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

Prep Date:

Metal

(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D11538
Account: KRWCCOL - KRW Consulting, Inc.
Project: 18-12

QC Batch ID: MP1435
Matrix Type: AQUEOUS

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

Prep Date:			03/10/10					03/10/10	
Metal	D11538-7 Original	DUP	RPD	QC Limits	D11538-7 Original	MS	Spikelot MPICPR1	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Boron									
Cadmium									
Calcium	2060	2060	0.0	0-20	2060	51100	50000	98.1	75-125
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Lithium									
Magnesium	787	781	0.8	0-20	787	48100	50000	94.6	75-125
Manganese									
Molybdenum									
Nickel									
Phosphorus									
Potassium									
Selenium									
Silicon									
Silver									
Sodium	116000	116000	0.0	0-20	116000	163000	50000	94.0	75-125
Strontium									
Thallium									
Tin									
Titanium									
Uranium									
Vanadium									
Zinc									

Associated samples MP1435: D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

Results < IDL are shown as zero for calculation purposes

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D11538
Account: KRWCCOL - KRW Consulting, Inc.
Project: 18-12

QC Batch ID: MP1435
Matrix Type: AQUEOUS

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

Prep Date:

Metal

(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D11538
Account: KRWCCOL - KRW Consulting, Inc.
Project: 18-12

QC Batch ID: MP1435
Matrix Type: AQUEOUS

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

Prep Date: 03/10/10

Metal	BSP Result	Spikelot MPICPR1	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	49700	50000	99.4	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	47900	50000	95.8	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	46900	50000	93.8	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP1435: D11538-1, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9, D11538-10

Results < IDL are shown as zero for calculation purposes

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D11538
Account: KRWCCOL - KRW Consulting, Inc.
Project: 18-12

QC Batch ID: MP1435
Matrix Type: AQUEOUS

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

Prep Date:

Metal

(*) Outside of QC limits
(anr) Analyte not requested

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: D11538
Account: KRWCCOL - KRW Consulting, Inc.
Project: 18-12

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Corrosivity as pH	GN3492			su	8.00	7.96	99.5	99.3-100.7%
Cyanide Reactivity	GP1581/GN3510	1.5	0.0	mg/kg	13.6	0.0	0.2	0-100%
Petroleum Hydrocarbons	GP1592/GN3545	20	<20	mg/kg	56.7	60.6	106.9	70-130%
Specific Conductivity	GP1593/GN3550			umhos/cm	9985	10100	101.3	90-110%
Sulfide Reactivity	GP1582/GN3512	10	0.0	mg/kg	65	40.0	61.5	50-150%
pH	GN3491			su	8.00	7.96	99.5	99.3-100.7%

Associated Samples:
Batch GN3491: D11538-1, D11538-10, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9
Batch GN3492: D11538-11
Batch GP1581: D11538-11
Batch GP1582: D11538-11
Batch GP1592: D11538-11
Batch GP1593: D11538-1, D11538-10, D11538-2, D11538-3, D11538-4, D11538-5, D11538-6, D11538-7, D11538-8, D11538-9
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D11538
Account: KRWCCOL - KRW Consulting, Inc.
Project: 18-12

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Petroleum Hydrocarbons	GP1592/GN3545	D11538-11	mg/kg	13700	11700	15.6	0-40%

Associated Samples:
Batch GP1592: D11538-11
(*) Outside of QC limits

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