

TABLE 1
LARAMIE ENERGY II CUTTINGS SAMPLING
Analytical Summary

SAMPLE SUMMARY	
Location Description	Hawxhurst 24-09
GPS N	39.25939
GPSW	-107.93567
Sample Type	Composite
Sample Date	12/12/2011
Sample ID	HAWX 24-09 SS1

DATA SUMMARY		Units	COGCC Allowable Limits Table 910-1
PARAMETER			
Organic Compounds			
TPH - Total	257.81	mg/kg	500
Gasoline Range Organics	6.81	mg/kg	-
Diesel Range Organics	251	mg/kg	-
Benzene	0.164	mg/kg	0.17
Toluene	0.671	mg/kg	85
Ethylbenzene	0.0789	mg/kg	100
Xylenes	1.370	mg/kg	175
Acenaphthene	U	mg/kg	1000
Anthracene	U	mg/kg	1000
Benzo(A)anthracene	U	mg/kg	0.22
Benzo(B)fluoranthene	U	mg/kg	0.22
Benzo(K)fluoranthene	U	mg/kg	2.2
Benzo(A)pyrene	U	mg/kg	0.022
Chrysene	0.0273	mg/kg	22
Dibenzo(A,H)anthracene	U	mg/kg	0.022
Fluoranthene	U	mg/kg	1000
Fluorene	0.0726	mg/kg	1000
Indeno(1,2,3,C,D)pyrene	U	mg/kg	0.22
Napthalene	0.344	mg/kg	23
Pyrene	0.0164	mg/kg	1000
Inorganics			
Electrical Conductivity (EC)	1.210	mmhos/cm	<4 mmhos/cm or 2x background
Sodium Adsorption Ratio (SAR)	8.88	ratio	<12
pH	9.39	su	6 to 9
Metals			
Arsenic	5.5	mg/kg	0.39
Barium	4700	mg/kg	15,000
Cadmium	U	mg/kg	70
Chromium, Hexavalent	U	mg/kg	23
Chromium, Trivalent	10.6	mg/kg	120,000
Copper	16.7	mg/kg	3,100
Lead	8.7	mg/kg	400
Mercury	U	mg/kg	23
Nickel	13.8	mg/kg	1,600
Selenium	U	mg/kg	390
Silver	U	mg/kg	390
Zinc	31.0	mg/kg	23,000

mg/kg - milligrams per kilogram

mmhos/cm - milliohms per centimeter

su - standard units

U - Parameter tested but not detected

* - Result exceeds COGCC allowable limits but below background

* - Results exceed allowable limits but within natural background levels for the site



12/28/11

Technical Report for

Olsson Associates

Laramie Energy II Hawxhurst 24-09

PO# 011-1173

Accutest Job Number: D30205

Sampling Date: 12/12/11

Report to:

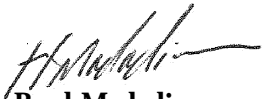
**Olsson Associates
826 21 1/2 Road
Grand Junction, CO 81505
shall@oaconsulting.com**

ATTN: Stuart Hall

Total number of pages in report: 73



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.


**Brad Madadian
Laboratory Director**

Client Service contact: 303-425-6021

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

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Sample Results	8
3.1: D30205-1: HAWX 24-09 SS1	9
3.2: D30205-1A: HAWX 24-09 SS1	15
Section 4: Misc. Forms	17
4.1: Chain of Custody	18
Section 5: GC/MS Volatiles - QC Data Summaries	20
5.1: Method Blank Summary	21
5.2: Blank Spike Summary	22
5.3: Matrix Spike/Matrix Spike Duplicate Summary	23
Section 6: GC/MS Semi-volatiles - QC Data Summaries	24
6.1: Method Blank Summary	25
6.2: Blank Spike Summary	26
6.3: Matrix Spike/Matrix Spike Duplicate Summary	27
Section 7: GC Volatiles - QC Data Summaries	28
7.1: Method Blank Summary	29
7.2: Blank Spike Summary	30
7.3: Matrix Spike/Matrix Spike Duplicate Summary	31
Section 8: GC Semi-volatiles - QC Data Summaries	32
8.1: Method Blank Summary	33
8.2: Blank Spike Summary	34
8.3: Matrix Spike/Matrix Spike Duplicate Summary	35
Section 9: Metals Analysis - QC Data Summaries	36
9.1: Prep QC MP6472: Ba,Cd,Cr,Cu,Pb,Ni,Se,Ag,Zn	37
9.2: Prep QC MP6473: As	47
9.3: Prep QC MP6474: Hg	52
9.4: Prep QC MP6487: Ca,Mg,Na,Sodium Adsorption Ratio	56
Section 10: General Chemistry - QC Data Summaries	64
10.1: Method Blank and Spike Results Summary	65
10.2: Duplicate Results Summary	66
Section 11: Misc. Forms (Accutest Labs of New England, Inc.)	67
11.1: Chain of Custody	68
Section 12: General Chemistry - QC Data (Accutest Labs of New England, Inc.)	70
12.1: Method Blank and Spike Results Summary	71
12.2: Duplicate Results Summary	72
12.3: Matrix Spike Results Summary	73



Sample Summary

Olsson Associates

Job No: D30205

Laramie Energy II Hawxhurst 24-09
Project No: PO# 011-1173

Sample Number	Collected		Time By	Received	Matrix		Client Sample ID
	Date				Code	Type	
D30205-1	12/12/11	14:30	WF	12/13/11	SO	Soil	HAWX 24-09 SS1
D30205-1A	12/12/11	14:30	WF	12/13/11	SO	Soil	HAWX 24-09 SS1

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Olsson Associates

Job No D30205

Site: Laramie Energy II Hawxhurst 24-09

Report Date 12/28/2011 4:58:20 PM

On 12/13/2011, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.6 °C. The sample was intact and properly preserved, unless noted below. An AMS Job Number of D30205 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

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 GCMS By Method SW846 8260B

Matrix SO	Batch ID: V5V1109
------------------	--------------------------

- The sample was analyzed within the recommended method holding time.
- Sample(s) D30387-1MS, D30387-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The matrix spike (MS) recovery(s) of Toluene are outside control limits. Outside control limits due to possible matrix interference.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO	Batch ID: OP5018
------------------	-------------------------

- The sample was extracted and analyzed within the recommended method holding time.
- Sample(s) D30326-1MS, D30326-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The matrix spike (MS) recovery(s) of Acenaphthene are outside control limits. Outside control limits due to possible matrix interference.
- The matrix spike duplicate (MSD) recovery(s) of Acenaphthene are outside control limits. Probable cause due to matrix interference.

Volatiles by GC By Method SW846 8015B

Matrix SO	Batch ID: GGB804
------------------	-------------------------

- The sample was analyzed within the recommended method holding time.
- Sample(s) D30165-1MS, D30165-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846-8015B

Matrix SO	Batch ID: OP5019
------------------	-------------------------

- The sample was extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30205-1MS, D30205-1MSD were used as the QC samples indicated.

Metals By Method SW846 6010B

Matrix AQ

Batch ID: MP6487

- The sample was digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29894-1RAMS, D29894-1RAMSD were used as the QC samples for the metals analysis.

Matrix SO

Batch ID: MP6472

- The sample was digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30205-1MS, D30205-1MSD, D30205-1SDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Nickel are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike (MS) recovery(s) of Barium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The serial dilution RPD(s) for Chromium, Nickel, Zinc are outside control limits for sample MP6472-SD1. Probable cause due to sample homogeneity.
- MP6472-SD1 for Zinc: Serial dilution indicates possible matrix interference.
- MP6472-SD1 for Nickel: Serial dilution indicates possible matrix interference.
- MP6472-SD1 for Chromium: Serial dilution indicates possible matrix interference.
- D30205-1 for Selenium: Elevated detection limit due to dilution required for possible matrix interference.

Metals By Method SW846 6020

Matrix SO

Batch ID: MP6473

- The sample was digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30205-1MS, D30205-1MSD, D30205-1SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Arsenic are outside control limits for sample MP6473-SD1. Probable cause due to sample homogeneity.
- MP6473-SD1 for Arsenic: Serial dilution indicates possible matrix interference.

Metals By Method SW846 7471A

Matrix SO

Batch ID: MP6474

- The sample was digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30239-1MS, D30239-1MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method ASTM D1498-76M

Matrix SO

Batch ID: GN12893

- Sample(s) D30239-1DUP were used as the QC samples for the Redox Potential Vs H2 analysis.

Wet Chemistry By Method SM19 2540B M

Matrix SO

Batch ID: GN12859

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

Wet Chemistry By Method SW846 3060/7196A M

Matrix SO	Batch ID: R11247
------------------	-------------------------

- The data for SW846 3060/7196A M meets quality control requirements.
- D30205-1 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO	Batch ID: M:GP13918
------------------	----------------------------

- The data for SW846 3060A/7196A meets quality control requirements.
- D30205-1 for Chromium, Hexavalent: Analysis performed at Accutest Laboratories, Marlborough, MA.

Wet Chemistry By Method SW846 9045C

Matrix SO	Batch ID: GN12889
------------------	--------------------------

- The following sample was ran outside of holding time for method SW846 9045C: D30205-1

Wet Chemistry By Method USDA HANDBOOK 60

Matrix SO	Batch ID: MP6487
------------------	-------------------------

- D30205-1A for Sodium Adsorption Ratio: Calculated as: $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS'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.

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Accutest Mountain States

Job No D30205

Site: CORCCOGJ: Laramie Energy II Hawxhurst 24-09

Report Date 12/28/2011 10:59:14 AM

1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 12/12/2011 and were received at Accutest on 12/13/2011 properly preserved, at 1.7 Deg. C and intact. These Samples received an Accutest job number of D30205. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO

Batch ID: GP13918

- All samples were distilled 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.
- Sample(s) D30086-11DUP, D30086-11MS were used as the QC samples for Chromium, Hexavalent.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(D30205).

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HAWX 24-09 SS1	
Lab Sample ID:	D30205-1	Date Sampled: 12/12/11
Matrix:	SO - Soil	Date Received: 12/13/11
Method:	SW846 8260B	Percent Solids: 84.4
Project:	Laramie Energy II Hawxhurst 24-09	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V18563.D	1	12/24/11	KV	n/a	n/a	V5V1109
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.08 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	164	68	30	ug/kg	
108-88-3	Toluene	671	140	68	ug/kg	
100-41-4	Ethylbenzene	78.9	140	34	ug/kg	J
1330-20-7	Xylene (total)	1370	270	140	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	92%		61-130%
460-00-4	4-Bromofluorobenzene	107%		53-131%
17060-07-0	1,2-Dichloroethane-D4	99%		62-130%

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:	HAWX 24-09 SS1	Date Sampled:	12/12/11
Lab Sample ID:	D30205-1	Date Received:	12/13/11
Matrix:	SO - Soil	Percent Solids:	84.4
Method:	SW846 8270C BY SIM SW846 3546		
Project:	Laramie Energy II Hawxhurst 24-09		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G07315.D	1	12/17/11	ME	12/15/11	OP5018	E3G271
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

COGCC Table 910-1 PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	7.9	6.3	ug/kg	
120-12-7	Anthracene	ND	7.9	7.1	ug/kg	
56-55-3	Benzo(a)anthracene	ND	20	10	ug/kg	
50-32-8	Benzo(a)pyrene	ND	20	14	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	20	15	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	20	8.7	ug/kg	
218-01-9	Chrysene	27.3	20	8.7	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	20	15	ug/kg	
206-44-0	Fluoranthene	ND	7.9	7.9	ug/kg	
86-73-7	Fluorene	72.6	7.9	6.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	24	22	ug/kg	
91-20-3	Naphthalene	344	7.9	7.5	ug/kg	
129-00-0	Pyrene	16.4	7.9	7.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	53%		10-145%
321-60-8	2-Fluorobiphenyl	51%		10-130%
1718-51-0	Terphenyl-d14	67%		22-130%

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:	HAWX 24-09 SS1	Date Sampled:	12/12/11
Lab Sample ID:	D30205-1	Date Received:	12/13/11
Matrix:	SO - Soil	Percent Solids:	84.4
Method:	SW846 8015B		
Project:	Laramie Energy II Hawxhurst 24-09		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB14272.D	1	12/14/11	SK	n/a	n/a	GGB804
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	6.81	14	6.8	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	98%		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:	HAWX 24-09 SS1	Date Sampled:	12/12/11
Lab Sample ID:	D30205-1	Date Received:	12/13/11
Matrix:	SO - Soil	Percent Solids:	84.4
Method:	SW846-8015B SW846 3546		
Project:	Laramie Energy II Hawxhurst 24-09		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD12326.D	1	12/15/11	TR	12/15/11	OP5019	GFD639
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	251	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	83%		43-136%		

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: HAWX 24-09 SS1**Lab Sample ID:** D30205-1**Matrix:** SO - Soil**Date Sampled:** 12/12/11**Date Received:** 12/13/11**Percent Solids:** 84.4**Project:** Laramie Energy II Hawxhurst 24-09**Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	5.5	0.48	mg/kg	5	12/14/11	12/15/11 GJ	SW846 6020 ³	SW846 3050B ⁵
Barium	4700	6.0	mg/kg	5	12/14/11	12/14/11 JB	SW846 6010B ²	SW846 3050B ⁴
Cadmium	< 1.2	1.2	mg/kg	1	12/14/11	12/14/11 JB	SW846 6010B ²	SW846 3050B ⁴
Chromium	10.8	1.2	mg/kg	1	12/14/11	12/14/11 JB	SW846 6010B ²	SW846 3050B ⁴
Copper	16.7	1.2	mg/kg	1	12/14/11	12/14/11 JB	SW846 6010B ²	SW846 3050B ⁴
Lead	8.7	6.0	mg/kg	1	12/14/11	12/14/11 JB	SW846 6010B ²	SW846 3050B ⁴
Mercury	< 0.11	0.11	mg/kg	1	12/14/11	12/14/11 JB	SW846 7471A ¹	SW846 7471A ⁶
Nickel	13.8	3.6	mg/kg	1	12/14/11	12/14/11 JB	SW846 6010B ²	SW846 3050B ⁴
Selenium ^a	< 30	30	mg/kg	5	12/14/11	12/14/11 JB	SW846 6010B ²	SW846 3050B ⁴
Silver	< 3.6	3.6	mg/kg	1	12/14/11	12/14/11 JB	SW846 6010B ²	SW846 3050B ⁴
Zinc	31.0	3.6	mg/kg	1	12/14/11	12/14/11 JB	SW846 6010B ²	SW846 3050B ⁴

(1) Instrument QC Batch: MA2050

(2) Instrument QC Batch: MA2052

(3) Instrument QC Batch: MA2055

(4) Prep QC Batch: MP6472

(5) Prep QC Batch: MP6473

(6) Prep QC Batch: MP6474

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: HAWX 24-09 SS1**Lab Sample ID:** D30205-1**Matrix:** SO - Soil**Date Sampled:** 12/12/11**Date Received:** 12/13/11**Percent Solids:** 84.4**Project:** Laramie Energy II Hawxhurst 24-09**General Chemistry**

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 0.47	0.47	mg/kg	1	12/15/11 15:50	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	10.6	1.7	mg/kg	1	12/15/11 15:50	AMA	SW846 3060/7196A M
Redox Potential Vs H2	437		mv	1	12/14/11 09:00	JK	ASTM D1498-76M
Solids, Percent	84.4		%	1	12/13/11	SWT	SM19 2540B M
Specific Conductivity	1210	1.0	umhos/cm	1	12/15/11	JD	DEPT.OF AG, BOOK N9
pH	9.39		su	1	12/14/11 09:00	JK	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit

Report of Analysis

Client Sample ID: HAWX 24-09 SS1**Lab Sample ID:** D30205-1A**Matrix:** SO - Soil**Project:** Laramie Energy II Hawxhurst 24-09**Date Sampled:** 12/12/11**Date Received:** 12/13/11**Percent Solids:** 84.4

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	27.4	2.0	mg/l	1	12/15/11	12/15/11 JB	SW846 6010B ¹	EPA 200.7 ²
Magnesium	8.83	1.0	mg/l	1	12/15/11	12/15/11 JB	SW846 6010B ¹	EPA 200.7 ²
Sodium	209	2.0	mg/l	1	12/15/11	12/15/11 JB	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA2052

(2) Prep QC Batch: MP6487

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HAWX 24-09 SS1	Date Sampled:	12/12/11
Lab Sample ID:	D30205-1A	Date Received:	12/13/11
Matrix:	SO - Soil	Percent Solids:	84.4
Project:	Laramie Energy II Hawxhurst 24-09		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	8.88		ratio	1	12/15/11 11:03	JB	USDA HANDBOOK 60

(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

CHAIN OF CUSTODY

10165 Harwin Drive, Houston, TX 77036 ; Phone 713-271-4700 ; Fax 713-271-4770

Client / Reporting Information										Project Information										Requested Analyses										Matrix Codes
Company Name Olsson Associates					Billing To: Laramie Energy II Hawhurst 24-09															DW - Drinking Water GW - Ground Water WW - Wastewater SO - Soil SL - Sludge LIQ - Liquid SOL - Other Solid										
Project Contact					Invoice Attn.																									
E-Mail Stuart Hall shall@caconsulting.com					Address																									
Address 826 21 1/2 Road					City Grand Junction					State CO					Zip 81505															
Phone No. 970-263-7800					Fax No.																									
Samplers's Name Whitney Fox					Client Purchase Order # 011-1173															LAB USE ONLY <div style="text-align: center; font-size: small;"> Date Rec'd: _____ By: _____ </div>										
Accutest Sample #					Field ID / Point of Collection																									
Turnaround Time (Business days)										Data Deliverable Information										Comments / Remarks										
<input checked="" type="checkbox"/> 10 Day STANDARD <input type="checkbox"/> 7 Day (per contract) <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										<input type="checkbox"/> Commercial "A" <input checked="" type="checkbox"/> Commercial "B" <input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> Full Data Package <small>Commercial "A" = Results Only Commercial "B" = Results & Standard QC</small>										<small>AMS FEDEX Account Number - 467721860</small> List 1 - Acenaphthene, Anthracene, Benzo(A)anthracene, Benzo(B)fluoranthene, Benzo(K)fluoranthene, Benzo(A)pyrene, Chrysene, Dibenzo(A,H)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-C,D)pyrene, Naphthalene, Pyrene List 2 - As, Ba, Cd, Cr3, Cr6, Cu, Pb, Hg, Ni, Se, Ag, Zn										
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																														
Relinquished by Sampler: Whitney Fox					Date Time: 12-12-11 7:00 AM					Received By: Jared Porter					Date Time: 12/13/14					Relinquished By:										
Relinquished by:					Date Time:					Received By:					Date Time:					Relinquished By:										
3										3										4										
Relinquished by:					Date Time:					Received By:					Date Time:					Custody Seal # FX										
5										5										On Ice Cooler Temp. 3.6										

D30205: Chain of Custody

Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D30205

Client: OLSSON ASS.

Immediate Client Services Action Required: No

Date / Time Received: 12/13/2011 9:20:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project: LAMAMIE ENERGY 2 HAWXHURST 24-09

Airbill #'s: Fedex

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:			Infrared gun
3. Cooler media:			Ice (bag)

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input type="checkbox"/>	
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:			Intact

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume rec'd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

 Accutest Laboratories
 V:(303) 425-6021

 4036 Youngfield Street
 F: (303) 425-6854

 Wheat Ridge, CO
 www.accutest.com

GC/MS Volatiles

5

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Page 1 of 1

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1109-MB	5V18555.D	1	12/24/11	KV	n/a	n/a	V5V1109

The QC reported here applies to the following samples:

Method: SW846 8260B

D30205-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	22	ug/kg	
100-41-4	Ethylbenzene	ND	100	25	ug/kg	
108-88-3	Toluene	ND	100	50	ug/kg	
1330-20-7	Xylene (total)	ND	200	100	ug/kg	

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	106% 61-130%
460-00-4	4-Bromofluorobenzene	97% 53-131%
17060-07-0	1,2-Dichloroethane-D4	103% 62-130%

Blank Spike Summary

Page 1 of 1

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1109-BS	5V18556.D	1	12/24/11	KV	n/a	n/a	V5V1109

The QC reported here applies to the following samples:

Method: SW846 8260B

D30205-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	45.5	91	70-130
100-41-4	Ethylbenzene	50	49.0	98	70-130
108-88-3	Toluene	50	42.1	84	70-130
1330-20-7	Xylene (total)	150	157	105	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	89%	61-130%
460-00-4	4-Bromofluorobenzene	101%	53-131%
17060-07-0	1,2-Dichloroethane-D4	85%	62-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D30387-1MS	5V18558.D	1	12/24/11	KV	n/a	n/a	V5V1109
D30387-1MSD	5V18559.D	1	12/24/11	KV	n/a	n/a	V5V1109
D30387-1	5V18557.D	1	12/24/11	KV	n/a	n/a	V5V1109

The QC reported here applies to the following samples:

Method: SW846 8260B

D30205-1

CAS No.	Compound	D30387-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	493		4180	4010	84	4640	99	15	70-134/30
100-41-4	Ethylbenzene	154	J	4180	3900	90	4550	105	15	70-137/30
108-88-3	Toluene	2150		4180	4830	64* a	5610	83	15	70-130/30
1330-20-7	Xylene (total)	2400		12500	14200	94	16100	109	13	61-131/30

CAS No.	Surrogate Recoveries	MS	MSD	D30387-1	Limits
2037-26-5	Toluene-D8	81%	92%	104%	61-130%
460-00-4	4-Bromofluorobenzene	106%	118%	120%	53-131%
17060-07-0	1,2-Dichloroethane-D4	83%	93%	105%	62-130%

(a) Outside control limits due to possible matrix interference.

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Page 1 of 1

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5018-MB	3G07307.D	1	12/17/11	ME	12/15/11	OP5018	E3G271

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D30205-1

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	6.7	5.3	ug/kg	
120-12-7	Anthracene	ND	6.7	6.0	ug/kg	
56-55-3	Benzo(a)anthracene	ND	17	8.7	ug/kg	
50-32-8	Benzo(a)pyrene	ND	17	12	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	17	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	17	7.3	ug/kg	
218-01-9	Chrysene	ND	17	7.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	17	12	ug/kg	
206-44-0	Fluoranthene	ND	6.7	6.7	ug/kg	
86-73-7	Fluorene	ND	6.7	5.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	20	18	ug/kg	
91-20-3	Naphthalene	ND	6.7	6.3	ug/kg	
129-00-0	Pyrene	ND	6.7	6.3	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	77% 10-145%
321-60-8	2-Fluorobiphenyl	77% 10-130%
1718-51-0	Terphenyl-d14	85% 22-130%

Blank Spike Summary

Page 1 of 1

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5018-BS	3G07306.D	1	12/17/11	ME	12/15/11	OP5018	E3G271

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D30205-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	68.6	82	34-130
120-12-7	Anthracene	83.3	72.8	87	35-130
56-55-3	Benzo(a)anthracene	83.3	67.8	81	36-130
50-32-8	Benzo(a)pyrene	83.3	73.4	88	36-130
205-99-2	Benzo(b)fluoranthene	83.3	71.3	86	35-130
207-08-9	Benzo(k)fluoranthene	83.3	71.1	85	37-130
218-01-9	Chrysene	83.3	73.3	88	40-130
53-70-3	Dibenzo(a,h)anthracene	83.3	73.4	88	32-130
206-44-0	Fluoranthene	83.3	68.4	82	38-130
86-73-7	Fluorene	83.3	67.0	80	35-130
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	71.0	85	28-130
91-20-3	Naphthalene	83.3	67.8	81	35-130
129-00-0	Pyrene	83.3	66.8	80	37-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	83%	10-145%
321-60-8	2-Fluorobiphenyl	82%	10-130%
1718-51-0	Terphenyl-d14	85%	22-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5018-MS	3G07309.D	1	12/17/11	ME	12/15/11	OP5018	E3G271
OP5018-MSD	3G07310.D	1	12/17/11	ME	12/15/11	OP5018	E3G271
D30326-1	3G07308.D	1	12/17/11	ME	12/15/11	OP5018	E3G271

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D30205-1

CAS No.	Compound	D30326-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		96.2	162	168* a	152	158* a	6	10-155/30
120-12-7	Anthracene	ND		96.2	146	152	150	155	3	10-155/30
56-55-3	Benzo(a)anthracene	ND		96.2	80.4	84	82.2	85	2	10-175/30
50-32-8	Benzo(a)pyrene	ND		96.2	65.8	68	67.9	70	3	10-164/30
205-99-2	Benzo(b)fluoranthene	ND		96.2	66.5	69	64.1	66	4	10-165/30
207-08-9	Benzo(k)fluoranthene	ND		96.2	56.6	59	52.0	54	8	10-178/30
218-01-9	Chrysene	16.4	J	96.2	114	101	120	107	5	10-147/30
53-70-3	Dibenzo(a,h)anthracene	ND		96.2	68.1	71	69.2	72	2	10-144/30
206-44-0	Fluoranthene	ND		96.2	99.0	103	96.1	100	3	10-207/30
86-73-7	Fluorene	66.3		96.2	154	91	146	83	5	10-163/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		96.2	67.7	70	71.3	74	5	10-180/30
91-20-3	Naphthalene	9.6		96.2	72.2	65	72.3	65	0	10-198/30
129-00-0	Pyrene	7.9		96.2	115	111	117	113	2	10-189/30

CAS No.	Surrogate Recoveries	MS	MSD	D30326-1	Limits
4165-60-0	Nitrobenzene-d5	58%	58%	57%	10-145%
321-60-8	2-Fluorobiphenyl	98%	91%	98%	10-130%
1718-51-0	Terphenyl-d14	102%	102%	108%	22-130%

(a) Outside control limits due to possible matrix interference.

GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Page 1 of 1

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB804-MB	GB14249.D	1	12/13/11	SK	n/a	n/a	GGB804

The QC reported here applies to the following samples:

Method: SW846 8015B

D30205-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.0	mg/kg	

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

Blank Spike Summary

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB804-BS	GB14250.D	1	12/13/11	SK	n/a	n/a	GGB804

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

D30205-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	110	100	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	114%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D30165-1MS	GB14252.D	1	12/13/11	SK	n/a	n/a	GGB804
D30165-1MSD	GB14253.D	1	12/13/11	SK	n/a	n/a	GGB804
D30165-1	GB14251.D	1	12/13/11	SK	n/a	n/a	GGB804

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

D30205-1

CAS No.	Compound	D30165-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	54.4		146	200	100	207	104	3	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D30165-1	Limits
120-82-1	1,2,4-Trichlorobenzene	98%	100%	99%	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

Page 1 of 1

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5019-MB	FD12322.D	1	12/15/11	TR	12/15/11	OP5019	GFD639

The QC reported here applies to the following samples:

Method: SW846-8015B

D30205-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	13	8.7	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	88% 43-136%

8.1.1

8

Blank Spike Summary

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5019-BS	FD12323.D	1	12/15/11	TR	12/15/11	OP5019	GFD639

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

D30205-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	499	75	58-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	82%	43-136%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D30205
Account: CORCCOGJ Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5019-MS	FD12324.D	1	12/15/11	TR	12/15/11	OP5019	GFD639
OP5019-MSD	FD12325.D	1	12/15/11	TR	12/15/11	OP5019	GFD639
D30205-1	FD12326.D	1	12/15/11	TR	12/15/11	OP5019	GFD639

The QC reported here applies to the following samples:

Method: SW846-8015B

D30205-1

CAS No.	Compound	D30205-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	251		788	803	70	762	65	5	20-183/43

CAS No.	Surrogate Recoveries	MS	MSD	D30205-1	Limits
84-15-1	o-Terphenyl	75%	82%	83%	43-136%

8.3.1
8

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: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6472
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 12/14/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.59	.59		
Antimony	3.0	.31	.31		
Arsenic	2.5	.59	.59		
Barium	1.0	.11	.11	0.020	<1.0
Beryllium	1.0	.044	.1		
Boron	5.0	.48	.48		
Cadmium	1.0	.027	.27	0.0	<1.0
Calcium	40	.96	1.1		
Chromium	1.0	.018	.031	0.040	<1.0
Cobalt	0.50	.035	.035		
Copper	1.0	.085	.16	-0.070	<1.0
Iron	7.0	.34	2		
Lead	5.0	.16	.21	0.070	<5.0
Lithium	0.20	.028	.031		
Magnesium	20	.58	1.4		
Manganese	0.50	.0053	.012		
Molybdenum	1.0	.045	.054		
Nickel	3.0	.043	.099	-0.050	<3.0
Phosphorus	10	1.1	1.2		
Potassium	200	5.5	9.2		
Selenium	5.0	.38	.5	0.010	<5.0
Silicon	5.0	.38	.51		
Silver	3.0	.018	.051	0.010	<3.0
Sodium	40	11	11		
Strontium	5.0		.017		
Thallium	1.0	.29	.34		
Tin	5.0	.55	1.3		
Titanium	1.0	.011	.1		
Uranium	5.0	.15	.2		
Vanadium	1.0	.016	.025		
Zinc	3.0	.028	.06	-0.070	<3.0

Associated samples MP6472: D30205-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6472
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

9.1.1

9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6472
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 12/14/11

Metal	D30205-1 Original MS		SpikeLot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	4700	5670	247	393.0(a)	75-125
Beryllium					
Boron					
Cadmium	0.0	49.1	61.7	79.6	75-125
Calcium					
Chromium	10.8	58.2	61.7	76.8	75-125
Cobalt					
Copper	16.7	69.2	61.7	85.1	75-125
Iron					
Lead	8.7	105	123	78.0	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	13.8	58.3	61.7	72.1N(b)	75-125
Phosphorus					
Potassium					
Selenium	0.0	130	123	105.3	75-125
Silicon					
Silver	0.0	20.6	24.7	83.5	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	31.0	78.7	61.7	77.3	75-125

Associated samples MP6472: D30205-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6472
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

- (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.
- (b) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6472
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 12/14/11

	D30205-1		Spikelot		MSD	QC
Metal	Original	MSD	MPICPAL	% Rec	RPD	Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	4700	6200	228	658.3(a)	8.9	20
Beryllium						
Boron						
Cadmium	0.0	49.9	57	87.6	1.6	20
Calcium						
Chromium	10.8	59.9	57	86.2	2.9	20
Cobalt						
Copper	16.7	73.3	57	99.4	5.8	20
Iron						
Lead	8.7	106	114	85.4	0.9	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	13.8	59.4	57	80.1	1.9	20
Phosphorus						
Potassium						
Selenium	0.0	136	114	119.4	4.5	20
Silicon						
Silver	0.0	21.1	22.8	92.6	2.4	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	31.0	81.3	57	88.3	3.2	20

Associated samples MP6472: D30205-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6472
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

- (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.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6472
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 12/14/11

Metal	BSP Result	Spikelot MPICPAL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	179	200	89.5	80-120
Beryllium				
Boron				
Cadmium	45.7	50	91.4	80-120
Calcium				
Chromium	46.6	50	93.2	80-120
Cobalt				
Copper	45.1	50	90.2	80-120
Iron				
Lead	92.2	100	92.2	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	44.4	50	88.8	80-120
Phosphorus				
Potassium				
Selenium	91.8	100	91.8	80-120
Silicon				
Silver	18.8	20	94.0	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	46.8	50	93.6	80-120

Associated samples MP6472: D30205-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6472
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6472
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 12/14/11

Metal	D30205-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	37500	38800	1.2	0-10
Beryllium				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	90.2	100	10.9*(a)	0-10
Cobalt				
Copper	140	134	4.2	0-10
Iron				
Lead	72.7	70.5	3.0	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	116	133	15.1*(a)	0-10
Phosphorus				
Potassium				
Selenium	21.4	195		0-10
Silicon				
Silver	0.00	2.00		0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	259	314	20.9*(a)	0-10

Associated samples MP6472: D30205-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6472
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

9.1.4

9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6473
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 12/14/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.14	1.2		
Antimony	0.20	.001	.0095		
Arsenic	0.40	.049	.22	0.11	<0.40
Barium	1.0	.0035	.1		
Beryllium	0.10	.0075	.014		
Boron	20	.97	1		
Cadmium	0.050	.023	.048		
Calcium	200	1.8	8.2		
Chromium	1.0	.021	.24		
Cobalt	0.10	.0033	.003		
Copper	1.0	.011	.063		
Iron	20	.81	3.7		
Lead	0.25	.0012	.015		
Magnesium	50	.067	2.6		
Manganese	0.50	.007	.029		
Molybdenum	0.50	.0044	.023		
Nickel	1.0	.0029	.031		
Phosphorus	30	1.8	3.5		
Potassium	100	2	3.2		
Selenium	0.20	.075	.19		
Silver	0.050	.0008	.002		
Sodium	250	.8	4.4		
Strontium	10	.004	.04		
Thallium	0.10	.015	.02		
Tin	5.0	.006	.028		
Titanium	1.0	.035	.062		
Uranium	0.25	.00038	.0009		
Vanadium	2.0	.052	.29		
Zinc	5.0	.039	.12		

Associated samples MP6473: D30205-1

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: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6473
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 12/14/11

Metal	D30205-1 Original MS		Spikelot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic	5.5	113	123	87.1	75-125
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP6473: D30205-1

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: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6473
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 12/14/11

Metal	D30205-1 Original	MSD	Spikelot MPICPAL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	5.5	113	114	94.4	0.0	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP6473: D30205-1

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D30205

Account: CORCCOGJ - Olsson Associates

Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6473

Methods: SW846 6020

Matrix Type: SOLID

Units: mg/kg

Prep Date: 12/14/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	96.3	100	96.3	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP6473: D30205-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6473
 Matrix Type: SOLID

Methods: SW846 6020
 Units: ug/l

Prep Date: 12/14/11

Metal	D30205-1	QC
Original	SDL 5:25 %DIF	Limits

Aluminum		
Antimony		
Arsenic	46.4	219
Barium		
Beryllium		
Boron		
Cadmium		
Calcium		
Chromium		
Cobalt		
Copper		
Iron		
Lead		
Magnesium		
Manganese		
Molybdenum		
Nickel		
Phosphorus		
Potassium		
Selenium		
Silver		
Sodium		
Strontium		
Thallium		
Tin		
Titanium		
Uranium		
Vanadium		
Zinc		

Associated samples MP6473: D30205-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested
 (a) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6474
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 12/14/11

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.10	.0011	.013	0.0011	<0.10

Associated samples MP6474: D30205-1

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: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6474
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 12/14/11

Metal	D30239-1 Original MS	Spikelot HGWSR1	% Rec	QC Limits
-------	-------------------------	--------------------	-------	--------------

Mercury	0.029	0.50	0.514	91.6	85-115
---------	-------	------	-------	------	--------

Associated samples MP6474: D30205-1

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: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6474
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 12/14/11

Metal	D30239-1 Original	MSD	Spikelot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.029	0.50	0.504	93.5	0.0	20

Associated samples MP6474: D30205-1

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6474
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 12/14/11

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.43	0.4	107.5	80-120

Associated samples MP6474: D30205-1

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: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6487
Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
Units: ug/l

Prep Date: 12/15/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	30	30		
Antimony	150	16	16		
Arsenic	130	30	30		
Barium	50	5.5	5.5		
Beryllium	50	2.2	2.5		
Boron	250	24	24		
Cadmium	50	1.4	1.4		
Calcium	2000	48	75	-27	<2000
Chromium	50	.9	4		
Cobalt	25	1.8	1.8		
Copper	50	4.3	14		
Iron	350	17	65		
Lead	250	8	11		
Lithium	10	1.4	6		
Magnesium	1000	29	50	8.0	<1000
Manganese	25	.27	1.6		
Molybdenum	50	2.3	4.4		
Nickel	150	2.2	5		
Phosphorus	500	55	100		
Potassium	5000	280	280		
Selenium	250	19	19		
Silicon	250	19	19		
Silver	150	.9	1.6		
Sodium	2000	570	570	-34	<2000
Strontium	25		1.3		
Thallium	50	15	15		
Tin	250	28	50		
Titanium	50	.55	1.6		
Uranium	250	7.5	18		
Vanadium	50	.8	1.1		
Zinc	150	1.4	9		

Associated samples MP6487: D30205-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6487
Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6487
 Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
 Units: ug/l

Prep Date: 12/15/11

Metal	D29894-1RA Original MS		Spikelot MPICPAL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	269000	417000	125000	118.4	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	107	127000	125000	101.5	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	1020000	1130000	125000	88.0	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP6487: D30205-1A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6487
Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6487
 Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
 Units: ug/l

Prep Date: 12/15/11

Metal	D29894-1RA Original MSD	Spikelot MPICPAL % Rec	MSD RPD	QC Limit
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	269000	422000	125000	122.4
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	107	125000	125000	99.9
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	1020000	1150000	125000	104.0
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP6487: D30205-1A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6487
Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D30205
 Account: CORCCOGJ - Olsson Associates
 Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6487
 Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
 Units: ug/l

Prep Date: 12/15/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	145000	125000	116.0	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	126000	125000	100.8	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	123000	125000	98.4	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP6487: D30205-1A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

QC Batch ID: MP6487
Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

(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: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Specific Conductivity	GP6125/GN12904			umhos/cm	10008	9880	98.7	90-110%
pH	GN12889			su	8.00	7.99	99.9	99.3-100.7%

Associated Samples:
Batch GN12889: D30205-1
Batch GP6125: D30205-1
(*) Outside of QC limits

10.1
10

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30205
Account: CORCCOGJ - Olsson Associates
Project: Laramie Energy II Hawxhurst 24-09

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Redox Potential Vs H2	GN12893	D30239-1	mv	375	384	2.4	0-20%

Associated Samples:
Batch GN12893: D30205-1
(*) Outside of QC limits

Misc. Forms

Custody Documents and Other Forms

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D30205

Client: AMS

Immediate Client Services Action Required: No

Date / Time Received: 12/14/2011

Delivery Method:

Client Service Action Required at Login: No

Project:

No. Coolers: 1

Airbill #'s:

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | Infrared gun | |
| 3. Cooler media: | Ice (bag) | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

General Chemistry

QC Data Summaries

(Accutest Labs of New England, Inc.)

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: D30205
Account: ALMS - Accutest Mountain States
Project: CORCCOGJ: Laramie Energy II Hawxhurst 24-09

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP13918/GN37214	0.40	0.17	mg/kg	40	37.4	93.5	80-120%
Chromium, Hexavalent	GP13918/GN37214			mg/kg	837	883	105.5	80-120%

Associated Samples:
Batch GP13918: D30205-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30205
Account: ALMS - Accutest Mountain States
Project: CORCCOGJ: Laramie Energy II Hawxhurst 24-09

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP13918/GN37214	D30086-11	mg/kg	0.0	0.0	0.0	0-20%

Associated Samples:
Batch GP13918: D30205-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30205
Account: ALMS - Accutest Mountain States
Project: CORCCOGJ: Laramie Energy II Hawxhurst 24-09

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP13918/GN37214	D30086-11	mg/kg	0.0	41.1	43.9	106.9	75-125%
Chromium, Hexavalent	GP13918/GN37214	D30086-11	mg/kg	0.0	742	882	118.8	75-125%

Associated Samples:
Batch GP13918: D30205-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits