



08/07/15

Technical Report for

Confluence Energy

Confluence

Accutest Job Number: D50137

Sampling Dates: 07/04/13 - 09/02/13

Report to:

rmcclure@ee3llc.com

Total number of pages in report: 97



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.

A handwritten signature in black ink, appearing to read "Scott Heideman".

Scott Heideman
Laboratory Director

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Test results relate only to samples analyzed.

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Sample Summary

Confluence Energy**Job No: D50137****Confluence**

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D50137-1	07/04/13	00:00	09/04/13	SO	Soil	WELL 3-13H INITIAL
D50137-1A	07/04/13	00:00	09/04/13	SO	Soil	WELL 3-13H INITIAL
D50137-2	09/02/13	00:00	09/04/13	SO	Soil	WELL 3-13H 60 DAY
D50137-2A	09/02/13	00:00	09/04/13	SO	Soil	WELL 3-13H 60 DAY
D50137-3	09/02/13	00:00	09/04/13	SO	Soil	WELL 3-12H INITIAL
D50137-3A	09/02/13	00:00	09/04/13	SO	Soil	WELL 3-12H INITIAL
D50137-4	09/02/13	00:00	09/04/13	SO	Soil	HEBRON 2-07H INITIAL
D50137-4A	09/02/13	00:00	09/04/13	SO	Soil	HEBRON 2-07H INITIAL

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



CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Confluence Energy

Job No D50137

Site: Confluence

Report Date 9/10/2013 1:26:02 PM

On 09/04/2013, 4 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 24.9 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D50137 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: V5V1744

- All method blanks for this batch meet method specific criteria.
- Sample(s) D50106-3MS, D50106-3MSD were used as the QC samples indicated.
- The following samples were run outside of holding time for method SW846 8260B: D50137-1 Sample received outside the holding time.
- D50137-1: Sample received outside the holding time.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO

Batch ID: OP8526

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D50216-1MS, D50216-1MSD were used as the QC samples indicated.
- The following samples were extracted outside of holding time for method SW846 8270C BY SIM: D50137-1 Sample received outside the holding time.
- The RPD(s) for the MS and MSD are outside control limits for sample OP8526-MSD. Variability of recovery may be due to sample matrix/homogeneity.
- D50137-1: Sample received outside the holding time.

Volatiles by GC By Method SW846 8015B

Matrix SO

Batch ID: GGB1209

- All method blanks for this batch meet method specific criteria.
- Sample(s) D50150-1MS, D50150-1MSD were used as the QC samples indicated.
- The following samples were run outside of holding time for method SW846 8015B: D50137-1 Sample received outside the holding time.
- D50137-1: Sample received outside the holding time.

Extractables by GC By Method SW846-8015B

Matrix SO

Batch ID: OP8514

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D50137-1MS, D50137-1MSD were used as the QC samples indicated.
- The following samples were extracted outside of holding time for method SW846-8015B: D50137-1 Sample received outside the holding time.
- D50137-1: Sample received outside the holding time.

Matrix SO

Batch ID: OP8525

- All samples were extracted and analyzed within the recommended method holding time.
- Sample(s) D50137-2MS, D50137-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The matrix spike / matrix spike duplicate (MS/MSD) recovery(s) of TPH-DRO (C10-C28) are outside control limits. Outside control limits due to possible matrix interference.
- The RPD(s) for the MS and MSD recoveries of TPH-DRO (C10-C28) are outside control limits for sample OP8525-MSD. Variability of recovery may be due to sample matrix/homogeneity.

Metals By Method SW846 6010C

Matrix AQ

Batch ID: MP11010

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D50053-4AMS, D50053-4AMSD, D50053-4ASDL were used as the QC samples for the metals analysis.

Matrix SO

Batch ID: MP11015

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D50213-1MSD, D50213-1SDL, D50213-1MS, D50213-1MSD were used as the QC samples for the metals analysis.
- The matrix spike / matrix spike duplicate (MS/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 Lead, Selenium, Boron, Chromium, Copper, Nickel are outside control limits for sample MP11015-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP11015-SD1 for Copper: Serial dilution indicates possible matrix interference.
- D50137-1 for Silver: Elevated detection limit due to dilution required for possible matrix interference.
- MP11015-SD1 for Nickel: Serial dilution indicates possible matrix interference.
- MP11015-SD1 for Chromium: Serial dilution indicates possible matrix interference.
- D50137-1 for Selenium: Elevated detection limit due to dilution required for possible matrix interference.
- D50137-1 for Lead: Elevated detection limit due to dilution required for possible matrix interference.
- D50137-1 for Cadmium: Elevated detection limit due to dilution required for possible matrix interference.
- D50137-1 for Boron: Elevated detection limit due to dilution required for possible matrix interference.
- MP11015-SD1 for Boron: Serial dilution indicates possible matrix interference.

Metals By Method SW846 6020A

Matrix SO	Batch ID: MP11016
------------------	--------------------------

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D50213-1MS, D50213-1MSD, D50213-1SDL were used as the QC samples for the metals analysis.

Metals By Method SW846 7471B

Matrix SO	Batch ID: MP11014
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D50150-1MS, D50150-1MSD were used as the QC samples for the metals analysis.
- The following samples were digested outside of holding time for method SW846 7471B: D50137-1

Wet Chemistry By Method ASTM D1498-76M

Matrix SO	Batch ID: GN21772
------------------	--------------------------

- Sample(s) D50053-1DUP were used as the QC samples for the Redox Potential Vs H2 analysis.
- The following samples were run outside of holding time for method ASTM D1498-76M: D50137-1

Wet Chemistry By Method SM 2510B-2011 MOD

Matrix SO	Batch ID: GP10865
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- The following samples were prepared outside of holding time for method SM 2510B-2011 MOD: D50137-1

Wet Chemistry By Method SM2540B-2011 M

Matrix SO	Batch ID: GN21768
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- The data for SM2540B-2011 M meets quality control requirements.

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO	Batch ID: GP10873
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- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D50275-1MS, D50275-1MSD, D50275-1DUP were used as the QC samples for the Chromium, Hexavalent analysis.
- The following samples were prepared outside of holding time for method SW846 3060A/7196A: D50137-1
- The duplicate RPD(s) for Chromium, Hexavalent are outside control limits for sample GP10873-D1. RPD acceptable due to low duplicate and sample concentrations.

Wet Chemistry By Method SW846 3060A/7196A M

Matrix SO	Batch ID: R18582
------------------	-------------------------

- The data for SW846 3060A/7196A M meets quality control requirements.
- D50137-4 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Matrix SO	Batch ID: R18583
------------------	-------------------------

- The data for SW846 3060A/7196A M meets quality control requirements.
- D50137-1 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Matrix SO	Batch ID: R18585
------------------	-------------------------

- The data for SW846 3060A/7196A M meets quality control requirements.
- D50137-3 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Wet Chemistry By Method SW846 9045D

Matrix SO	Batch ID: GN21782
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- The following samples were run outside of holding time for method SW846 9045D: D50137-1, D50137-2, D50137-3, D50137-4

Wet Chemistry By Method USDA HANDBOOK 60

Matrix SO	Batch ID: MP11010
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- D50137-4A for Sodium Adsorption Ratio: Calculated as: $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$
- D50137-3A for Sodium Adsorption Ratio: Calculated as: $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$
- D50137-2A for Sodium Adsorption Ratio: Calculated as: $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$
- D50137-1A 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.

Summary of Hits

Job Number: D50137
 Account: Confluence Energy
 Project: Confluence
 Collected: 07/04/13 thru 09/02/13

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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D50137-1 WELL 3-13H INITIAL

Naphthalene ^a	20.8	18	16	ug/kg	SW846 8270C BY SIM
TPH-DRO (C10-C28) ^a	30.6	10	7.6	mg/kg	SW846-8015B
Arsenic	2.4	0.15		mg/kg	SW846 6020A
Barium	195	7.7		mg/kg	SW846 6010C
Chromium	43.5	7.7		mg/kg	SW846 6010C
Copper	61.6	7.7		mg/kg	SW846 6010C
Nickel	35.3	23		mg/kg	SW846 6010C
Zinc	137	23		mg/kg	SW846 6010C
Specific Conductivity	1780	1.0		umhos/cm	SM 2510B-2011 MOD
Chromium, Trivalent ^b	43.1	8.7		mg/kg	SW846 3060A/7196A M
pH	8.57			su	SW846 9045D

D50137-1A WELL 3-13H INITIAL

Calcium	90.0	2.0		mg/l	SW846 6010C
Magnesium	30.4	1.0		mg/l	SW846 6010C
Sodium	248	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio ^c	5.77			ratio	USDA HANDBOOK 60

D50137-2 WELL 3-13H 60 DAY

TPH-DRO (C10-C28)	938	76	57	mg/kg	SW846-8015B
Specific Conductivity	58300	1.0		umhos/cm	SM 2510B-2011 MOD
pH	8.96			su	SW846 9045D

D50137-2A WELL 3-13H 60 DAY

Calcium	297	2.0		mg/l	SW846 6010C
Magnesium	99.2	1.0		mg/l	SW846 6010C
Sodium	3910	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio ^c	50.2			ratio	USDA HANDBOOK 60

D50137-3 WELL 3-12H INITIAL

Xylene (total)	944	300	150	ug/kg	SW846 8260B
Acenaphthene	64.0	10	5.4	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene	31.1	10	5.4	ug/kg	SW846 8270C BY SIM
Chrysene	68.8	10	5.4	ug/kg	SW846 8270C BY SIM
Fluoranthene	23.6	10	5.4	ug/kg	SW846 8270C BY SIM
Fluorene	176	10	6.2	ug/kg	SW846 8270C BY SIM
Naphthalene	519	15	13	ug/kg	SW846 8270C BY SIM
Pyrene	70.3	10	5.4	ug/kg	SW846 8270C BY SIM
TPH-GRO (C6-C10)	191	15	7.4	mg/kg	SW846 8015B

Summary of Hits

Job Number: D50137
 Account: Confluence Energy
 Project: Confluence
 Collected: 07/04/13 thru 09/02/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TPH-DRO (C10-C28)		1120	8.3	6.2	mg/kg	SW846-8015B
Arsenic		10.8	0.12		mg/kg	SW846 6020A
Barium		3460	1.2		mg/kg	SW846 6010C
Boron		7.7	6.2		mg/kg	SW846 6010C
Cadmium		1.7	1.2		mg/kg	SW846 6010C
Chromium		12.2	1.2		mg/kg	SW846 6010C
Copper		23.9	1.2		mg/kg	SW846 6010C
Lead		8.3	6.2		mg/kg	SW846 6010C
Nickel		33.2	3.7		mg/kg	SW846 6010C
Zinc		82.9	3.7		mg/kg	SW846 6010C
Specific Conductivity		23300	1.0		umhos/cm	SM 2510B-2011 MOD
Chromium, Trivalent ^b		11.7	2.2		mg/kg	SW846 3060A/7196A M
pH		8.08			su	SW846 9045D

D50137-3A WELL 3-12H INITIAL

Calcium	144	2.0		mg/l	SW846 6010C
Magnesium	45.2	1.0		mg/l	SW846 6010C
Sodium	1630	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio ^c	30.4			ratio	USDA HANDBOOK 60

D50137-4 HEBRON 2-07H INITIAL

Ethylbenzene	37.4 J	160	31	ug/kg	SW846 8260B
Benzo(a)anthracene	20.4	11	5.7	ug/kg	SW846 8270C BY SIM
Chrysene	29.0	11	5.7	ug/kg	SW846 8270C BY SIM
Fluoranthene	15.7	11	5.7	ug/kg	SW846 8270C BY SIM
Fluorene	158	11	6.6	ug/kg	SW846 8270C BY SIM
Naphthalene	297	15	14	ug/kg	SW846 8270C BY SIM
Pyrene	45.4	11	5.7	ug/kg	SW846 8270C BY SIM
TPH-GRO (C6-C10)	84.5	16	8.1	mg/kg	SW846 8015B
TPH-DRO (C10-C28)	607	8.8	6.6	mg/kg	SW846-8015B
Arsenic	12.3	0.13		mg/kg	SW846 6020A
Barium	2380	1.3		mg/kg	SW846 6010C
Boron	8.7	6.6		mg/kg	SW846 6010C
Cadmium	2.3	1.3		mg/kg	SW846 6010C
Chromium	10.9	1.3		mg/kg	SW846 6010C
Copper	26.3	1.3		mg/kg	SW846 6010C
Lead	11.7	6.6		mg/kg	SW846 6010C
Nickel	30.1	4.0		mg/kg	SW846 6010C
Zinc	74.6	4.0		mg/kg	SW846 6010C
Specific Conductivity	15200	1.0		umhos/cm	SM 2510B-2011 MOD
Chromium, Trivalent ^b	10.8	2.3		mg/kg	SW846 3060A/7196A M
pH	7.61			su	SW846 9045D

Summary of Hits

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Job Number: D50137
Account: Confluence Energy
Project: Confluence
Collected: 07/04/13 thru 09/02/13



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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D50137-4A HEBRON 2-07H INITIAL

Calcium	213	2.0	mg/l	SW846 6010C
Magnesium	33.2	1.0	mg/l	SW846 6010C
Sodium	1060	2.0	mg/l	SW846 6010C
Sodium Adsorption Ratio ^c	17.8		ratio	USDA HANDBOOK 60

- (a) Sample received outside the holding time.
(b) Calculated as: (Chromium) - (Chromium, Hexavalent)
(c) Calculated as: (Na meq/L) / sqrt [(Ca meq/L) + (Mg meq/L)/2]

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	WELL 3-13H INITIAL	Date Sampled:	07/04/13
Lab Sample ID:	D50137-1	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	65.9
Method:	SW846 8260B		
Project:	Confluence		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	5V28952.D	1	09/04/13	BD	n/a	n/a	V5V1744
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.04 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	100	51	ug/kg	
108-88-3	Toluene	ND	200	100	ug/kg	
100-41-4	Ethylbenzene	ND	200	38	ug/kg	
1330-20-7	Xylene (total)	ND	400	200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		64-130%
460-00-4	4-Bromofluorobenzene	99%		62-131%
17060-07-0	1,2-Dichloroethane-D4	98%		70-130%

(a) Sample received outside the holding time.

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:	WELL 3-13H INITIAL	Date Sampled:	07/04/13
Lab Sample ID:	D50137-1	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	65.9
Method:	SW846 8270C BY SIM SW846 3546		
Project:	Confluence		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3G16236.D	1	09/06/13	DC	09/06/13	OP8526	E3G799
Run #2							

Run #	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	13	6.6	ug/kg	
120-12-7	Anthracene	ND	13	6.6	ug/kg	
56-55-3	Benzo(a)anthracene	ND	13	6.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	13	6.6	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	13	6.6	ug/kg	
50-32-8	Benzo(a)pyrene	ND	13	6.6	ug/kg	
218-01-9	Chrysene	ND	13	6.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	13	6.6	ug/kg	
206-44-0	Fluoranthene	ND	13	6.6	ug/kg	
86-73-7	Fluorene	ND	13	7.6	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	13	6.6	ug/kg	
91-20-3	Naphthalene	20.8	18	16	ug/kg	
129-00-0	Pyrene	ND	13	6.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	30%		10-159%
321-60-8	2-Fluorobiphenyl	35%		19-131%
1718-51-0	Terphenyl-d14	44%		18-150%

(a) Sample received outside the holding time.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	WELL 3-13H INITIAL	Date Sampled:	07/04/13
Lab Sample ID:	D50137-1	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	65.9
Method:	SW846 8015B		
Project:	Confluence		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	GB21965.D	1	09/05/13	EV	n/a	n/a	GGB1209
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	20	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	86%		60-140%		

(a) Sample received outside the holding time.

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

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

Report of Analysis

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Client Sample ID:	WELL 3-13H INITIAL	Date Sampled:	07/04/13
Lab Sample ID:	D50137-1	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	65.9
Method:	SW846-8015B SW846 3546		
Project:	Confluence		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	FD28439.D	1	09/05/13	TU	09/05/13	OP8514	GFD1376
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	30.6	10	7.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	73%		35-130%		

(a) Sample received outside the holding time.

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: WELL 3-13H INITIAL
 Lab Sample ID: D50137-1
 Matrix: SO - Soil
 Project: Confluence

Date Sampled: 07/04/13
 Date Received: 09/04/13
 Percent Solids: 65.9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.4	0.15	mg/kg	5	09/06/13	09/07/13 JM	SW846 6020A ²	SW846 3050B ⁶
Barium	195	7.7	mg/kg	5	09/06/13	09/09/13 JB	SW846 6010C ³	SW846 3050B ⁵
Boron ^a	< 38	38	mg/kg	5	09/06/13	09/09/13 JB	SW846 6010C ³	SW846 3050B ⁵
Cadmium ^a	< 7.7	7.7	mg/kg	5	09/06/13	09/09/13 JB	SW846 6010C ³	SW846 3050B ⁵
Chromium	43.5	7.7	mg/kg	5	09/06/13	09/09/13 JB	SW846 6010C ³	SW846 3050B ⁵
Copper	61.6	7.7	mg/kg	5	09/06/13	09/09/13 JB	SW846 6010C ³	SW846 3050B ⁵
Lead ^a	< 38	38	mg/kg	5	09/06/13	09/09/13 JB	SW846 6010C ³	SW846 3050B ⁵
Mercury	< 0.13	0.13	mg/kg	1	09/06/13	09/06/13 JB	SW846 7471B ¹	SW846 7471B ⁴
Nickel	35.3	23	mg/kg	5	09/06/13	09/09/13 JB	SW846 6010C ³	SW846 3050B ⁵
Selenium ^a	< 38	38	mg/kg	5	09/06/13	09/09/13 JB	SW846 6010C ³	SW846 3050B ⁵
Silver ^a	< 23	23	mg/kg	5	09/06/13	09/09/13 JB	SW846 6010C ³	SW846 3050B ⁵
Zinc	137	23	mg/kg	5	09/06/13	09/09/13 JB	SW846 6010C ³	SW846 3050B ⁵

(1) Instrument QC Batch: MA3942

(2) Instrument QC Batch: MA3944

(3) Instrument QC Batch: MA3948

(4) Prep QC Batch: MP11014

(5) Prep QC Batch: MP11015

(6) Prep QC Batch: MP11016

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: WELL 3-13H INITIAL
 Lab Sample ID: D50137-1
 Matrix: SO - Soil
 Project: Confluence

Date Sampled: 07/04/13
 Date Received: 09/04/13
 Percent Solids: 65.9

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	1780	1.0	umhos/cm	1	09/06/13	JD	SM 2510B-2011 MOD
Chromium, Hexavalent	< 1.0	1.0	mg/kg	1	09/09/13	RW	SW846 3060A/7196A
Chromium, Trivalent ^a	43.1	8.7	mg/kg	1	09/09/13 12:42	JB	SW846 3060A/7196A M
Redox Potential Vs H2	-6.0		mv	1	09/05/13	AK	ASTM D1498-76M
Solids, Percent	65.9		%	1	09/05/13	SWT	SM2540B-2011 M
pH	8.57		su	1	09/05/13 14:45	AK	SW846 9045D

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	WELL 3-13H INITIAL	Date Sampled:	07/04/13
Lab Sample ID:	D50137-1A	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	65.9
Project:	Confluence		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	90.0	2.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	30.4	1.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²
Sodium	248	2.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²

- (1) Instrument QC Batch: MA3948
(2) Prep QC Batch: MP11010

RL = Reporting Limit

Report of Analysis

Client Sample ID:	WELL 3-13H INITIAL	Date Sampled:	07/04/13
Lab Sample ID:	D50137-1A	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	65.9
Project:	Confluence		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	5.77		ratio	1	09/09/13 15:57	JB	USDA HANDBOOK 60

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

RL = Reporting Limit

Report of Analysis

Page 1 of 1

Client Sample ID:	WELL 3-13H 60 DAY	Date Sampled:	09/02/13
Lab Sample ID:	D50137-2	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	87.2
Method:	SW846 8015B		
Project:	Confluence		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB21966.D	1	09/05/13	EV	n/a	n/a	GGB1209
Run #2							

Run #	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)	ND	13	6.4	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	88%		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:	WELL 3-13H 60 DAY			Date Sampled:	09/02/13
Lab Sample ID:	D50137-2			Date Received:	09/04/13
Matrix:	SO - Soil			Percent Solids:	87.2
Method:	SW846-8015B SW846 3546				
Project:	Confluence				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD28498.D	10	09/08/13	TU	09/06/13	OP8525	GFD1381
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	938	76	57	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	115%		35-130%		

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: WELL 3-13H 60 DAY
 Lab Sample ID: D50137-2
 Matrix: SO - Soil
 Project: Confluence

Date Sampled: 09/02/13
 Date Received: 09/04/13
 Percent Solids: 87.2

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	58300	1.0	umhos/cm	1	09/06/13	JD	SM 2510B-2011 MOD
Solids, Percent	87.2		%	1	09/05/13	SWT	SM2540B-2011 M
pH	8.96		su	1	09/05/13 14:45	AK	SW846 9045D

RL = Reporting Limit

Report of Analysis

Client Sample ID:	WELL 3-13H 60 DAY	Date Sampled:	09/02/13
Lab Sample ID:	D50137-2A	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	87.2
Project:	Confluence		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	297	2.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	99.2	1.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²
Sodium	3910	2.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²

- (1) Instrument QC Batch: MA3948
(2) Prep QC Batch: MP11010

RL = Reporting Limit

Report of Analysis

Client Sample ID:	WELL 3-13H 60 DAY	Date Sampled:	09/02/13
Lab Sample ID:	D50137-2A	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	87.2
Project:	Confluence		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	50.2		ratio	1	09/09/13 16:03	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:	WELL 3-12H INITIAL	Date Sampled:	09/02/13
Lab Sample ID:	D50137-3	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	80.3
Method:	SW846 8260B		
Project:	Confluence		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V28953.D	1	09/04/13	BD	n/a	n/a	V5V1744
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.02 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	74	37	ug/kg	
108-88-3	Toluene	ND	150	74	ug/kg	
100-41-4	Ethylbenzene	ND	150	28	ug/kg	
1330-20-7	Xylene (total)	944	300	150	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	96%		64-130%
460-00-4	4-Bromofluorobenzene	105%		62-131%
17060-07-0	1,2-Dichloroethane-D4	99%		70-130%

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:	WELL 3-12H INITIAL	Date Sampled:	09/02/13
Lab Sample ID:	D50137-3	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	80.3
Method:	SW846 8270C BY SIM SW846 3546		
Project:	Confluence		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G16237.D	1	09/06/13	DC	09/06/13	OP8526	E3G799
Run #2							

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

COGCC Table 910-1 PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	64.0	10	5.4	ug/kg	
120-12-7	Anthracene	ND	10	5.4	ug/kg	
56-55-3	Benzo(a)anthracene	ND	10	5.4	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	10	5.4	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	10	5.4	ug/kg	
50-32-8	Benzo(a)pyrene	31.1	10	5.4	ug/kg	
218-01-9	Chrysene	68.8	10	5.4	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	10	5.4	ug/kg	
206-44-0	Fluoranthene	23.6	10	5.4	ug/kg	
86-73-7	Fluorene	176	10	6.2	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10	5.4	ug/kg	
91-20-3	Naphthalene	519	15	13	ug/kg	
129-00-0	Pyrene	70.3	10	5.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	57%		10-159%
321-60-8	2-Fluorobiphenyl	59%		19-131%
1718-51-0	Terphenyl-d14	60%		18-150%

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:	WELL 3-12H INITIAL			Date Sampled:	09/02/13
Lab Sample ID:	D50137-3			Date Received:	09/04/13
Matrix:	SO - Soil			Percent Solids:	80.3
Method:	SW846 8015B				
Project:	Confluence				

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB21967.D	1	09/05/13	EV	n/a	n/a	GGB1209
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	191	15	7.4	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	139%		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:	WELL 3-12H INITIAL			Date Sampled:	09/02/13
Lab Sample ID:	D50137-3			Date Received:	09/04/13
Matrix:	SO - Soil			Percent Solids:	80.3
Method:	SW846-8015B SW846 3546				
Project:	Confluence				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD28592.D	1	09/09/13	TU	09/06/13	OP8525	GFD1383
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1120	8.3	6.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	107%		35-130%		

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: WELL 3-12H INITIAL
 Lab Sample ID: D50137-3
 Matrix: SO - Soil
 Project: Confluence

Date Sampled: 09/02/13
 Date Received: 09/04/13
 Percent Solids: 80.3

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	10.8	0.12	mg/kg	5	09/06/13	09/07/13 JM	SW846 6020A ²	SW846 3050B ⁷
Barium	3460	1.2	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Boron	7.7	6.2	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Cadmium	1.7	1.2	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Chromium	12.2	1.2	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Copper	23.9	1.2	mg/kg	1	09/06/13	09/09/13 JB	SW846 6010C ⁴	SW846 3050B ⁶
Lead	8.3	6.2	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Mercury	< 0.10	0.10	mg/kg	1	09/06/13	09/06/13 JB	SW846 7471B ¹	SW846 7471B ⁵
Nickel	33.2	3.7	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Selenium	< 6.2	6.2	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Silver	< 3.7	3.7	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Zinc	82.9	3.7	mg/kg	1	09/06/13	09/09/13 JB	SW846 6010C ⁴	SW846 3050B ⁶

- (1) Instrument QC Batch: MA3942
 (2) Instrument QC Batch: MA3944
 (3) Instrument QC Batch: MA3947
 (4) Instrument QC Batch: MA3948
 (5) Prep QC Batch: MP11014
 (6) Prep QC Batch: MP11015
 (7) Prep QC Batch: MP11016

RL = Reporting Limit

Report of Analysis

Client Sample ID: WELL 3-12H INITIAL
 Lab Sample ID: D50137-3
 Matrix: SO - Soil
 Project: Confluence

Date Sampled: 09/02/13
 Date Received: 09/04/13
 Percent Solids: 80.3

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	23300	1.0	umhos/cm	1	09/06/13	JD	SM 2510B-2011 MOD
Chromium, Hexavalent	< 1.0	1.0	mg/kg	1	09/09/13	RW	SW846 3060A/7196A
Chromium, Trivalent ^a	11.7	2.2	mg/kg	1	09/09/13	RW	SW846 3060A/7196A M
Redox Potential Vs H2	-26		mv	1	09/05/13	AK	ASTM D1498-76M
Solids, Percent	80.3		%	1	09/05/13	SWT	SM2540B-2011 M
pH	8.08		su	1	09/05/13 14:45	AK	SW846 9045D

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: WELL 3-12H INITIAL
Lab Sample ID: D50137-3A
Matrix: SO - Soil
Project: Confluence

Date Sampled: 09/02/13
Date Received: 09/04/13
Percent Solids: 80.3

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	144	2.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	45.2	1.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²
Sodium	1630	2.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²

(1) Instrument QC Batch: MA3948

(2) Prep QC Batch: MP11010

RL = Reporting Limit

Report of Analysis

Client Sample ID:	WELL 3-12H INITIAL	Date Sampled:	09/02/13
Lab Sample ID:	D50137-3A	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	80.3
Project:	Confluence		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	30.4		ratio	1	09/09/13 16:14	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:	HEBRON 2-07H INITIAL	Date Sampled:	09/02/13
Lab Sample ID:	D50137-4	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	75.8
Method:	SW846 8260B		
Project:	Confluence		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V28954.D	1	09/04/13	BD	n/a	n/a	V5V1744
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.07 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	81	41	ug/kg	
108-88-3	Toluene	ND	160	81	ug/kg	
100-41-4	Ethylbenzene	37.4	160	31	ug/kg	J
1330-20-7	Xylene (total)	ND	320	160	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	98%		64-130%
460-00-4	4-Bromofluorobenzene	102%		62-131%
17060-07-0	1,2-Dichloroethane-D4	96%		70-130%

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:	HEBRON 2-07H INITIAL	Date Sampled:	09/02/13
Lab Sample ID:	D50137-4	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	75.8
Method:	SW846 8270C BY SIM SW846 3546		
Project:	Confluence		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G16238.D	1	09/06/13	DC	09/06/13	OP8526	E3G799
Run #2							

Run #	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	11	5.7	ug/kg	
120-12-7	Anthracene	ND	11	5.7	ug/kg	
56-55-3	Benzo(a)anthracene	20.4	11	5.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	11	5.7	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	11	5.7	ug/kg	
50-32-8	Benzo(a)pyrene	ND	11	5.7	ug/kg	
218-01-9	Chrysene	29.0	11	5.7	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	11	5.7	ug/kg	
206-44-0	Fluoranthene	15.7	11	5.7	ug/kg	
86-73-7	Fluorene	158	11	6.6	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	11	5.7	ug/kg	
91-20-3	Naphthalene	297	15	14	ug/kg	
129-00-0	Pyrene	45.4	11	5.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	38%		10-159%
321-60-8	2-Fluorobiphenyl	48%		19-131%
1718-51-0	Terphenyl-d14	48%		18-150%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	HEBRON 2-07H INITIAL	Date Sampled:	09/02/13
Lab Sample ID:	D50137-4	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	75.8
Method:	SW846 8015B		
Project:	Confluence		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB21968.D	1	09/05/13	EV	n/a	n/a	GGB1209
Run #2							

Run #	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)	84.5	16	8.1	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	130%		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:	HEBRON 2-07H INITIAL					Date Sampled:	09/02/13
Lab Sample ID:	D50137-4					Date Received:	09/04/13
Matrix:	SO - Soil					Percent Solids:	75.8
Method:	SW846-8015B SW846 3546						
Project:	Confluence						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD28594.D	1	09/09/13	TU	09/06/13	OP8525	GFD1383
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	607	8.8	6.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	91%		35-130%		

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:	HEBRON 2-07H INITIAL	Date Sampled:	09/02/13
Lab Sample ID:	D50137-4	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	75.8
Project:	Confluence		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	12.3	0.13	mg/kg	5	09/06/13	09/07/13 JM	SW846 6020A ²	SW846 3050B ⁷
Barium	2380	1.3	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Boron	8.7	6.6	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Cadmium	2.3	1.3	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Chromium	10.9	1.3	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Copper	26.3	1.3	mg/kg	1	09/06/13	09/09/13 JB	SW846 6010C ⁴	SW846 3050B ⁶
Lead	11.7	6.6	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Mercury	< 0.11	0.11	mg/kg	1	09/06/13	09/06/13 JB	SW846 7471B ¹	SW846 7471B ⁵
Nickel	30.1	4.0	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Selenium	< 6.6	6.6	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Silver	< 4.0	4.0	mg/kg	1	09/06/13	09/06/13 JB	SW846 6010C ³	SW846 3050B ⁶
Zinc	74.6	4.0	mg/kg	1	09/06/13	09/09/13 JB	SW846 6010C ⁴	SW846 3050B ⁶

- (1) Instrument QC Batch: MA3942
 (2) Instrument QC Batch: MA3944
 (3) Instrument QC Batch: MA3947
 (4) Instrument QC Batch: MA3948
 (5) Prep QC Batch: MP11014
 (6) Prep QC Batch: MP11015
 (7) Prep QC Batch: MP11016

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HEBRON 2-07H INITIAL	Date Sampled:	09/02/13
Lab Sample ID:	D50137-4	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	75.8
Project:	Confluence		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	15200	1.0	umhos/cm	1	09/06/13	JD	SM 2510B-2011 MOD
Chromium, Hexavalent	< 1.0	1.0	mg/kg	1	09/09/13	RW	SW846 3060A/7196A
Chromium, Trivalent ^a	10.8	2.3	mg/kg	1	09/09/13	RW	SW846 3060A/7196A M
Redox Potential Vs H2	-44		mv	1	09/05/13	AK	ASTM D1498-76M
Solids, Percent	75.8		%	1	09/05/13	SWT	SM2540B-2011 M
pH	7.61		su	1	09/05/13 14:45	AK	SW846 9045D

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

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HEBRON 2-07H INITIAL	Date Sampled:	09/02/13
Lab Sample ID:	D50137-4A	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	75.8
Project:	Confluence		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	213	2.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	33.2	1.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²
Sodium	1060	2.0	mg/l	1	09/05/13	09/09/13 JB	SW846 6010C ¹	SW846 3010A/M ²

- (1) Instrument QC Batch: MA3948
(2) Prep QC Batch: MP11010

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HEBRON 2-07H INITIAL	Date Sampled:	09/02/13
Lab Sample ID:	D50137-4A	Date Received:	09/04/13
Matrix:	SO - Soil	Percent Solids:	75.8
Project:	Confluence		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	17.8		ratio	1	09/09/13 16:24	JB	USDA HANDBOOK 60

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

RL = Reporting Limit

4.8
4

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D50137

Client: CONFLUENCE

Immediate Client Services Action Required: No

Date / Time Received: 9/4/2013 11:00:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project:
Airbill #'s: UPS

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"/> | Infrared gun |
| 2. Cooler temp verification: | Ice (bag) |
| 3. Cooler media: | |

Quality Control Preservation
Y or N
N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 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"/> |

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 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

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: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1744-MB	5V28945.D	1	09/04/13	BD	n/a	n/a	V5V1744

The QC reported here applies to the following samples:

Method: SW846 8260B

D50137-1, D50137-3, D50137-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	25	ug/kg	
100-41-4	Ethylbenzene	ND	100	19	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	92% 64-130%
460-00-4	4-Bromofluorobenzene	99% 62-131%
17060-07-0	1,2-Dichloroethane-D4	96% 70-130%

Blank Spike Summary

Page 1 of 1

Job Number: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1744-BS	5V28946.D	1	09/04/13	BD	n/a	n/a	V5V1744

The QC reported here applies to the following samples:

Method: SW846 8260B

D50137-1, D50137-3, D50137-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	2500	2530	101	70-130
100-41-4	Ethylbenzene	2500	2700	108	70-130
108-88-3	Toluene	2500	2580	103	70-130
1330-20-7	Xylene (total)	7500	8470	113	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	99%	64-130%
460-00-4	4-Bromofluorobenzene	101%	62-131%
17060-07-0	1,2-Dichloroethane-D4	91%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D50106-3MS	5V28948.D	1	09/04/13	BD	n/a	n/a	V5V1744
D50106-3MSD	5V28949.D	1	09/04/13	BD	n/a	n/a	V5V1744
D50106-3	5V28947.D	1	09/04/13	BD	n/a	n/a	V5V1744

The QC reported here applies to the following samples:

Method: SW846 8260B

D50137-1, D50137-3, D50137-4

CAS No.	Compound	D50106-3 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		5270	5580	106	5270	5380	102	4	64-139/30
100-41-4	Ethylbenzene	84.2	J	5270	5770	108	5270	5580	104	3	68-136/30
108-88-3	Toluene	ND		5270	5280	100	5270	5240	99	1	60-130/30
1330-20-7	Xylene (total)	ND		15800	17700	112	15800	17300	109	2	58-142/30

CAS No.	Surrogate Recoveries	MS	MSD	D50106-3	Limits
2037-26-5	Toluene-D8	93%	94%	96%	64-130%
460-00-4	4-Bromofluorobenzene	104%	105%	101%	62-131%
17060-07-0	1,2-Dichloroethane-D4	91%	94%	100%	70-130%

* = Outside of Control Limits.

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: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8526-MB	3G16223.D	1	09/06/13	DC	09/06/13	OP8526	E3G799

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D50137-1, D50137-3, D50137-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	8.3	4.3	ug/kg	
120-12-7	Anthracene	ND	8.3	4.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	8.3	4.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	8.3	4.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	8.3	4.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	8.3	4.3	ug/kg	
218-01-9	Chrysene	ND	8.3	4.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	8.3	4.3	ug/kg	
206-44-0	Fluoranthene	ND	8.3	4.3	ug/kg	
86-73-7	Fluorene	ND	8.3	5.0	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	8.3	4.3	ug/kg	
91-20-3	Naphthalene	ND	12	10	ug/kg	
129-00-0	Pyrene	ND	8.3	4.3	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	63% 10-159%
321-60-8	2-Fluorobiphenyl	65% 19-131%
1718-51-0	Terphenyl-d14	93% 18-150%

Blank Spike Summary

Page 1 of 1

Job Number: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8526-BS	3G16224.D	1	09/06/13	DC	09/06/13	OP8526	E3G799

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D50137-1, D50137-3, D50137-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	48.5	58	55-130
120-12-7	Anthracene	83.3	54.9	66	60-130
56-55-3	Benzo(a)anthracene	83.3	59.3	71	62-130
205-99-2	Benzo(b)fluoranthene	83.3	55.6	67	55-130
207-08-9	Benzo(k)fluoranthene	83.3	49.8	60	59-130
50-32-8	Benzo(a)pyrene	83.3	55.9	67	64-130
218-01-9	Chrysene	83.3	58.6	70	70-130
53-70-3	Dibenzo(a,h)anthracene	83.3	57.2	69	56-130
206-44-0	Fluoranthene	83.3	54.3	65	59-130
86-73-7	Fluorene	83.3	51.8	62	58-130
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	56.9	68	60-130
91-20-3	Naphthalene	83.3	46.4	56	56-130
129-00-0	Pyrene	83.3	61.8	74	65-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	50%	10-175%
321-60-8	2-Fluorobiphenyl	56%	25-130%
1718-51-0	Terphenyl-d14	77%	41-133%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8526-MS	3G16226.D	1	09/06/13	DC	09/06/13	OP8526	E3G799
OP8526-MSD	3G16227.D	1	09/06/13	DC	09/06/13	OP8526	E3G799
D50216-1	3G16225.D	1	09/06/13	DC	09/06/13	OP8526	E3G799

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D50137-1, D50137-3, D50137-4

CAS No.	Compound	D50216-1 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		91.2	64.5	71	91.1	79.8	88	21	29-139/30
120-12-7	Anthracene	ND		91.2	61.4	67	91.1	84.4	93	32* a	10-182/30
56-55-3	Benzo(a)anthracene	ND		91.2	67.8	74	91.1	93.3	102	32* a	35-149/30
205-99-2	Benzo(b)fluoranthene	ND		91.2	67.8	74	91.1	91.7	101	30	22-174/30
207-08-9	Benzo(k)fluoranthene	ND		91.2	40.6	45	91.1	55.7	61	31* a	10-185/30
50-32-8	Benzo(a)pyrene	ND		91.2	56.9	62	91.1	78.3	86	32* a	10-168/30
218-01-9	Chrysene	9.1		91.2	58.6	54	91.1	80.0	78	31* a	10-168/30
53-70-3	Dibenzo(a,h)anthracene	ND		91.2	60.0	66	91.1	81.8	90	31* a	12-160/30
206-44-0	Fluoranthene	6.6	J	91.2	64.9	64	91.1	88.8	90	31* a	20-156/30
86-73-7	Fluorene	47.0		91.2	103	61	91.1	126	87	20	10-164/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		91.2	58.8	64	91.1	79.7	88	30	29-136/30
91-20-3	Naphthalene	43.2		91.2	104	67	91.1	110	73	6	10-258/30
129-00-0	Pyrene	6.6	J	91.2	70.1	70	91.1	96.1	98	31* a	10-196/30

CAS No.	Surrogate Recoveries	MS	MSD	D50216-1	Limits
4165-60-0	Nitrobenzene-d5	57%	59%	66%	10-175%
321-60-8	2-Fluorobiphenyl	65%	80%	75%	25-130%
1718-51-0	Terphenyl-d14	70%	88%	85%	41-133%

(a) Variability of recovery may be due to sample matrix/homogeneity.

* = Outside of Control Limits.

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: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1209-MB	GB21958.D	1	09/05/13	EV	n/a	n/a	GGB1209

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

D50137-1, D50137-2, D50137-3, D50137-4

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	84% 60-140%

Blank Spike Summary

Page 1 of 1

Job Number: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1209-BS	GB21959.D	1	09/05/13	EV	n/a	n/a	GGB1209

The QC reported here applies to the following samples:

Method: SW846 8015B

D50137-1, D50137-2, D50137-3, D50137-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	112	102	70-130

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D50150-1MS	GB21961.D	1	09/05/13	EV	n/a	n/a	GGB1209
D50150-1MSD	GB21962.D	1	09/05/13	EV	n/a	n/a	GGB1209
D50150-1	GB21960.D	1	09/05/13	EV	n/a	n/a	GGB1209

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

D50137-1, D50137-2, D50137-3, D50137-4

CAS No.	Compound	D50150-1 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)	19.3	J	225	240	98	225	235	96	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D50150-1	Limits
120-82-1	1,2,4-Trichlorobenzene	94%	94%	94%	60-140%

* = Outside of Control Limits.

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: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8514-MB	FD28431.D	1	09/05/13	TU	09/05/13	OP8514	GFD1376

The QC reported here applies to the following samples:

Method: SW846-8015B

D50137-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	6.7	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	72% 35-130%

9.1.1

9

Method Blank Summary

Page 1 of 1

Job Number: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8525-MB	FD28490.D	1	09/08/13	TU	09/06/13	OP8525	GFD1381

The QC reported here applies to the following samples:

Method: SW846-8015B

D50137-2, D50137-3, D50137-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	6.7	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	87% 35-130%

9.1.2

9

Blank Spike Summary

Page 1 of 1

Job Number: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8514-BS	FD28433.D	1	09/05/13	TU	09/05/13	OP8514	GFD1376

The QC reported here applies to the following samples:

Method: SW846-8015B

D50137-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	554	83	48-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	90%	35-130%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8525-BS	FD28492.D	1	09/08/13	TU	09/06/13	OP8525	GFD1381

The QC reported here applies to the following samples:

Method: SW846-8015B

D50137-2, D50137-3, D50137-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	712	107	48-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	112%	35-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8514-MS	FD28435.D	1	09/05/13	TU	09/05/13	OP8514	GFD1376
OP8514-MSD	FD28437.D	1	09/05/13	TU	09/05/13	OP8514	GFD1376
D50137-1 ^a	FD28439.D	1	09/05/13	TU	09/05/13	OP8514	GFD1376

The QC reported here applies to the following samples:

Method: SW846-8015B

D50137-1

CAS No.	Compound	D50137-1 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)	30.6		1010	770	73	1010	618	58	22	20-168/30

CAS No.	Surrogate Recoveries	MS	MSD	D50137-1	Limits
84-15-1	o-Terphenyl	79%	65%	73%	35-130%

(a) Sample received outside the holding time.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D50137
Account: CONECOK Confluence Energy
Project: Confluence

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8525-MS	FD28582.D	10	09/09/13	TU	09/06/13	OP8525	GFD1383
OP8525-MSD	FD28586.D	10	09/09/13	TU	09/06/13	OP8525	GFD1383
D50137-2	FD28498.D	10	09/08/13	TU	09/06/13	OP8525	GFD1381

The QC reported here applies to the following samples:

Method: SW846-8015B

D50137-2, D50137-3, D50137-4

CAS No.	Compound	D50137-2 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)	938		764	1070	17* a	764	750	-25* a	35* b	20-168/30

CAS No.	Surrogate Recoveries	MS	MSD	D50137-2	Limits
84-15-1	o-Terphenyl	80%	60%	115%	35-130%

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

(b) Variability of recovery may be due to sample matrix/homogeneity.

* = Outside of Control Limits.

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: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11010
Matrix Type: AQUEOUS

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

Prep Date: 09/05/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	43	210		
Antimony	150	16	95		
Arsenic	130	26	28		
Barium	50	7	7		
Beryllium	50	4	6		
Boron	250	34	33		
Cadmium	50	2	1.8		
Calcium	2000	11	210	-22	<2000
Chromium	50	2	2		
Cobalt	25	2	2.9		
Copper	50	6	9.5		
Iron	350	11	48		
Lead	250	18	110		
Lithium	25	9.5	14		
Magnesium	1000	70	95	84.0	<1000
Manganese	25	.05	2.3		
Molybdenum	50	4	4.2		
Nickel	150	4.5	4.4		
Phosphorus	500	75	100		
Potassium	5000	650	1400		
Selenium	250	44	55		
Silicon	250	26	26		
Silver	150	2	3		
Sodium	2000	25	850	58.5	<2000
Strontium	25	.05	.6		
Thallium	50	15	20		
Tin	250	65	80		
Titanium	50	.75	11		
Uranium	250	19	28		
Vanadium	50	2	2		
Zinc	150	3	16		

Associated samples MP11010: D50137-1A, D50137-2A, D50137-3A, D50137-4A

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

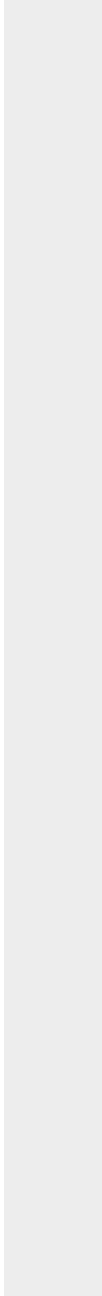
QC Batch ID: MP11010
Matrix Type: AQUEOUS

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

Prep Date: 09/05/13

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11010
Matrix Type: AQUEOUS

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

Prep Date: 09/05/13

Metal	D50053-4A Original MS		Spikelot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	83800	201000	125000	93.8	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	24000	153000	125000	103.2	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	278000	402000	125000	99.2	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP11010: D50137-1A, D50137-2A, D50137-3A, D50137-4A

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D50137
 Account: CONECOK - Confluence Energy
 Project: Confluence

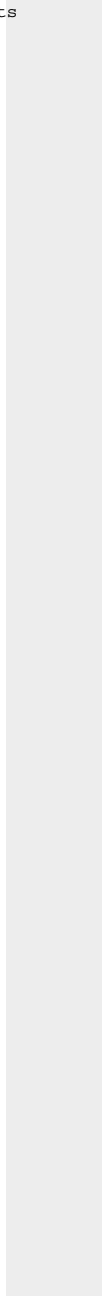
QC Batch ID: MP11010
 Matrix Type: AQUEOUS

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

Prep Date: 09/05/13

Metal	D50053-4A Original MS	Spikelot ICPALL2	% Rec	QC Limits
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(N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested



10.1.2
10

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11010
Matrix Type: AQUEOUS

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

Prep Date: 09/05/13

Metal	D50053-4A Original MSD		Spikelot ICPALL2 % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	83800	206000	125000	97.8	2.5	20
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium	24000	157000	125000	106.4	2.6	20
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silicon						
Silver						
Sodium	278000	413000	125000	108.0	2.7	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP11010: D50137-1A, D50137-2A, D50137-3A, D50137-4A

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D50137
 Account: CONECOK - Confluence Energy
 Project: Confluence

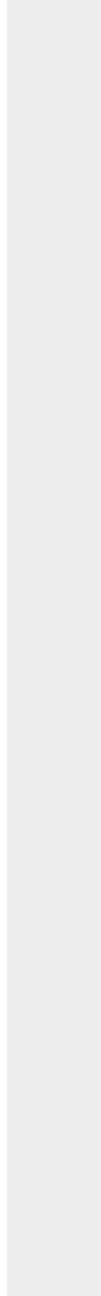
QC Batch ID: MP11010
 Matrix Type: AQUEOUS

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

Prep Date: 09/05/13

Metal	D50053-4A Original MSD	SpikeLot ICPALL2	% Rec	MSD RPD	QC Limit
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(N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D50137

Account: CONECOK - Confluence Energy

Project: Confluence

QC Batch ID: MP11010

Methods: SW846 6010C, USDA HANDBOOK 60

Matrix Type: AQUEOUS

Units: ug/l

Prep Date:

09/05/13

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	126000	125000	100.8	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	129000	125000	103.2	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	134000	125000	107.2	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP11010: D50137-1A, D50137-2A, D50137-3A, D50137-4A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

10.1.3 10

Account: CONECOK - Confluence Energy
Project: Confluence

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

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11010
Matrix Type: AQUEOUS

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

Prep Date: 09/05/13

Metal	D50053-4A Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	16800	17000	1.5	0-10
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	4790	4930	2.9	0-10
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	55500	55300	0.4	0-10
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP11010: D50137-1A, D50137-2A, D50137-3A, D50137-4A

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

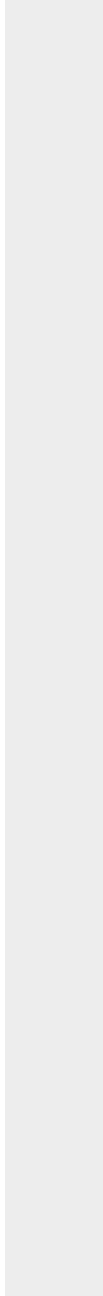
QC Batch ID: MP11010
Matrix Type: AQUEOUS

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

Prep Date: 09/05/13

D50053-4A				QC
Metal	Original	SDL 1:5	%DIF	Limits

(anr) Analyte not requested



10.1.4
10

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11014
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 09/06/13

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.083	.00088	.0067	0.000092	<0.083

Associated samples MP11014: D50137-1, D50137-3, D50137-4

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: D50137
 Account: CONECOK - Confluence Energy
 Project: Confluence

QC Batch ID: MP11014
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/06/13

Metal	D50150-1 Original MS	Spikelot HGWSR1	% Rec	QC Limits
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Mercury	0.047	0.56	0.501	102.3	75-125
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Associated samples MP11014: D50137-1, D50137-3, D50137-4

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: D50137
 Account: CONECOK - Confluence Energy
 Project: Confluence

QC Batch ID: MP11014
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/06/13

Metal	D50150-1 Original	MSD	Spikelot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.047	0.55	0.501	100.3	1.8	20

Associated samples MP11014: D50137-1, D50137-3, D50137-4

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: D50137
 Account: CONECOK - Confluence Energy
 Project: Confluence

QC Batch ID: MP11014
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/06/13

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
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Mercury	0.33	0.333	99.0	80-120
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Associated samples MP11014: D50137-1, D50137-3, D50137-4

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: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11015
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/06/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	1.1	1.8		
Antimony	3.0	.21	.5		
Arsenic	2.5	.38	.63		
Barium	1.0	.02	.36	0.10	<1.0
Beryllium	1.0	.09	.06		
Boron	5.0	.08	.16	0.13	<5.0
Cadmium	1.0	.02	.28	0.010	<1.0
Calcium	40	.24	6.8		
Chromium	1.0	.03	.03	0.050	<1.0
Cobalt	0.50	.05	.039		
Copper	1.0	.08	.13	0.070	<1.0
Iron	7.0	.15	1.8		
Lead	5.0	.21	.25	-0.19	<5.0
Lithium	0.50	.04	.13		
Magnesium	20	.68	1.8		
Manganese	0.50	.05	.038		
Molybdenum	1.0	.04	.13		
Nickel	3.0	.05	.07	0.17	<3.0
Phosphorus	10	1.5	1.2		
Potassium	200	9.9	12		
Selenium	5.0	.71	1.1	0.020	<5.0
Silicon	5.0	.47	1.1		
Silver	3.0	.03	.05	-0.060	<3.0
Sodium	40	.73	3.7		
Strontium	5.0	.001	.022		
Thallium	1.0	.18	.46		
Tin	5.0	1.2	2.3		
Titanium	1.0	.01	.46		
Uranium	5.0	.29	.31		
Vanadium	1.0	.04	.043		
Zinc	3.0	.04	.16	0.31	<3.0

Associated samples MP11015: D50137-1, D50137-3, D50137-4

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11015
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/06/13

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11015
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/06/13

Metal	D50213-1 Original MS		Spikelot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	6390	7310	221	416.7(a)	75-125
Beryllium					
Boron	7.5	107	110	90.1	75-125
Cadmium	0.023	46.7	55.2	84.6	75-125
Calcium					
Chromium	26.6	73.3	55.2	84.6	75-125
Cobalt					
Copper	14.5	62.5	55.2	85.2	75-125
Iron					
Lead	11.3	100	110	81.6	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	16.2	59.2	55.2	76.6	75-125
Phosphorus					
Potassium					
Selenium	1.2	101	110	90.4	75-125
Silicon					
Silver	0.0	20.1	22.1	91.0	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	37.5	77.0	55.2	71.5	75-125

Associated samples MP11015: D50137-1, D50137-3, D50137-4

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D50137
 Account: CONECOK - Confluence Energy
 Project: Confluence

QC Batch ID: MP11015
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 09/06/13

Metal	D50213-1 Original MS	Spikelot ICPALL2	% Rec	QC Limits
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(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: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11015
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/06/13

Metal	D50213-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	6390	6530	225	62.2 (a)	11.3	20
Beryllium						
Boron	7.5	110	113	91.0	2.8	20
Cadmium	0.023	48.4	56.3	86.0	3.6	20
Calcium						
Chromium	26.6	76.8	56.3	89.2	4.7	20
Cobalt						
Copper	14.5	62.5	56.3	83.5	0.0	20
Iron						
Lead	11.3	103	113	82.7	3.0	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	16.2	60.4	56.3	77.3	2.0	20
Phosphorus						
Potassium						
Selenium	1.2	104	113	91.3	2.9	20
Silicon						
Silver	0.0	20.8	22.5	92.4	3.4	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	37.5	79.5	56.3	74.6	3.2	20

Associated samples MP11015: D50137-1, D50137-3, D50137-4

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D50137
 Account: CONECOK - Confluence Energy
 Project: Confluence

QC Batch ID: MP11015
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 09/06/13

Metal	D50213-1 Original MSD	Spike lot ICPALL2 % Rec	MSD RPD	QC Limit
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(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: D50137

Account: CONECOK - Confluence Energy

Project: Confluence

QC Batch ID: MP11015

Methods: SW846 6010C

Matrix Type: SOLID

Units: mg/kg

Prep Date:

09/06/13

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	196	200	98.0	80-120
Beryllium				
Boron	99.6	100	99.6	80-120
Cadmium	47.9	50	95.8	80-120
Calcium				
Chromium	52.6	50	105.2	80-120
Cobalt				
Copper	46.6	50	93.2	80-120
Iron				
Lead	102	100	102.0	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	49.7	50	99.4	80-120
Phosphorus				
Potassium				
Selenium	101	100	101.0	80-120
Silicon				
Silver	20.2	20	101.0	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	51.3	50	102.6	80-120

Associated samples MP11015: D50137-1, D50137-3, D50137-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

10.3.3 10

Account: CONECOK - Confluence Energy
Project: Confluence

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/06/13

Metal	BSP Result	Spikelot ICPALL2 % Rec	QC Limits
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(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11015
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 09/06/13

Metal	D50213-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	50200	55400	2.5	0-10
Beryllium				
Boron	66.3	82.0	23.7*(a)	0-10
Cadmium	0.200	0.00	NC	0-10
Calcium				
Chromium	236	284	20.4*(a)	0-10
Cobalt				
Copper	138	146	12.6*(a)	0-10
Iron				
Lead	101	105	19.0 (b)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	144	192	28.1*(a)	0-10
Phosphorus				
Potassium				
Selenium	11.0	0.00	100.0(b)	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	423	446	5.4	0-10

Associated samples MP11015: D50137-1, D50137-3, D50137-4

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: D50137
 Account: CONECOK - Confluence Energy
 Project: Confluence

QC Batch ID: MP11015
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 09/06/13

	D50213-1		QC
Metal	Original SDL 1:5	%DIF	Limits

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference.

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11016
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 09/06/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.55	.75		
Antimony	0.20	.0011	.029		
Arsenic	0.10	.0085	.024	-0.0035	<0.10
Barium	1.0	.008	.16		
Beryllium	0.10	.008	.049		
Boron	20	.25	.07		
Cadmium	0.050	.018	.038		
Calcium	200	2.8	13		
Chromium	1.0	.027	.11		
Cobalt	0.10	.0025	.0085		
Copper	1.0	.03	.1		
Iron	5.0	1.8	1.8		
Lead	0.25	.004	.0075		
Magnesium	50	.65	.65		
Manganese	0.50	.06	.07		
Molybdenum	0.50	.025	.046		
Nickel	1.0	.0044	.17		
Phosphorus	30	1.3	4.9		
Potassium	100	1.5	2.5		
Selenium	0.20	.03	.13		
Silver	0.050	.00095	.01		
Sodium	250	2.5	5.5		
Strontium	10	.005	.027		
Thallium	0.10	.0012	.0075		
Tin	5.0	.032	2.3		
Titanium	1.0	.03	.085		
Uranium	0.25	.00085	.0015		
Vanadium	2.0	.019	.11		
Zinc	5.0	.11	1.4		

Associated samples MP11016: D50137-1, D50137-3, D50137-4

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: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11016
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 09/06/13

Metal	D50213-1 Original MS		Spikelot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	21.1	131	110	99.6	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 MP11016: D50137-1, D50137-3, D50137-4

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

10.4.2
10

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

QC Batch ID: MP11016
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 09/06/13

Metal	D50213-1 Original	MSD	Spikelot ICPAL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	21.1	127	113	94.0	3.1	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 MP11016: D50137-1, D50137-3, D50137-4

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: D50137
 Account: CONECOK - Confluence Energy
 Project: Confluence

QC Batch ID: MP11016
 Matrix Type: SOLID

Methods: SW846 6020A
 Units: mg/kg

Prep Date: 09/06/13

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	101	100	101.0	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 MP11016: D50137-1, D50137-3, D50137-4

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

10.4.3
10

SERIAL DILUTION RESULTS SUMMARY

Login Number: D50137
 Account: CONECOK - Confluence Energy
 Project: Confluence

QC Batch ID: MP11016
 Matrix Type: SOLID

Methods: SW846 6020A
 Units: ug/l

Prep Date: 09/06/13

Metal	D50213-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	188	176	6.3	0-10
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 MP11016: D50137-1, D50137-3, D50137-4

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

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP10873/GN21829	1.0	0.0	mg/kg	106.4	107	100.2	80-120%
Specific Conductivity	GP10865/GN21809			umhos/cm	10003	9970	99.7	90-110%
pH	GN21782			su	8.00	8.00	100.0	99.3-100.7%

Associated Samples:
Batch GN21782: D50137-1, D50137-2, D50137-3, D50137-4
Batch GP10865: D50137-1, D50137-2, D50137-3, D50137-4
Batch GP10873: D50137-1, D50137-3, D50137-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP10873/GN21829	D50275-1	mg/kg	0.39	0.31	20.6(a)	0-20%
Redox Potential Vs H2	GN21772	D50053-1	mv	70.0	64.0	8.9	0-20%

Associated Samples:

Batch GN21772: D50137-1, D50137-3, D50137-4

Batch GP10873: D50137-1, D50137-3, D50137-4

(*) Outside of QC limits

(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP10873/GN21829	D50275-1	mg/kg	0.39	40.0	39.0	97.5	75-125%

Associated Samples:

Batch GP10873: D50137-1, D50137-3, D50137-4

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D50137
Account: CONECOK - Confluence Energy
Project: Confluence

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chromium, Hexavalent	GP10873/GN21829	D50275-1	mg/kg	0.39	40.0	37.3	4.5	20%

Associated Samples:
Batch GP10873: D50137-1, D50137-3, D50137-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits