Mountain States ACCUTEST LABORATORIES

05/27/15

Technical Report for

Confluence Energy

Grizzly

Accutest Job Number: D70875

Sampling Date: 05/18/15

Report to:

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Total number of pages in report: **84**

NELAP ACCREDITED TNI LABORATORY

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

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Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY

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Accutest Laboratories

Sample Summary

Confluence Energy

Grizzly

Job No: D70875

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D70875-1	05/18/15	09:00	MM	05/19/15	SO	Soil	GRIZZLY SITE B
D70875-1A	05/18/15	09:00	MM	05/19/15	SO	Soil	GRIZZLY SITE B
D70875-2	05/18/15	09:00	MM	05/19/15	SO	Soil	GRIZZLY SITE P
D70875-2A	05/18/15	09:00	MM	05/19/15	SO	Soil	GRIZZLY SITE P

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Confluence Energy	**Job No**	D70875
Site:	Grizzly	**Report Date**	5/27/2015 4:00:52 PM

On 05/19/2015, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 14.8 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D70875 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:** C:VL1244

- The data for SW846 8260B meets quality control requirements.
- D70875-2: Dilution required due to nature of sample matrix and high concentration of non-target hydrocarbons. Analysis performed at Accutest Laboratories, San Jose, CA.
- D70875-1: Dilution required due to nature of sample matrix and high concentration of non-target hydrocarbons. Analysis performed at Accutest Laboratories, San Jose, CA.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix: SO **Batch ID:** OP11767

- All samples were extracted and analyzed within the recommended method holding time.
- Sample(s) D70875-2MS, D70875-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The matrix spike (MS) recovery(s) of Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Pyrene are outside control limits. Dilution required due to matrix interference. Internal standard failure at lesser dilution.
- The matrix spike duplicate (MSD) recovery(s) of Anthracene, Chrysene are outside control limits. Dilution required due to matrix interference. Internal standard failure at lesser dilution.
- The RPD(s) for the MS and MSD recoveries of Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Pyrene are outside control limits for sample OP11767-MSD. Variability of recovery may be due to sample matrix/nonhomogeneity.
- Sample(s) OP11767-MSD have surrogates outside control limits. Probable cause due to matrix interference.
- OP11767-MS and OP11767-MSD: Dilution required due to matrix interference. Internal standard failure at lesser dilution.
- D70875-1,-2: Dilution required due to matrix interference. Internal standard failure at lesser dilution.
- OP11767-MSD for Terphenyl-d14: Outside control limits due to possible matrix interference.

Volatiles by GC By Method SW846 8015B

Matrix: SO **Batch ID:** GGB1631

- All samples were analyzed within the recommended method holding time.
- Sample(s) D70875-1MS, D70875-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D70875-1, D70875-1MS, D70875-1MSD have surrogates outside control limits. Probable cause due to matrix interference.
- D70875-1: Outside control limits due to possible matrix interference.
- D70875-1MS and D70875-1MSD: Outside control limits due to possible matrix interference.

Extractables by GC By Method SW846-8015B

Matrix: SO **Batch ID:** OP11768

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D70875-2MS, D70875-2MSD were used as the QC samples indicated.
- The matrix spike (MS) recovery(s) of TPH-DRO (C10-C28) are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- OP11768-MS: Elevated reporting limits due to insufficient sample and sample matrix. Dilution required during sample prep.
- OP11768-MSD: Elevated reporting limits due to insufficient sample and sample matrix. Dilution required during sample prep.
- D70875-2: Elevated reporting limits due to insufficient sample and sample matrix. Dilution required during sample prep.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP16003

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D70875-2AMS, D70875-2AMSD, D70875-2ASDL were used as the QC samples for the metals analysis.

Matrix: SO **Batch ID:** MP15998

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D70875-1MSD, D70875-1SDL, D70875-1MS, D70875-1MSD were used as the QC samples for the metals analysis.
- The matrix spike duplicate (MSD) recovery(s) of Zinc are outside control limits. Probable cause due to matrix interference.
- 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 Cadmium, Lead, Selenium, Nickel, Zinc are outside control limits for sample MP15998-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP15998-SD1 for Zinc, Nickel: Serial dilution indicates possible matrix interference.

Metals By Method SW846 6020A

Matrix: SO **Batch ID:** MP15999

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D70875-1MS, D70875-1MSD, D70875-1SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Arsenic are outside control limits for sample MP15999-SD1. Probable cause due to sample homogeneity.
- MP15999-SD1 for Arsenic: Serial dilution indicates possible matrix interference.

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP15966

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D70722-1MS, D70722-1MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method ASTM D1498-76M

Matrix: SO **Batch ID:** GN30045

- Sample(s) D70875-1DUP were used as the QC samples for the Redox Potential Vs H2 analysis.

Wet Chemistry By Method SM2540G-2011 M

Matrix: SO **Batch ID:** GN29990

- The data for SM2540G-2011 M meets quality control requirements.

Wet Chemistry By Method SW846 3060A/7196A

Matrix: SO **Batch ID:** GP15387

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D70875-1DUP, D70875-1MSD were used as the QC samples for the Chromium, Hexavalent analysis.
- GP15387-S1 for Chromium, Hexavalent: Bench MS/MSD performed when digested spikes gave low recovery.This indicates reducing agents in the sample.

Wet Chemistry By Method SW846 3060A/7196A M

Matrix: SO **Batch ID:** R28148

- The data for SW846 3060A/7196A M meets quality control requirements.
- D70875-1 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Matrix: SO **Batch ID:** R28149

- The data for SW846 3060A/7196A M meets quality control requirements.
- D70875-2 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Wet Chemistry By Method SW846 9045D

Matrix: SO **Batch ID:** GN30019

- The following samples were run outside of holding time for method SW846 9045D: D70875-1, D70875-2

Wet Chemistry By Method USDA HANDBOOK 60

Matrix: SO **Batch ID:** MP16003

- D70875-2A for Sodium Adsorption Ratio: Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+(Mg meq/L)/2]
- D70875-1A for Sodium Adsorption Ratio: Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+(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**	D70875
Site:	CONECOK: Grizzly	**Report Date**	5/26/2015 8:57:51 PM

2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 05/18/2015 and were received at Accutest Northern California on 05/20/2015 properly preserved, at 4 Deg. C and intact. These Samples received an Accutest job number of D70875. 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.

Volatiles by GCMS By Method SW846 8260B

Matrix: SO **Batch ID:** VL1244

- Sample(s) C39925-1MS, C39925-1MSD were used as the QC samples indicated. Northern California
- Matrix Spike Duplicate Recovery(s) for Xylene (total) are outside laboratory control limits. Surrogate recoveries for Dibromofluoromethane are outside control limits for samples C39925-1MS, C39925-1MSD. Probable cause due to matrix interference.
- D70875-1, D70875-2: Dilution required due to nature of sample matrix and high concentration of non-target hydrocarbons.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: D70875
Account: Confluence Energy
Project: Grizzly
Collected: 05/18/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D70875-1	**GRIZZLY SITE B**					
Benzo(b)fluoranthene [a]		22.0 J	25	12	ug/kg	SW846 8270C BY SIM
Naphthalene [a]		39.2	25	15	ug/kg	SW846 8270C BY SIM
Pyrene [a]		83.2	25	12	ug/kg	SW846 8270C BY SIM
TPH-GRO (C6-C10) [b]		53.7	18	9.2	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		3070	71	53	mg/kg	SW846-8015B
Arsenic		4.5	0.13		mg/kg	SW846 6020A
Barium		5390	6.5		mg/kg	SW846 6010C
Chromium		13.8	1.3		mg/kg	SW846 6010C
Copper		14.1	1.3		mg/kg	SW846 6010C
Nickel		11.6	3.9		mg/kg	SW846 6010C
Zinc		39.8	3.9		mg/kg	SW846 6010C
Specific Conductivity		1150	1.0		umhos/cm	SM 2510B-2011 MOD
Chromium, Trivalent [c]		13.8	2.3		mg/kg	SW846 3060A/7196A M
Redox Potential Vs H2		372			mv	ASTM D1498-76M
pH		8.34			su	SW846 9045D
D70875-1A	**GRIZZLY SITE B**					
Calcium		75.5	2.0		mg/l	SW846 6010C
Magnesium		15.8	1.0		mg/l	SW846 6010C
Sodium		234	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio [d]		6.39			ratio	USDA HANDBOOK 60
D70875-2	**GRIZZLY SITE P**					
Fluorene [a]		261	35	17	ug/kg	SW846 8270C BY SIM
Naphthalene [a]		94.1	35	21	ug/kg	SW846 8270C BY SIM
TPH-GRO (C6-C10)		74.0	31	15	mg/kg	SW846 8015B
TPH-DRO (C10-C28) [e]		4130	140	100	mg/kg	SW846-8015B
Arsenic		2.8	0.12		mg/kg	SW846 6020A
Barium		4050	6.2		mg/kg	SW846 6010C
Chromium		12.1	1.2		mg/kg	SW846 6010C
Copper		12.2	1.2		mg/kg	SW846 6010C
Nickel		9.6	3.7		mg/kg	SW846 6010C
Zinc		40.4	3.7		mg/kg	SW846 6010C
Specific Conductivity		1180	1.0		umhos/cm	SM 2510B-2011 MOD
Chromium, Trivalent [c]		12.1	2.2		mg/kg	SW846 3060A/7196A M
Redox Potential Vs H2		436			mv	ASTM D1498-76M
pH		8.02			su	SW846 9045D
D70875-2A	**GRIZZLY SITE P**					
Calcium		103	2.0		mg/l	SW846 6010C

Summary of Hits

Job Number: D70875
Account: Confluence Energy
Project: Grizzly
Collected: 05/18/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Magnesium		22.0	1.0		mg/l	SW846 6010C
Sodium		212	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio [d]		4.94			ratio	USDA HANDBOOK 60

(a) Dilution required due to matrix interference. Internal standard failure at lesser dilution.
(b) Outside control limits due to possible matrix interference.
(c) Calculated as: (Chromium) - (Chromium, Hexavalent)
(d) Calculated as: (Na meq/L) / sqrt [(Ca meq/L) + (Mg meq/L)/2]
(e) Elevated reporting limits due to insufficient sample and sample matrix. Dilution required during sample prep.

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	GRIZZLY SITE B		
Lab Sample ID:	D70875-1	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
Method:	SW846 8260B	**Percent Solids:**	69.8
Project:	Grizzly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L41460.D	1	05/20/15	ANC	n/a	n/a	C:VL1244
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	560	56	ug/kg	
108-88-3	Toluene	ND	560	56	ug/kg	
100-41-4	Ethylbenzene	ND	560	56	ug/kg	
1330-20-7	Xylene (total)	ND	1100	110	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	107%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

(a) Dilution required due to nature of sample matrix and high concentration of non-target hydrocarbons. Analysis performed at Accutest Laboratories, San Jose, CA.

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:	GRIZZLY SITE B		
Lab Sample ID:	D70875-1	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
Method:	SW846 8270C BY SIM SW846 3546	**Percent Solids:**	69.8
Project:	Grizzly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3G23799.D	4	05/21/15	JJ	05/21/15	OP11767	E3G1191
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 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	25	12	ug/kg	
120-12-7	Anthracene	ND	25	12	ug/kg	
56-55-3	Benzo(a)anthracene	ND	25	12	ug/kg	
205-99-2	Benzo(b)fluoranthene	22.0	25	12	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	25	12	ug/kg	
50-32-8	Benzo(a)pyrene	ND	25	12	ug/kg	
218-01-9	Chrysene	ND	25	12	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	25	12	ug/kg	
206-44-0	Fluoranthene	ND	25	12	ug/kg	
86-73-7	Fluorene	ND	25	12	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	25	19	ug/kg	
91-20-3	Naphthalene	39.2	25	15	ug/kg	
129-00-0	Pyrene	83.2	25	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		11-164%
321-60-8	2-Fluorobiphenyl	69%		14-138%
1718-51-0	Terphenyl-d14	90%		35-139%

(a) Dilution required due to matrix interference. Internal standard failure at lesser dilution.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GRIZZLY SITE B		
Lab Sample ID:	D70875-1	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
Method:	SW846 8015B	**Percent Solids:**	69.8
Project:	Grizzly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	GB30311.D	1	05/21/15	EP	n/a	n/a	GGB1631
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)	53.7	18	9.2	mg/kg	

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

(a) Outside control limits due to possible 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:	GRIZZLY SITE B		
Lab Sample ID:	D70875-1	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
Method:	SW846-8015B SW846 3546	**Percent Solids:**	69.8
Project:	Grizzly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI25355.D	5	05/21/15	GN	05/21/15	OP11768	GFI1273
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	3070	71	53	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		20-130%

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:	GRIZZLY SITE B		
Lab Sample ID:	D70875-1	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
		Percent Solids:	69.8
Project:	Grizzly		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.5	0.13	mg/kg	5	05/26/15	05/27/15	NT	SW846 6020A [3]	SW846 3050B [6]
Barium	5390	6.5	mg/kg	5	05/26/15	05/27/15	JB	SW846 6010C [2]	SW846 3050B [5]
Cadmium	< 1.3	1.3	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Chromium	13.8	1.3	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Copper	14.1	1.3	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Lead	< 6.5	6.5	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Mercury	< 0.11	0.11	mg/kg	1	05/20/15	05/20/15	JB	SW846 7471B [1]	SW846 7471B [4]
Nickel	11.6	3.9	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Selenium	< 6.5	6.5	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Silver	< 3.9	3.9	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Zinc	39.8	3.9	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA6146
(2) Instrument QC Batch: MA6156
(3) Instrument QC Batch: MA6160
(4) Prep QC Batch: MP15966
(5) Prep QC Batch: MP15998
(6) Prep QC Batch: MP15999

RL = Reporting Limit

Report of Analysis

Client Sample ID:	GRIZZLY SITE B		
Lab Sample ID:	D70875-1	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
		Percent Solids:	69.8
Project:	Grizzly		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	69.8		%	1	05/19/15	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	1150	1.0	umhos/cm	1	05/26/15	JD	SM 2510B-2011 MOD
Chromium, Hexavalent	< 1.0	1.0	mg/kg	1	05/26/15	AK	SW846 3060A/7196A
Chromium, Trivalent [a]	13.8	2.3	mg/kg	1	05/26/15 15:10	JB	SW846 3060A/7196A M
Redox Potential Vs H2	372		mv	1	05/22/15	JD	ASTM D1498-76M
pH	8.34		su	1	05/20/15 14:25	TB	SW846 9045D

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: GRIZZLY SITE B
Lab Sample ID: D70875-1A
Matrix: SO - Soil
Project: Grizzly

Date Sampled: 05/18/15
Date Received: 05/19/15
Percent Solids: 69.8

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	75.5	2.0	mg/l	1	05/26/15	05/26/15	JB	SW846 6010C [1]	SW846 3010A/M [2]
Magnesium	15.8	1.0	mg/l	1	05/26/15	05/26/15	JB	SW846 6010C [1]	SW846 3010A/M [2]
Sodium	234	2.0	mg/l	1	05/26/15	05/26/15	JB	SW846 6010C [1]	SW846 3010A/M [2]

(1) Instrument QC Batch: MA6156
(2) Prep QC Batch: MP16003

RL = Reporting Limit

Report of Analysis

Client Sample ID:	GRIZZLY SITE B		
Lab Sample ID:	D70875-1A	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
		Percent Solids:	69.8
Project:	Grizzly		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	6.39		ratio	1	05/26/15 18:47	JB	USDA HANDBOOK 60

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	GRIZZLY SITE P		
Lab Sample ID:	D70875-2	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
Method:	SW846 8260B	**Percent Solids:**	73.2
Project:	Grizzly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L41462.D	1	05/20/15	ANC	n/a	n/a	C:VL1244
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	520	52	ug/kg	
108-88-3	Toluene	ND	520	52	ug/kg	
100-41-4	Ethylbenzene	ND	520	52	ug/kg	
1330-20-7	Xylene (total)	ND	1000	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		70-130%
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	96%		70-130%

(a) Dilution required due to nature of sample matrix and high concentration of non-target hydrocarbons. Analysis performed at Accutest Laboratories, San Jose, CA.

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:	GRIZZLY SITE P		
Lab Sample ID:	D70875-2	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
Method:	SW846 8270C BY SIM SW846 3546	**Percent Solids:**	73.2
Project:	Grizzly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3G23796.D	4	05/21/15	JJ	05/21/15	OP11767	E3G1191
Run #2 [a]	3G23794.D	20	05/21/15	JJ	05/21/15	OP11767	E3G1191

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2	20.1 g	1.0 ml

COGCC Table 910-1 PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	35	17	ug/kg	
120-12-7	Anthracene	ND	35	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND [b]	180	86	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND [b]	180	86	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND [b]	180	86	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND [b]	180	86	ug/kg	
50-32-8	Benzo(a)pyrene	ND [b]	180	86	ug/kg	
218-01-9	Chrysene	ND [b]	180	86	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND [b]	180	86	ug/kg	
206-44-0	Fluoranthene	ND	35	17	ug/kg	
86-73-7	Fluorene	261	35	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND [b]	180	140	ug/kg	
91-20-3	Naphthalene	94.1	35	21	ug/kg	
129-00-0	Pyrene	ND [b]	180	86	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		11-164%
321-60-8	2-Fluorobiphenyl	74%		14-138%
1718-51-0	Terphenyl-d14		79%	35-139%

(a) Dilution required due to matrix interference. Internal standard failure at lesser dilution.
(b) Result is from Run# 2

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:	GRIZZLY SITE P		
Lab Sample ID:	D70875-2	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
Method:	SW846 8015B	**Percent Solids:**	73.2
Project:	Grizzly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB30314.D	1	05/21/15	EP	n/a	n/a	GGB1631
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)	74.0	31	15	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	123%		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:	GRIZZLY SITE P		
Lab Sample ID:	D70875-2	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
Method:	SW846-8015B SW846 3546	**Percent Solids:**	73.2
Project:	Grizzly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	FI25353.D	5	05/21/15	GN	05/21/15	OP11768	GFI1273
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	4130	140	100	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	86%		20-130%

(a) Elevated reporting limits due to insufficient sample and sample matrix. Dilution required during sample prep.

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:	GRIZZLY SITE P		
Lab Sample ID:	D70875-2	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
		Percent Solids:	73.2
Project:	Grizzly		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	2.8	0.12	mg/kg	5	05/26/15	05/27/15	NT	SW846 6020A [3]	SW846 3050B [6]
Barium	4050	6.2	mg/kg	5	05/26/15	05/27/15	JB	SW846 6010C [2]	SW846 3050B [5]
Cadmium	< 1.2	1.2	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Chromium	12.1	1.2	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Copper	12.2	1.2	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Lead	< 6.2	6.2	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Mercury	< 0.11	0.11	mg/kg	1	05/20/15	05/20/15	JB	SW846 7471B [1]	SW846 7471B [4]
Nickel	9.6	3.7	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Selenium	< 6.2	6.2	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Silver	< 3.7	3.7	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]
Zinc	40.4	3.7	mg/kg	1	05/26/15	05/26/15	JB	SW846 6010C [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA6146
(2) Instrument QC Batch: MA6156
(3) Instrument QC Batch: MA6160
(4) Prep QC Batch: MP15966
(5) Prep QC Batch: MP15998
(6) Prep QC Batch: MP15999

RL = Reporting Limit

Report of Analysis

Client Sample ID:	GRIZZLY SITE P		
Lab Sample ID:	D70875-2	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
		Percent Solids:	73.2
Project:	Grizzly		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	73.2		%	1	05/19/15	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	1180	1.0	umhos/cm	1	05/26/15	JD	SM 2510B-2011 MOD
Chromium, Hexavalent	< 1.0	1.0	mg/kg	1	05/26/15	AK	SW846 3060A/7196A
Chromium, Trivalent [a]	12.1	2.2	mg/kg	1	05/26/15 15:43	JB	SW846 3060A/7196A M
Redox Potential Vs H2	436		mv	1	05/22/15	JD	ASTM D1498-76M
pH	8.02		su	1	05/20/15 14:25	TB	SW846 9045D

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	GRIZZLY SITE P		
Lab Sample ID:	D70875-2A	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
		Percent Solids:	73.2
Project:	Grizzly		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	103	2.0	mg/l	1	05/26/15	05/26/15	JB	SW846 6010C [1]	SW846 3010A/M [2]
Magnesium	22.0	1.0	mg/l	1	05/26/15	05/26/15	JB	SW846 6010C [1]	SW846 3010A/M [2]
Sodium	212	2.0	mg/l	1	05/26/15	05/26/15	JB	SW846 6010C [1]	SW846 3010A/M [2]

(1) Instrument QC Batch: MA6156
(2) Prep QC Batch: MP16003

RL = Reporting Limit

Report of Analysis

Client Sample ID:	GRIZZLY SITE P		
Lab Sample ID:	D70875-2A	**Date Sampled:**	05/18/15
Matrix:	SO - Soil	**Date Received:**	05/19/15
		Percent Solids:	73.2
Project:	Grizzly		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	4.94		ratio	1	05/26/15 18:20	JB	USDA HANDBOOK 60

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

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories Mountain States
4036 Youngfield Street Wheat Ridge, Co 80033
TEL. 303-425-6021 877-737-4521
FAX 303-425-6021

PAGE ___ OF ___

FED-EX Tracking # | Bottle Order Control #
Accutest Quote # | Accutest Job # D70875

Client / Reporting Information
Company Name: Confluence Energy
Street Address: 1809 Hwy 9
City: Kremmling State: Co Zip: 80459
Project Contact: J. Levine E-mail: Jlevine@Confluenceenergy.com
Phone #: 303 621 5491 Fax #
Sampler(s) Name(s): Mark Mathis Phone #

Project Information
Project Name: Grizzly
Street:
City:
Project#
Client PO#
Project Manager

Billing Information (If different from Report to)
Company Name
Street Address
City State Zip
Attention: PO#

Requested Analysis (see TEST CODE sheet): Co 9/0

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 #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	Co 9/0	LAB USE ONLY
	Grizzly Site B		May 18	9 AM	MM	Soil											X	01
	Grizzly Site P		May 18	9 AM	MM	Soil											X	02

Data Deliverable Information

Turnaround Time (Business days)
- [ ] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [x] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

wants ≤3 day; Told 5 by MM; JB-AP; Told client 5 days - AP

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] Commercial "B" +Narrative
- [ ] FULLT1 (Level 3+4)
- [ ] State Forms
- [ ] EDD Format
- [ ] PDF

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

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	5/19/15 11:20	1	2		2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Intact / Not intact; Preserved where applicable	On Ice: ON ICE; Cooler Temp. 14.8

D70875: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D70875 **Client:** CONFLUENCE ENGERY **Project:** GRIZZLY

Date / Time Received: 5/19/2015 11:20:00 AM **Delivery Method:** **Airbill #'s:** hd

Cooler Temps (Initial/Adjusted): #1: (14.8/14.8);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Comments

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www/accutest.com

D70875: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

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

Job Number: D70875
Account: CONECOK Confluence Energy
Project: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11767-MB	3G23792.D	1	05/21/15	JJ	05/21/15	OP11767	E3G1191

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D70875-1, D70875-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.3	2.1	ug/kg	
120-12-7	Anthracene	ND	4.3	2.1	ug/kg	
56-55-3	Benzo(a)anthracene	ND	4.3	2.1	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	4.3	2.1	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	4.3	2.1	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	4.3	2.1	ug/kg	
50-32-8	Benzo(a)pyrene	ND	4.3	2.1	ug/kg	
218-01-9	Chrysene	ND	4.3	2.1	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	4.3	2.1	ug/kg	
206-44-0	Fluoranthene	ND	4.3	2.1	ug/kg	
86-73-7	Fluorene	ND	4.3	2.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.3	3.3	ug/kg	
91-20-3	Naphthalene	ND	4.3	2.6	ug/kg	
129-00-0	Pyrene	ND	4.3	2.1	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	76%	11-164%
321-60-8	2-Fluorobiphenyl	72%	14-138%
1718-51-0	Terphenyl-d14	95%	35-139%

Blank Spike Summary

Job Number: D70875
Account: CONECOK Confluence Energy
Project: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11767-BS	3G23793.D	1	05/21/15	JJ	05/21/15	OP11767	E3G1191

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D70875-1, D70875-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	63.5	76	42-130
120-12-7	Anthracene	83.3	80.0	96	45-130
56-55-3	Benzo(a)anthracene	83.3	78.4	94	49-137
205-99-2	Benzo(b)fluoranthene	83.3	77.1	93	43-146
207-08-9	Benzo(k)fluoranthene	83.3	78.6	94	27-146
191-24-2	Benzo(g,h,i)perylene	83.3	76.4	92	58-130
50-32-8	Benzo(a)pyrene	83.3	83.0	100	53-130
218-01-9	Chrysene	83.3	77.9	93	61-130
53-70-3	Dibenzo(a,h)anthracene	83.3	79.9	96	59-130
206-44-0	Fluoranthene	83.3	79.5	95	48-130
86-73-7	Fluorene	83.3	72.0	86	44-130
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	77.8	93	58-130
91-20-3	Naphthalene	83.3	54.3	65	56-130
129-00-0	Pyrene	83.3	79.8	96	53-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	66%	11-164%
321-60-8	2-Fluorobiphenyl	77%	14-138%
1718-51-0	Terphenyl-d14	98%	35-139%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D70875
Account: CONECOK Confluence Energy
Project: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11767-MS [a]	3G23797.D	4	05/21/15	JJ	05/21/15	OP11767	E3G1191
OP11767-MSD [a]	3G23798.D	4	05/21/15	JJ	05/21/15	OP11767	E3G1191
D70875-2 [a]	3G23796.D	4	05/21/15	JJ	05/21/15	OP11767	E3G1191
D70875-2 [a]	3G23794.D	20	05/21/15	JJ	05/21/15	OP11767	E3G1191

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D70875-1, D70875-2

CAS No.	Compound	D70875-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		171	192	112	170	184	108	4	10-167/30
120-12-7	Anthracene	ND		171	ND	0* [b]	170	ND	0* [b]	nc	10-200/30
56-55-3	Benzo(a)anthracene	ND [d]		171	ND	0* [b]	170	24.9	15	200* [c]	10-161/30
205-99-2	Benzo(b)fluoranthene	ND [d]		171	186	109	170	189	111	2	10-166/30
207-08-9	Benzo(k)fluoranthene	ND [d]		171	136	80	170	120	71	13	10-152/30
191-24-2	Benzo(g,h,i)perylene	ND [d]		171	81.1	47	170	76.6	45	6	10-154/30
50-32-8	Benzo(a)pyrene	ND [d]		171	ND	0* [b]	170	159	48	200* [c]	10-149/30
218-01-9	Chrysene	ND [d]		171	164	96	170	ND	0* [b]	200* [c]	10-156/30
53-70-3	Dibenzo(a,h)anthracene	ND [d]		171	74.6	44	170	81.3	48	9	11-149/30
206-44-0	Fluoranthene	ND		171	229	134	170	197	116	15	10-175/30
86-73-7	Fluorene	261		171	394	78	170	362	59	8	10-280/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND [d]		171	88.8	52	170	89.2	52	0	10-151/30
91-20-3	Naphthalene	94.1		171	204	64	170	185	53	10	10-230/30
129-00-0	Pyrene	ND [d]		171	451	230* [b]	170	74.7	10	143* [c]	10-160/30

CAS No.	Surrogate Recoveries	MS	MSD	D70875-2	D70875-2	Limits
4165-60-0	Nitrobenzene-d5	65%	73%	76%		11-164%
321-60-8	2-Fluorobiphenyl	74%	67%	74%		14-138%
1718-51-0	Terphenyl-d14	125%	23%* [b]		79%	35-139%

(a) Dilution required due to matrix interference. Internal standard failure at lesser dilution.
(b) Outside control limits due to possible matrix interference.
(c) Variability of recovery may be due to sample matrix/nonhomogeneity.
(d) Result is from Run #2.

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D70875
Account: CONECOK Confluence Energy
Project: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1631-MB	GB30309.D	1	05/21/15	EP	n/a	n/a	GGB1631

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

D70875-1, D70875-2

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	97%	60-140%

Blank Spike Summary

Job Number: D70875
Account: CONECOK Confluence Energy
Project: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1631-BS	GB30310.D	1	05/21/15	EP	n/a	n/a	GGB1631

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

D70875-1, D70875-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	108	98	70-130

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D70875
Account: CONECOK Confluence Energy
Project: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D70875-1MS [a]	GB30312.D	1	05/21/15	EP	n/a	n/a	GGB1631
D70875-1MSD [a]	GB30313.D	1	05/21/15	EP	n/a	n/a	GGB1631
D70875-1 [a]	GB30311.D	1	05/21/15	EP	n/a	n/a	GGB1631

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

D70875-1, D70875-2

CAS No.	Compound	D70875-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	53.7		203	250	97	203	250	97	0	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D70875-1	Limits
120-82-1	1,2,4-Trichlorobenzene	159%*	158%*	151%*	60-140%

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

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D70875
Account: CONECOK Confluence Energy
Project: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11768-MB	FI25345.D	1	05/21/15	GN	05/21/15	OP11768	GFI1273

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

D70875-1, D70875-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	10	7.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	94%	20-130%

Blank Spike Summary

Job Number: D70875
Account: CONECOK Confluence Energy
Project: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11768-BS	FI25347.D	1	05/21/15	GN	05/21/15	OP11768	GFI1273

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

D70875-1, D70875-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	250	180	72	32-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	98%	20-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D70875
Account: CONECOK Confluence Energy
Project: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11768-MS [a]	FI25349.D	5	05/21/15	GN	05/21/15	OP11768	GFI1273
OP11768-MSD [a]	FI25351.D	5	05/21/15	GN	05/21/15	OP11768	GFI1273
D70875-2 [a]	FI25353.D	5	05/21/15	GN	05/21/15	OP11768	GFI1273

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

D70875-1, D70875-2

CAS No.	Compound	D70875-2 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	4130		676	3400	-108* [b]	683	4470	50	27	20-152/54

CAS No.	Surrogate Recoveries	MS	MSD	D70875-2	Limits
84-15-1	o-Terphenyl	86%	76%	86%	20-130%

(a) Elevated reporting limits due to insufficient sample and sample matrix. Dilution required during sample prep.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15966
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 05/20/15

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.083	.00088	.0067	-0.0010	<0.083

Associated samples MP15966: D70875-1, D70875-2

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: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15966
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 05/20/15

Metal	D70722-1 Original	MS	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.0073	0.39	0.348	110.0	75-125

Associated samples MP15966: D70875-1, D70875-2

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: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15966 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 05/20/15

Metal	D70722-1 Original	MSD	Spikelot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.0073	0.37	0.348	104.2	5.3	20

Associated samples MP15966: D70875-1, D70875-2

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: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15966
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 05/20/15

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.35	0.333	105.0	80-120

Associated samples MP15966: D70875-1, D70875-2

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: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15998
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 05/26/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	1.1	1.7		
Antimony	3.0	.21	.82		
Arsenic	2.5	.38	2.1		
Barium	1.0	.02	.03	0.080	<1.0
Beryllium	1.0	.09	.16		
Boron	5.0	.08	.29		
Cadmium	1.0	.02	.1	0.010	<1.0
Calcium	40	.24	9.6		
Chromium	1.0	.03	.07	0.040	<1.0
Cobalt	0.50	.05	.12		
Copper	1.0	.08	.48	0.070	<1.0
Iron	7.0	.15	.69		
Lead	5.0	.21	.6	-0.25	<5.0
Lithium	0.50	.04	.07		
Magnesium	20	.68	3.9		
Manganese	0.50	.05	.07		
Molybdenum	1.0	.04	.36		
Nickel	3.0	.05	.24	0.0	<3.0
Phosphorus	10	1.5	4.3		
Potassium	200	9.9	6		
Selenium	5.0	.71	1	0.22	<5.0
Silicon	5.0	.47	.91		
Silver	3.0	.03	.05	0.030	<3.0
Sodium	40	.73	1.5		
Strontium	5.0	.001	.03		
Thallium	1.0	.18	.86		
Tin	5.0	1.2	1.2		
Titanium	1.0	.01	.27		
Uranium	5.0	.29	.44		
Vanadium	1.0	.04	.07		
Zinc	3.0	.04	.35	0.24	<3.0

Associated samples MP15998: D70875-1, D70875-2

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15998
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 05/26/15

Metal	RL	IDL	MDL	MB raw	final

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15998
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 05/26/15

Metal	D70875-1 Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	5390	6400	287	352.5(a)	75-125
Beryllium					
Boron					
Cadmium	0.30	68.3	71.6	94.9	75-125
Calcium	anr				
Chromium	13.8	84.0	71.6	98.0	75-125
Cobalt					
Copper	14.1	85.2	71.6	99.3	75-125
Iron					
Lead	5.1	140	143	94.2	75-125
Lithium					
Magnesium	anr				
Manganese					
Molybdenum					
Nickel	11.6	75.9	71.6	89.8	75-125
Phosphorus					
Potassium	anr				
Selenium	2.1	155	143	106.7	75-125
Silicon					
Silver	0.0	25.8	28.7	90.0	75-125
Sodium	anr				
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	39.8	106	71.6	92.4	75-125

Associated samples MP15998: D70875-1, D70875-2

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15998
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 05/26/15

Metal	D70875-1 Original MS	Spikelot ICPALL2	% Rec	QC Limits

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15998
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 05/26/15

Metal	D70875-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	5390	7280	265	712.4(a)	12.9	20
Beryllium						
Boron						
Cadmium	0.30	62.2	66.3	93.3	9.3	20
Calcium	anr					
Chromium	13.8	82.9	66.3	104.2	1.3	20
Cobalt						
Copper	14.1	85.0	66.3	106.9	0.2	20
Iron						
Lead	5.1	127	133	91.9	9.7	20
Lithium						
Magnesium	anr					
Manganese						
Molybdenum						
Nickel	11.6	75.1	66.3	95.7	1.1	20
Phosphorus						
Potassium	anr					
Selenium	2.1	142	133	105.5	8.8	20
Silicon						
Silver	0.0	22.9	26.5	86.3	11.9	20
Sodium	anr					
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	39.8	127	66.3	131.5N(b	18.0	20

Associated samples MP15998: D70875-1, D70875-2

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15998 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 05/26/15

Metal	D70875-1 Original MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit

(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.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15998
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 05/26/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	200	200	100.0	80-120
Beryllium				
Boron				
Cadmium	50.3	50	100.6	80-120
Calcium	anr			
Chromium	56.1	50	112.2	80-120
Cobalt				
Copper	52.3	50	104.6	80-120
Iron				
Lead	103	100	103.0	80-120
Lithium				
Magnesium	anr			
Manganese				
Molybdenum				
Nickel	50.1	50	100.2	80-120
Phosphorus				
Potassium	anr			
Selenium	109	100	109.0	80-120
Silicon				
Silver	20.1	20	100.5	80-120
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	51.9	50	103.8	80-120

Associated samples MP15998: D70875-1, D70875-2

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15998
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 05/26/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15998
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/26/15

Metal	D70875-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	41400	41600	0.5	0-10
Beryllium				
Boron				
Cadmium	2.30	0.00	100.0(a)	0-10
Calcium	anr			
Chromium	106	112	5.5	0-10
Cobalt				
Copper	109	104	4.6	0-10
Iron				
Lead	39.5	49.0	24.1 (a)	0-10
Lithium				
Magnesium	anr			
Manganese				
Molybdenum				
Nickel	89.2	98.5	10.4*(b)	0-10
Phosphorus				
Potassium	anr			
Selenium	16.0	0.00	100.0(a)	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	306	359	17.2*(b)	0-10

Associated samples MP15998: D70875-1, D70875-2

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15998
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/26/15

	D70875-1		QC
Metal	Original SDL 1:5	%DIF	Limits

(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15999
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 05/26/15

Metal	RL	IDL	MDL	MB raw	final
Arsenic	0.10	.0085	.024	0.0049	<0.10

Associated samples MP15999: D70875-1, D70875-2

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: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15999
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 05/26/15

Metal	D70875-1 Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Arsenic	4.5	167	143	113.4	75-125

Associated samples MP15999: D70875-1, D70875-2

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: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15999 Methods: SW846 6020A
Matrix Type: SOLID Units: mg/kg

Prep Date: 05/26/15

Metal	D70875-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Arsenic	4.5	163	133	119.5	2.4	20

Associated samples MP15999: D70875-1, D70875-2

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: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15999
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 05/26/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Arsenic	103	100	103.0	80-120

Associated samples MP15999: D70875-1, D70875-2

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP15999
Matrix Type: SOLID

Methods: SW846 6020A
Units: ug/l

Prep Date: 05/26/15

Metal	D70875-1 Original	SDL 5:25	%DIF	QC Limits
Arsenic	34.4	30.3	12.0*(a)	0-10

Associated samples MP15999: D70875-1, D70875-2

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: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP16003
Matrix Type: AQUEOUS

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

Prep Date: 05/26/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	55	65		
Antimony	150	11	44		
Arsenic	130	19	60		
Barium	50	1	2		
Beryllium	50	4.5	8		
Boron	250	4	18		
Cadmium	50	1	4		
Calcium	2000	12	50	-20	<2000
Chromium	50	1.5	3.5		
Cobalt	25	2.5	6		
Copper	50	4	19		
Iron	350	7.5	35		
Lead	250	11	25		
Lithium	25	2	3.5		
Magnesium	1000	34	200	1.5	<1000
Manganese	25	2.5	4.5		
Molybdenum	50	2	18		
Nickel	150	2.5	14		
Phosphorus	500	75	170		
Potassium	5000	500	360		
Selenium	250	36	50		
Silicon	250	24	42		
Silver	150	1.5	3		
Sodium	2000	37	70	-29	<2000
Strontium	25	.05	1.5		
Thallium	50	9	40		
Tin	250	60	60		
Titanium	50	.5	14		
Uranium	250	15	22		
Vanadium	50	2	3		
Zinc	150	2	18		

Associated samples MP16003: D70875-1A, D70875-2A

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP16003
Matrix Type: AQUEOUS

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

Prep Date: 05/26/15

Metal	RL	IDL	MDL	MB raw	final

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP16003
Matrix Type: AQUEOUS

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

Prep Date: 05/26/15

Metal	D70875-2A Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	103000	236000	125000	106.4	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	22000	155000	125000	106.4	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	212000	346000	125000	107.2	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP16003: D70875-1A, D70875-2A

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP16003
Matrix Type: AQUEOUS

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

Prep Date: 05/26/15

Metal	D70875-2A Original MS	Spikelot ICPALL2	% Rec	QC Limits

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP16003
Matrix Type: AQUEOUS

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

Prep Date: 05/26/15

Metal	D70875-2A Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	103000	242000	125000	111.2	2.5	20
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium	22000	157000	125000	108.0	1.3	20
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silicon						
Silver						
Sodium	212000	353000	125000	112.8	2.0	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP16003: D70875-1A, D70875-2A

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP16003
Matrix Type: AQUEOUS

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

Prep Date: 05/26/15

Metal	D70875-2A Original MSD	Spikelot ICPALL2 % Rec	MSD RPD	QC Limit

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP16003
Matrix Type: AQUEOUS

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

Prep Date: 05/26/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	132000	125000	105.6	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	133000	125000	106.4	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	133000	125000	106.4	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP16003: D70875-1A, D70875-2A

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP16003
Matrix Type: AQUEOUS

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

Prep Date: 05/26/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP16003
Matrix Type: AQUEOUS

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

Prep Date: 05/26/15

Metal	D70875-2A Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	20600	20800	1.0	0-10
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	4400	4340	1.3	0-10
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	42400	42600	0.5	0-10
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP16003: D70875-1A, D70875-2A

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

QC Batch ID: MP16003
Matrix Type: AQUEOUS

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

Prep Date: 05/26/15

	D70875-2A		QC
Metal	Original SDL 1:5	%DIF	Limits

(anr) Analyte not requested

Mountain States ACCUTEST LABORATORIES

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: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP15387/GN30067	1.0	0.0	mg/kg	59.8	55.4	92.6	80-120%
Specific Conductivity	GP15382/GN30056			umhos/cm	9988	9770	97.8	90-110%
pH	GN30019			su	8.00	8.01	100.1	99.1-100.9%

Associated Samples:
Batch GN30019: D70875-1, D70875-2
Batch GP15382: D70875-1, D70875-2
Batch GP15387: D70875-1, D70875-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP15387/GN30067	D70875-1	mg/kg	0.0	0.0	0.0	0-20%
Redox Potential Vs H2	GN30045	D70875-1	mv	372	372	0.0	0-20%

Associated Samples:
Batch GN30045: D70875-1, D70875-2
Batch GP15387: D70875-1, D70875-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP15387/GN30067	D70875-1	mg/kg	0.0	40.0	33.9	84.7(a)	75-125%

Associated Samples:
Batch GP15387: D70875-1, D70875-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Bench MS/MSD performed when digested spikes gave low recovery.This indicates reducing agents in the sample.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D70875
Account: CONECOK - Confluence Energy
Project: Grizzly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chromium, Hexavalent	GP15387/GN30067	D70875-1	mg/kg	0.0	40.0	34.2	0.9	20%

Associated Samples:
Batch GP15387: D70875-1, D70875-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

(Accutest Northern California,Inc.)

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #:	D70875
Accutest Quote #:	0
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information			Analytical Information
Name: Accutest Mountain States (AMS)			Name: Accutest - Northern California			
Address: 4036 Youngfield St.			Address: 2105 Lundy Ave.			
City: Wheat Ridge,	State: CO	Zip: 80033	City: San Jose	State: CA	Zip: 95131	
Send Report to: Scott Heideman			Contact: Sample Management			
Any questions contact: Renea Rooks						
Phone/Fax #: (303) 425-6021; (303)425-6854			Phone: (408) 588-0200			

Field ID / Point of Collection	Collection Date	Collection Time		Matrix	# of bottles	Preservation HCl	NaOH	HNO3	H2SO4	None	V8260BTX					Comments
D70875 -1	5/18/15	9:00 AM		Soil	1						x					402
-2	5/18/15	9:00 AM		Soil	1						x					402
-																

Turnaround Information

- [X] 3 - 5 Business Day Rush
- [ ] Other 4 (Days)

Approved By: _____

10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] Commercial "BN"
- [ ] Reduced Tier 1
- [ ] Full Tier 1
- [ ] PDF
- [ ] Compact Disk Deliverable
- [ ] Electronic Delivery: _____
- [ ] State Forms
- [ ] Other (Specify) _____

Comments / Remarks

Please use Colorado regulations and RLs.

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

Relinquished by:	Date & Time:	Received By:	Date & Time:
1	5/19/15	1	1
2 fedex	5/20/15 0905	2	2
3		3	3

For Subcontract Laborartory Use Only

Seal #: Y Headspace: Yes ☐ No ☐ NA ☐

Preserved where applicable: ☐

Temperature °C 4.0/4.0 On Ice ☐

11.1 11

D70875: Chain of Custody
Page 1 of 2
Accutest Northern California,Inc.

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D70875 **Client:** AMS **Project:** D70875

Date / Time Received: 5/20/2015 9:05:00 AM **Delivery Method:** FedEx **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (4/4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Therm ID:	IR1;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Comments

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Accutest Laboratories
V:408.588.0200

2105 Lundy Avenue
F: 408.588.0201

San Jose, CA 95131
www/accutest.com

D70875: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

(Accutest Northern California,Inc.)

Includes the following where applicable:

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

Method Blank Summary

Job Number: D70875
Account: ALMS Accutest Mountain States
Project: CONECOK: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL1244-MB	L41448.D	1	05/20/15	XB	n/a	n/a	VL1244

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

D70875-1, D70875-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	70-130%
2037-26-5	Toluene-D8	104%	70-130%
460-00-4	4-Bromofluorobenzene	95%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: D70875
Account: ALMS Accutest Mountain States
Project: CONECOK: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL1244-BS	L41445.D	1	05/20/15	XB	n/a	n/a	VL1244
VL1244-BSD	L41446.D	1	05/20/15	XB	n/a	n/a	VL1244

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

D70875-1, D70875-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	34.5	86	34.5	86	0	81-119/20
100-41-4	Ethylbenzene	40	36.4	91	37.7	94	4	80-119/21
108-88-3	Toluene	40	35.4	89	36.8	92	4	80-117/21
1330-20-7	Xylene (total)	120	109	91	112	93	3	81-122/22

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	98%	70-130%
2037-26-5	Toluene-D8	102%	103%	70-130%
460-00-4	4-Bromofluorobenzene	98%	98%	70-130%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: D70875
Account: ALMS Accutest Mountain States
Project: CONECOK: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL1244-LCS	L41447.D	1	05/20/15	XB	n/a	n/a	VL1244

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

D70875-1, D70875-2

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	70-130%
2037-26-5	Toluene-D8	105%	70-130%
460-00-4	4-Bromofluorobenzene	96%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D70875
Account: ALMS Accutest Mountain States
Project: CONECOK: Grizzly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C39925-1MS	L41450.D	1	05/20/15	XB	n/a	n/a	VL1244
C39925-1MSD	L41451.D	1	05/20/15	XB	n/a	n/a	VL1244
C39925-1	L41449.D	1	05/20/15	XB	n/a	n/a	VL1244
C39925-1	L41457.D	1	05/20/15	XB	n/a	n/a	VL1244

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

D70875-1, D70875-2

CAS No.	Compound	C39925-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		39.6	33.8	85	40	33.4	84	1	81-119/20
100-41-4	Ethylbenzene	ND		39.6	34.0	86	40	31.9	80	6	80-119/21
108-88-3	Toluene	ND		39.6	34.7	88	40	33.8	85	3	80-117/21
1330-20-7	Xylene (total)	ND		119	99.8	84	120	93.8	78* [a]	6	81-122/22

CAS No.	Surrogate Recoveries	MS	MSD	C39925-1	C39925-1	Limits
1868-53-7	Dibromofluoromethane	23%* [a]	20%* [a]	9%* [b]	48%* [b]	70-130%
2037-26-5	Toluene-D8	105%	104%	110%	106%	70-130%
460-00-4	4-Bromofluorobenzene	99%	99%	92%	99%	70-130%

(a) Outside control limits due to matrix interference.
(b) Outside control limits due to matrix interference. Confirmed by reanalysis.

* = Outside of Control Limits.