



10/02/15

Technical Report for

CP Exploration

Tepee

Accutest Job Number: D75359

Sampling Date: 09/17/15

Report to:

CP Exploration
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ATTN: Mary Griggs

Total number of pages in report: **102**



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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Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY CO (CO00049), EPA 524.2 Provisional

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Test results relate only to samples analyzed.

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Sample Summary

CP Exploration

Job No: D75359

Tepee

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D75359-1	09/17/15	16:30	MGCS 09/19/15	SO	Soil	PAD 25A WEST
D75359-1A	09/17/15	16:30	MGCS 09/19/15	SO	Soil	PAD 25A WEST
D75359-2	09/17/15	16:45	MGCS 09/19/15	SO	Soil	PAD 25A EAST
D75359-2A	09/17/15	16:45	MGCS 09/19/15	SO	Soil	PAD 25A EAST
D75359-3	09/17/15	15:00	MGCS 09/19/15	AQ	Water	PW TANK

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

Summary of Hits

Job Number: D75359
Account: CP Exploration
Project: Teepee
Collected: 09/17/15

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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D75359-1 PAD 25A WEST

Pyrene	12.5	5.7	2.8	ug/kg	SW846 8270C BY SIM
TPH-DRO (C10-C28)	276	13	12	mg/kg	SW846-8015B
Arsenic	11.4	0.13		mg/kg	SW846 6020A
Barium	4170	6.5		mg/kg	SW846 6010C
Boron	10.5	6.7		mg/kg	SW846 6010C
Chromium	18.4	1.3		mg/kg	SW846 6010C
Copper	29.2	1.3		mg/kg	SW846 6010C
Lead	9.5	6.5		mg/kg	SW846 6010C
Mercury	0.067	0.061		mg/kg	SW846 7471B
Nickel	14.6	3.9		mg/kg	SW846 6010C
Zinc	46.1	3.9		mg/kg	SW846 6010C
Specific Conductivity	1340	1.0		umhos/cm	SM 2510B-2011 MOD
Chromium, Trivalent ^a	18.4	2.3		mg/kg	SW846 3060A/7196A M
Redox Potential Vs H2	444			mv	ASTM D1498-76M
pH	8.97			su	SW846 9045D

D75359-1A PAD 25A WEST

Calcium	42.3	2.0		mg/l	SW846 6010C
Magnesium	5.42	1.0		mg/l	SW846 6010C
Sodium	243	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio ^b	9.34			ratio	USDA HANDBOOK 60

D75359-2 PAD 25A EAST

TPH-DRO (C10-C28)	535	12	11	mg/kg	SW846-8015B
Arsenic	9.6	0.12		mg/kg	SW846 6020A
Barium	9440	6.0		mg/kg	SW846 6010C
Boron	8.8	5.8		mg/kg	SW846 6010C
Chromium	20.5	1.2		mg/kg	SW846 6010C
Copper	23.9	1.2		mg/kg	SW846 6010C
Lead	7.6	6.0		mg/kg	SW846 6010C
Nickel	15.5	3.6		mg/kg	SW846 6010C
Zinc	38.6	3.6		mg/kg	SW846 6010C
Specific Conductivity	1840	1.0		umhos/cm	SM 2510B-2011 MOD
Chromium, Trivalent ^a	20.5	2.2		mg/kg	SW846 3060A/7196A M
Redox Potential Vs H2	443			mv	ASTM D1498-76M
pH	8.96			su	SW846 9045D

D75359-2A PAD 25A EAST

Calcium	69.6	2.0		mg/l	SW846 6010C
Magnesium	7.77	1.0		mg/l	SW846 6010C

Summary of Hits

Job Number: D75359
Account: CP Exploration
Project: Teepee
Collected: 09/17/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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Sodium		322	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio ^b		9.76			ratio	USDA HANDBOOK 60

D75359-3 PW TANK

Benzene ^c	1320	25	12	ug/l	SW846 8260C
Toluene ^c	5430	50	8.1	ug/l	SW846 8260C
Ethylbenzene ^c	636	50	13	ug/l	SW846 8260C
Xylene (total) ^c	9280	50	8.3	ug/l	SW846 8260C
TPH-GRO (C6-C10)	45.9	1.0	1.0	mg/l	SW846 8015B
TPH-DRO (C10-C28)	73.9	2.5	2.3	mg/l	SW846-8015B
Chloride	9720	500		mg/l	EPA 300.0/SW846 9056
Solids, Total Dissolved	17400	10		mg/l	SM 2540C-2011

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

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

(c) Analysis performed at Accutest Laboratories, Dayton, NJ.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	PAD 25A WEST	Date Sampled:	09/17/15
Lab Sample ID:	D75359-1	Date Received:	09/19/15
Matrix:	SO - Soil	Percent Solids:	75.8
Method:	SW846 8260C		
Project:	Tepee		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3C123552.D	1	09/25/15	ANJ	n/a	n/a	N:V3C5644
Run #2							

Run #	Initial Weight
Run #1	4.9 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.67	0.18	ug/kg	
108-88-3	Toluene	ND	1.3	0.28	ug/kg	
100-41-4	Ethylbenzene	ND	1.3	0.22	ug/kg	
1330-20-7	Xylene (total)	ND	1.3	0.37	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-122%
17060-07-0	1,2-Dichloroethane-D4	104%		68-124%
2037-26-5	Toluene-D8	100%		77-125%
460-00-4	4-Bromofluorobenzene	99%		72-130%

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

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:	PAD 25A WEST	Date Sampled:	09/17/15
Lab Sample ID:	D75359-1	Date Received:	09/19/15
Matrix:	SO - Soil	Percent Solids:	75.8
Method:	SW846 8270C BY SIM SW846 3546		
Project:	Tepee		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G25319.D	1	09/29/15	DC	09/29/15	OP12438	E3G1269
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	5.7	2.8	ug/kg	
120-12-7	Anthracene	ND	5.7	2.8	ug/kg	
56-55-3	Benzo(a)anthracene	ND	5.7	2.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	5.7	2.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	5.7	2.8	ug/kg	
50-32-8	Benzo(a)pyrene	ND	5.7	2.8	ug/kg	
218-01-9	Chrysene	ND	5.7	2.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	5.7	2.8	ug/kg	
206-44-0	Fluoranthene	ND	5.7	2.8	ug/kg	
86-73-7	Fluorene	ND	5.7	2.8	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.7	4.4	ug/kg	
91-20-3	Naphthalene	ND	5.7	3.4	ug/kg	
129-00-0	Pyrene	12.5	5.7	2.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%		11-164%
321-60-8	2-Fluorobiphenyl	64%		14-138%
1718-51-0	Terphenyl-d14	85%		35-139%

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:	PAD 25A WEST	Date Sampled:	09/17/15
Lab Sample ID:	D75359-1	Date Received:	09/19/15
Matrix:	SO - Soil	Percent Solids:	75.8
Method:	SW846 8015B		
Project:	Tepee		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB32374.D	1	09/25/15	KN	n/a	n/a	GGB1727
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	16	8.1	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	86%		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:	PAD 25A WEST	Date Sampled:	09/17/15
Lab Sample ID:	D75359-1	Date Received:	09/19/15
Matrix:	SO - Soil	Percent Solids:	75.8
Method:	SW846-8015B SW846 3546		
Project:	Tepee		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI29309.D	1	09/23/15	GN	09/22/15	OP12400	GFI1427
Run #2							

Run #	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)	276	13	12	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	91%		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: PAD 25A WEST

Lab Sample ID: D75359-1

Matrix: SO - Soil

Project: Tepee

Date Sampled: 09/17/15

Date Received: 09/19/15

Percent Solids: 75.8

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	11.4	0.13	mg/kg	5	09/22/15	09/29/15 NT	SW846 6020A ⁴	SW846 3050B ⁶
Barium	4170	6.5	mg/kg	5	09/22/15	09/24/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Boron	10.5	6.7	mg/kg	1	09/24/15	09/25/15 KV	SW846 6010C ³	SW846 3050B ⁷
Cadmium	< 1.3	1.3	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Chromium	18.4	1.3	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Copper	29.2	1.3	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Lead	9.5	6.5	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Mercury	0.067	0.061	mg/kg	1	09/25/15	09/25/15 KV	SW846 7471B ²	SW846 7471B ⁸
Nickel	14.6	3.9	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Selenium	< 6.5	6.5	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Silver	< 3.9	3.9	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Zinc	46.1	3.9	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵

(1) Instrument QC Batch: MA6562

(2) Instrument QC Batch: MA6570

(3) Instrument QC Batch: MA6571

(4) Instrument QC Batch: MA6582

(5) Prep QC Batch: MP16990

(6) Prep QC Batch: MP16991

(7) Prep QC Batch: MP17007

(8) Prep QC Batch: MP17020

RL = Reporting Limit

Report of Analysis

Client Sample ID: PAD 25A WEST

Lab Sample ID: D75359-1

Matrix: SO - Soil

Project: Tepee

Date Sampled: 09/17/15

Date Received: 09/19/15

Percent Solids: 75.8

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	75.8		%	1	09/22/15	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	1340	1.0	umhos/cm	1	09/25/15	JD	SM 2510B-2011 MOD
Chromium, Hexavalent	< 1.0	1.0	mg/kg	1	09/22/15	AK	SW846 3060A/7196A
Chromium, Trivalent ^a	18.4	2.3	mg/kg	1	09/23/15 20:31	JB	SW846 3060A/7196A M
Redox Potential Vs H2	444		mv	1	09/23/15	AK	ASTM D1498-76M
pH	8.97		su	1	09/23/15 12:00	TB	SW846 9045D

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: PAD 25A WEST

Lab Sample ID: D75359-1A

Matrix: SO - Soil

Project: Tepee

Date Sampled: 09/17/15

Date Received: 09/19/15

Percent Solids: 75.8

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	42.3	2.0	mg/l	1	09/25/15	09/25/15 KV	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	5.42	1.0	mg/l	1	09/25/15	09/25/15 KV	SW846 6010C ¹	SW846 3010A/M ²
Sodium	243	2.0	mg/l	1	09/25/15	09/25/15 KV	SW846 6010C ¹	SW846 3010A/M ²

(1) Instrument QC Batch: MA6571

(2) Prep QC Batch: MP17019

RL = Reporting Limit

Report of Analysis

Client Sample ID:	PAD 25A WEST	Date Sampled:	09/17/15
Lab Sample ID:	D75359-1A	Date Received:	09/19/15
Matrix:	SO - Soil	Percent Solids:	75.8
Project:	Tepee		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	9.34		ratio	1	09/25/15 19:01	KV	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:	PAD 25A EAST	Date Sampled:	09/17/15
Lab Sample ID:	D75359-2	Date Received:	09/19/15
Matrix:	SO - Soil	Percent Solids:	83.6
Method:	SW846 8260C		
Project:	Tepee		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3C123553.D	1	09/25/15	ANJ	n/a	n/a	N:V3C5644
Run #2							

Run #	Initial Weight
Run #1	4.9 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.61	0.16	ug/kg	
108-88-3	Toluene	ND	1.2	0.25	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.20	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.33	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-122%
17060-07-0	1,2-Dichloroethane-D4	106%		68-124%
2037-26-5	Toluene-D8	100%		77-125%
460-00-4	4-Bromofluorobenzene	100%		72-130%

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

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:	PAD 25A EAST	Date Sampled:	09/17/15
Lab Sample ID:	D75359-2	Date Received:	09/19/15
Matrix:	SO - Soil	Percent Solids:	83.6
Method:	SW846 8270C BY SIM SW846 3546		
Project:	Tepee		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G25322.D	1	09/29/15	DC	09/29/15	OP12438	E3G1269
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	ND	5.2	2.5	ug/kg	
120-12-7	Anthracene	ND	5.2	2.5	ug/kg	
56-55-3	Benzo(a)anthracene	ND	5.2	2.5	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	5.2	2.5	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	5.2	2.5	ug/kg	
50-32-8	Benzo(a)pyrene	ND	5.2	2.5	ug/kg	
218-01-9	Chrysene	ND	5.2	2.5	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	2.5	ug/kg	
206-44-0	Fluoranthene	ND	5.2	2.5	ug/kg	
86-73-7	Fluorene	ND	5.2	2.5	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	4.0	ug/kg	
91-20-3	Naphthalene	ND	5.2	3.1	ug/kg	
129-00-0	Pyrene	ND	5.2	2.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		11-164%
321-60-8	2-Fluorobiphenyl	67%		14-138%
1718-51-0	Terphenyl-d14	89%		35-139%

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:	PAD 25A EAST	Date Sampled:	09/17/15
Lab Sample ID:	D75359-2	Date Received:	09/19/15
Matrix:	SO - Soil	Percent Solids:	83.6
Method:	SW846 8015B		
Project:	Tepee		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB32375.D	1	09/25/15	KN	n/a	n/a	GGB1727
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	14	6.9	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	75%		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:	PAD 25A EAST	Date Sampled:	09/17/15
Lab Sample ID:	D75359-2	Date Received:	09/19/15
Matrix:	SO - Soil	Percent Solids:	83.6
Method:	SW846-8015B SW846 3546		
Project:	Tepee		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI29311.D	1	09/23/15	GN	09/22/15	OP12400	GFI1427
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	535	12	11	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	94%		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: PAD 25A EAST

Lab Sample ID: D75359-2

Matrix: SO - Soil

Project: Tepee

Date Sampled: 09/17/15

Date Received: 09/19/15

Percent Solids: 83.6

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.6	0.12	mg/kg	5	09/22/15	09/29/15 NT	SW846 6020A ⁴	SW846 3050B ⁶
Barium	9440	6.0	mg/kg	5	09/22/15	09/24/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Boron	8.8	5.8	mg/kg	1	09/24/15	09/25/15 KV	SW846 6010C ³	SW846 3050B ⁷
Cadmium	< 1.2	1.2	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Chromium	20.5	1.2	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Copper	23.9	1.2	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Lead	7.6	6.0	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Mercury	< 0.093	0.093	mg/kg	1	09/25/15	09/25/15 KV	SW846 7471B ²	SW846 7471B ⁸
Nickel	15.5	3.6	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Selenium ^a	< 30	30	mg/kg	5	09/22/15	09/24/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Silver	< 3.6	3.6	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵
Zinc	38.6	3.6	mg/kg	1	09/22/15	09/23/15 JB	SW846 6010C ¹	SW846 3050B ⁵

(1) Instrument QC Batch: MA6562

(2) Instrument QC Batch: MA6570

(3) Instrument QC Batch: MA6571

(4) Instrument QC Batch: MA6582

(5) Prep QC Batch: MP16990

(6) Prep QC Batch: MP16991

(7) Prep QC Batch: MP17007

(8) Prep QC Batch: MP17020

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: PAD 25A EAST

Lab Sample ID: D75359-2

Matrix: SO - Soil

Project: Tepee

Date Sampled: 09/17/15

Date Received: 09/19/15

Percent Solids: 83.6

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	83.6		%	1	09/22/15	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	1840	1.0	umhos/cm	1	09/25/15	JD	SM 2510B-2011 MOD
Chromium, Hexavalent	< 1.0	1.0	mg/kg	1	09/22/15	AK	SW846 3060A/7196A
Chromium, Trivalent ^a	20.5	2.2	mg/kg	1	09/23/15 22:08	JB	SW846 3060A/7196A M
Redox Potential Vs H2	443		mv	1	09/23/15	AK	ASTM D1498-76M
pH	8.96		su	1	09/23/15 12:00	TB	SW846 9045D

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

RL = Reporting Limit

Report of Analysis

Client Sample ID: PAD 25A EAST

Lab Sample ID: D75359-2A

Matrix: SO - Soil

Project: Tepee

Date Sampled: 09/17/15

Date Received: 09/19/15

Percent Solids: 83.6

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	69.6	2.0	mg/l	1	09/25/15	09/25/15 KV	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	7.77	1.0	mg/l	1	09/25/15	09/25/15 KV	SW846 6010C ¹	SW846 3010A/M ²
Sodium	322	2.0	mg/l	1	09/25/15	09/25/15 KV	SW846 6010C ¹	SW846 3010A/M ²

(1) Instrument QC Batch: MA6571

(2) Prep QC Batch: MP17019

RL = Reporting Limit

Report of Analysis

Client Sample ID:	PAD 25A EAST	Date Sampled:	09/17/15
Lab Sample ID:	D75359-2A	Date Received:	09/19/15
Matrix:	SO - Soil	Percent Solids:	83.6
Project:	Tepee		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	9.76		ratio	1	09/25/15 19:08	KV	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:	PW TANK	Date Sampled:	09/17/15
Lab Sample ID:	D75359-3	Date Received:	09/19/15
Matrix:	AQ - Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	Tepee		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	2B135041.D	50	09/30/15	ANJ	n/a	n/a	N:V2B6018
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1320	25	12	ug/l	
108-88-3	Toluene	5430	50	8.1	ug/l	
100-41-4	Ethylbenzene	636	50	13	ug/l	
1330-20-7	Xylene (total)	9280	50	8.3	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		76-120%
17060-07-0	1,2-Dichloroethane-D4	116%		73-122%
2037-26-5	Toluene-D8	106%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

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:	PW TANK	Date Sampled:	09/17/15
Lab Sample ID:	D75359-3	Date Received:	09/19/15
Matrix:	AQ - Water	Percent Solids:	n/a
Method:	SW846 8015B		
Project:	Tepee		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB32475.D	20	10/01/15	KN	n/a	n/a	GGB1732
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	45.9	1.0	1.0	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	116%		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:	PW TANK	Date Sampled:	09/17/15
Lab Sample ID:	D75359-3	Date Received:	09/19/15
Matrix:	AQ - Water	Percent Solids:	n/a
Method:	SW846-8015B SW846 3510C		
Project:	Tepee		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI29454.D	10	09/29/15	GN	09/24/15	OP12420	GFI1434
Run #2							

Run #	Initial Volume	Final Volume
Run #1	800 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	73.9	2.5	2.3	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	83%		11-142%		

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:	PW TANK	Date Sampled:	09/17/15
Lab Sample ID:	D75359-3	Date Received:	09/19/15
Matrix:	AQ - Water	Percent Solids:	n/a
Project:	Tepee		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	9720	500	mg/l	1000	09/19/15 13:31	JB	EPA 300.0/SW846 9056
Solids, Total Dissolved	17400	10	mg/l	1	09/24/15	TJ	SM 2540C-2011
Sulfate ^a	< 50	50	mg/l	100	09/19/15 12:19	JB	EPA 300.0/SW846 9056

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Client / Reporting Information Company Name: CP Exploration II Street Address: 5000 Legacy Drive Ste 310 City: Plano TX State: 75024 Zip: 75024 Project Contact: Mary Griggs E-mail: mgriggs@cpexpl.com Phone #: 303-912-8292 Fax #: Company Name(s): Mary Griggs Phone #: 		Project Information Project Name: Tepee Street: City: State: Zip: Company Name: Street Address: City: State: Zip: Project Manager: Mary Griggs Attention: PO#: 		Requested Analysis (See TEST CODE sheet) X SARI, SCON X XCRA 8015 DRG, DRG, 8270 PAM # 97 Metals 8260 BTX 8015 DRG 504, CHL TDS 8015 GRG 8260 BTX		Matrix Codes DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OL - Oil LQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank	
Field ID / Point of Collection PAD 25 A West PAD 25 A East PW Tank		Collection Date: 9/17/15 Time: 4:30 Date: 9/17/15 Time: 4:45 Date: 9/17/15 Time: 3:00		Number of preserved bottles Matrix: S # of bottles: 5 Matrix: S # of bottles: 5 Matrix: CS WW # of bottles: 10		LAB USE ONLY 01 02 03 04 TB (JP) (CA)	
Turnaround Time (Business days) <input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> Std. 5 Business Days (By Contract only) <input type="checkbox"/> 5 Day FR SH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY		Approved By (Accutest PM) / Date: _____ _____ _____		<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> Commercial "B" + Narrative <input type="checkbox"/> FULLT1 (Level 3+4) 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: 1 Mary Griggs Date Time: 9/18/15		Received By: 1 9:50 Date Time: 		Relinquished By: 2 Date Time: 		Received By: 2 Jacob P... Date Time: 9/19/15 5:10	
Relinquished by Sampler: 3 Date Time: 		Received By: 3 Date Time: 		Relinquished By: 4 Date Time: 		Received By: 4 Date Time: 	
Relinquished by: 5 Date Time: 		Received By: 5 Date Time: 		Custody Seal # FX <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not Intact Preserved where applicable 10 On Ice 10 Cooler Temp. 5.6		Title	

D75359: Chain of Custody

Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D75359 **Client:** CP EXPLORATION **Project:** TEPEE
Date / Time Received: 9/19/2015 10:15:00 AM **Delivery Method:** _____ **Airbill #s:** Ffedex
Cooler Temps (Initial/Adjusted): #1: (5.6/5.6); #2: (5.6/5.6); #3: (5.6/5.6);

Cooler Security
Y or N

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

Cooler Temperature
Y or N

- | | |
|---|--|
| 1. Temp criteria achieved: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 2. Cooler temp verification: <u>IR Gun; IR Gun; IR Gun;</u> | |
| 3. Cooler media: <u>Ice (Bag)</u> | |
| 4. No. Coolers: <u>2</u> | |

Quality Control Preservation
Y or N
N/A

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

Comments

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: <u>Intact</u> | |

Sample Integrity - Instructions
Y or N N/A

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

GC/MS Semi-volatiles

5

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Page 1 of 1

Job Number: D75359
Account: CPEXPTPL CP Exploration
Project: Teepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12438-MB	3G25317.D	1	09/29/15	DC	09/29/15	OP12438	E3G1269

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D75359-1, D75359-2

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	
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	73% 11-164%
321-60-8	2-Fluorobiphenyl	72% 14-138%
1718-51-0	Terphenyl-d14	111% 35-139%

Blank Spike Summary

Page 1 of 1

Job Number: D75359
Account: CPEXPTPL CP Exploration
Project: Teepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12438-BS	3G25318.D	1	09/29/15	DC	09/29/15	OP12438	E3G1269

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D75359-1, D75359-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	70.0	84	42-130
120-12-7	Anthracene	83.3	81.2	97	45-130
56-55-3	Benzo(a)anthracene	83.3	82.5	99	49-137
205-99-2	Benzo(b)fluoranthene	83.3	85.0	102	43-146
207-08-9	Benzo(k)fluoranthene	83.3	94.2	113	27-146
50-32-8	Benzo(a)pyrene	83.3	84.6	102	53-130
218-01-9	Chrysene	83.3	77.8	93	61-130
53-70-3	Dibenzo(a,h)anthracene	83.3	79.1	95	59-130
206-44-0	Fluoranthene	83.3	88.3	106	48-130
86-73-7	Fluorene	83.3	73.5	88	44-130
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	81.9	98	58-130
91-20-3	Naphthalene	83.3	68.6	82	56-130
129-00-0	Pyrene	83.3	82.7	99	53-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	72%	11-164%
321-60-8	2-Fluorobiphenyl	74%	14-138%
1718-51-0	Terphenyl-d14	106%	35-139%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D75359
Account: CPEXPTPL CP Exploration
Project: Teepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12438-MS	3G25320.D	1	09/29/15	DC	09/29/15	OP12438	E3G1269
OP12438-MSD	3G25321.D	1	09/29/15	DC	09/29/15	OP12438	E3G1269
D75359-1	3G25319.D	1	09/29/15	DC	09/29/15	OP12438	E3G1269

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D75359-1, D75359-2

CAS No.	Compound	D75359-1 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		110	92.4	84	110	103	94	11	10-167/30
120-12-7	Anthracene	ND		110	94.9	87	110	108	98	13	10-200/30
56-55-3	Benzo(a)anthracene	ND		110	93.2	85	110	105	96	12	10-161/30
205-99-2	Benzo(b)fluoranthene	ND		110	97.5	89	110	101	92	4	10-166/30
207-08-9	Benzo(k)fluoranthene	ND		110	97.4	89	110	104	95	7	10-152/30
50-32-8	Benzo(a)pyrene	ND		110	108	99	110	111	101	3	10-149/30
218-01-9	Chrysene	ND		110	84.3	77	110	94.6	86	12	10-156/30
53-70-3	Dibenzo(a,h)anthracene	ND		110	81.4	74	110	89.6	82	10	11-149/30
206-44-0	Fluoranthene	ND		110	97.1	89	110	112	102	14	10-175/30
86-73-7	Fluorene	ND		110	110	100	110	122	111	10	10-280/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		110	89.1	81	110	97.1	88	9	10-151/30
91-20-3	Naphthalene	ND		110	94.5	86	110	107	97	12	10-230/30
129-00-0	Pyrene	12.5		110	87.9	69	110	107	86	20	10-160/30

CAS No.	Surrogate Recoveries	MS	MSD	D75359-1	Limits
4165-60-0	Nitrobenzene-d5	72%	79%	62%	11-164%
321-60-8	2-Fluorobiphenyl	70%	78%	64%	14-138%
1718-51-0	Terphenyl-d14	77%	97%	85%	35-139%

* = 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

Page 1 of 1

Job Number: D75359
Account: CPEXPTPL CP Exploration
Project: Tepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1727-MB	GB32359.D	1	09/25/15	KN	n/a	n/a	GGB1727

The QC reported here applies to the following samples:

Method: SW846 8015B

D75359-1, D75359-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	9.9	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	75% 60-140%

Method Blank Summary

Page 1 of 1

Job Number: D75359
Account: CPEXPTPL CP Exploration
Project: Tepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1732-MB	GB32465.D	1	09/30/15	KN	n/a	n/a	GGB1732

The QC reported here applies to the following samples:

Method: SW846 8015B

D75359-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.050	0.050	mg/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	88% 60-140%

Blank Spike Summary

Page 1 of 1

Job Number: D75359

Account: CPEXPTPL CP Exploration

Project: Teepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1727-BS	GB32360.D	1	09/25/15	KN	n/a	n/a	GGB1727

The QC reported here applies to the following samples:

Method: SW846 8015B

D75359-1, D75359-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	109	103	94	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	110%	60-140%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: D75359
Account: CPEXPTPL CP Exploration
Project: Tepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1732-BS	GB32466.D	1	09/30/15	KN	n/a	n/a	GGB1732

The QC reported here applies to the following samples:

Method: SW846 8015B

D75359-3

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-GRO (C6-C10)	2.2	2.35	107	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	124%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D75359

Account: CPEXPTPL CP Exploration

Project: Teepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D75418-14MS	GB32362.D	1	09/25/15	KN	n/a	n/a	GGB1727
D75418-14MSD	GB32363.D	1	09/25/15	KN	n/a	n/a	GGB1727
D75418-14	GB32361.D	1	09/25/15	KN	n/a	n/a	GGB1727

The QC reported here applies to the following samples:

Method: SW846 8015B

D75359-1, D75359-2

CAS No.	Compound	D75418-14 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)	ND		110	107	98	110	105	96	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D75418-14	Limits
120-82-1	1,2,4-Trichlorobenzene	79%	83%	88%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D75359

Account: CPEXPTPL CP Exploration

Project: Teepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D75418-28MS	GB32468.D	1	09/30/15	KN	n/a	n/a	GGB1732
D75418-28MSD	GB32469.D	1	09/30/15	KN	n/a	n/a	GGB1732
D75418-28	GB32467.D	1	09/30/15	KN	n/a	n/a	GGB1732

The QC reported here applies to the following samples:

Method: SW846 8015B

D75359-3

CAS No.	Compound	D75418-28 mg/l	Spike Q	mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	0.0510	2.2	2.36	105	2.2	2.36	105	0		64-138/30

CAS No.	Surrogate Recoveries	MS	MSD	D75418-28	Limits
120-82-1	1,2,4-Trichlorobenzene	98%	107%	90%	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

Job Number: D75359
Account: CPEXPTPL CP Exploration
Project: Teepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12400-MB	FI29296.D	1	09/22/15	GN	09/22/15	OP12400	GFI1426

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

D75359-1, D75359-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	10	9.0	mg/kg	

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

7.1.1
7

Method Blank Summary

Page 1 of 1

Job Number: D75359
Account: CPEXPTPL CP Exploration
Project: Teepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12420-MB	FI29364.D	1	09/25/15	GN	09/24/15	OP12420	GFI1430

The QC reported here applies to the following samples:

Method: SW846-8015B

D75359-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.20	0.18	mg/l	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	66% 11-142%

7.1.2

7

Blank Spike Summary

Page 1 of 1

Job Number: D75359
Account: CPEXPTPL CP Exploration
Project: Teepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12400-BS	FI29298.D	1	09/22/15	GN	09/22/15	OP12400	GFI1426

The QC reported here applies to the following samples:

Method: SW846-8015B

D75359-1, D75359-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	250	194	78	32-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	99%	20-130%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: D75359

Account: CPEXPTPL CP Exploration

Project: Teepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12420-BS	FI29366.D	1	09/25/15	GN	09/24/15	OP12420	GFI1430

The QC reported here applies to the following samples:

Method: SW846-8015B

D75359-3

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-DRO (C10-C28)	5	4.89	98	22-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	90%	11-142%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D75359

Account: CPEXPTPL CP Exploration

Project: Teepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12400-MS	FI29300.D	1	09/22/15	GN	09/22/15	OP12400	GFI1426
OP12400-MSD	FI29302.D	1	09/22/15	GN	09/22/15	OP12400	GFI1426
D75361-3	FI29304.D	1	09/22/15	GN	09/22/15	OP12400	GFI1426

The QC reported here applies to the following samples:

Method: SW846-8015B

D75359-1, D75359-2

CAS No.	Compound	D75361-3 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)	19.7		296	184	55	295	269	85	38	20-152/54

CAS No.	Surrogate Recoveries	MS	MSD	D75361-3	Limits
84-15-1	o-Terphenyl	87%	83%	76%	20-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D75359
Account: CPEXPTPL CP Exploration
Project: Tepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12420-MS	FI29368.D	1	09/25/15	GN	09/24/15	OP12420	GFI1430
OP12420-MSD	FI29370.D	1	09/25/15	GN	09/24/15	OP12420	GFI1430
D75418-1	FI29372.D	1	09/25/15	GN	09/24/15	OP12420	GFI1430

The QC reported here applies to the following samples:

Method: SW846-8015B

D75359-3

CAS No.	Compound	D75418-1 mg/l	Q	Spike mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND		5	5.16	103	5	5.20	104	1	20-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D75418-1	Limits
84-15-1	o-Terphenyl	93%	94%	101%	11-142%

* = 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: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP16990
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/22/15

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	0.010	<1.0
Cobalt	0.50	.05	.12		
Copper	1.0	.08	.48	-0.080	<1.0
Iron	7.0	.15	.69		
Lead	5.0	.21	.6	0.020	<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	0.090	<3.0
Phosphorus	10	1.5	4.3		
Potassium	200	9.9	6		
Selenium	5.0	.71	1	1.5	<5.0
Silicon	5.0	.47	.91		
Silver	3.0	.03	.05	0.040	<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	0.19	<3.0

Associated samples MP16990: D75359-1, D75359-2

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

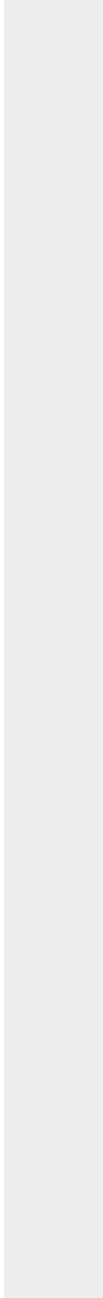
QC Batch ID: MP16990
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/22/15

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



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP16990
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/22/15

Metal	D75359-1 Original MS		Spikelot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium	4170	8320	267	1557.1(a	75-125
Beryllium					
Boron					
Cadmium	0.27	64.3	66.6	96.1	75-125
Calcium	anr				
Chromium	18.4	76.8	66.6	87.6	75-125
Cobalt					
Copper	29.2	91.7	66.6	93.8	75-125
Iron					
Lead	9.5	129	133	89.7	75-125
Lithium					
Magnesium	anr				
Manganese					
Molybdenum					
Nickel	14.6	74.7	66.6	90.2	75-125
Phosphorus					
Potassium	anr				
Selenium	0.0	125	133	93.8	75-125
Silicon					
Silver	0.0	23.2	26.7	87.0	75-125
Sodium	anr				
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	46.1	100	66.6	80.9	75-125

Associated samples MP16990: D75359-1, D75359-2

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

QC Batch ID: MP16990
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 09/22/15

Metal	D75359-1 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.

8.1.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP16990
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/22/15

Metal	D75359-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium	4170	8930	251	1894.2(a	7.1	20
Beryllium						
Boron						
Cadmium	0.27	61.4	62.8	97.3	4.6	20
Calcium	anr					
Chromium	18.4	74.0	62.8	88.5	3.7	20
Cobalt						
Copper	29.2	95.5	62.8	105.5	4.1	20
Iron						
Lead	9.5	126	126	92.7	2.4	20
Lithium						
Magnesium	anr					
Manganese						
Molybdenum						
Nickel	14.6	71.0	62.8	89.8	5.1	20
Phosphorus						
Potassium	anr					
Selenium	0.0	110	126	87.5	12.8	20
Silicon						
Silver	0.0	22.0	25.1	87.5	5.3	20
Sodium	anr					
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	46.1	108	62.8	98.5	7.7	20

Associated samples MP16990: D75359-1, D75359-2

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

QC Batch ID: MP16990
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 09/22/15

Metal	D75359-1 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.

8.1.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

QC Batch ID: MP16990
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 09/22/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	192	200	96.0	80-120
Beryllium				
Boron				
Cadmium	53.2	50	106.4	80-120
Calcium	anr			
Chromium	50.2	50	100.4	80-120
Cobalt				
Copper	52.1	50	104.2	80-120
Iron				
Lead	103	100	103.0	80-120
Lithium				
Magnesium	anr			
Manganese				
Molybdenum				
Nickel	49.8	50	99.6	80-120
Phosphorus				
Potassium	anr			
Selenium	101	100	101.0	80-120
Silicon				
Silver	20.3	20	101.5	80-120
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	50.1	50	100.2	80-120

Associated samples MP16990: D75359-1, D75359-2

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

8.1.3
8

Login Number: D75359
Account: CPExPTPL - CP Exploration
Project: Tepee

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/22/15

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP16990
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 09/22/15

Metal	D75359-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	32200	31000	3.9	0-10
Beryllium				
Boron				
Cadmium	2.10	0.00	100.0(a)	0-10
Calcium	anr			
Chromium	143	147	3.1	0-10
Cobalt				
Copper	226	207	8.4	0-10
Iron				
Lead	73.8	83.5	13.1 (a)	0-10
Lithium				
Magnesium	anr			
Manganese				
Molybdenum				
Nickel	113	126	11.3*(b)	0-10
Phosphorus				
Potassium	anr			
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	357	417	16.9*(b)	0-10

Associated samples MP16990: D75359-1, D75359-2

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

QC Batch ID: MP16990
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 09/22/15

	D75359-1		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.

8.1.4

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP16991
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 09/22/15

Metal	RL	IDL	MDL	MB raw	final
Arsenic	0.10	.0085	.024	0.030	<0.10

Associated samples MP16991: D75359-1, D75359-2

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: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

QC Batch ID: MP16991
 Matrix Type: SOLID

Methods: SW846 6020A
 Units: mg/kg

Prep Date: 09/22/15

Metal	D75359-1		SpikeLot		QC
	Original	MS	ICPALL2	% Rec	Limits
Arsenic	11.4	186	133	131.0N(a)	75-125

Associated samples MP16991: D75359-1, D75359-2

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
 (a) Spike recovery indicates possible matrix interference.

8.2.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

QC Batch ID: MP16991
 Matrix Type: SOLID

Methods: SW846 6020A
 Units: mg/kg

Prep Date: 09/22/15

Metal	D75359-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Arsenic	11.4	183	126	136.6N(a	1.6	20

Associated samples MP16991: D75359-1, D75359-2

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
 (a) Spike recovery indicates possible matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Teepee

QC Batch ID: MP16991
 Matrix Type: SOLID

Methods: SW846 6020A
 Units: mg/kg

Prep Date: 09/22/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Arsenic	115	100	115.0	80-120

Associated samples MP16991: D75359-1, D75359-2

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

QC Batch ID: MP16991
 Matrix Type: SOLID

Methods: SW846 6020A
 Units: ug/l

Prep Date: 09/22/15

Metal	D75359-1			QC
	Original	SDL 5:25	%DIF	Limits

Arsenic	88.1	73.2	17.0*(a)	0-10
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Associated samples MP16991: D75359-1, D75359-2

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: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP17007
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/24/15

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		
Beryllium	1.0	.09	.16		
Boron	5.0	.08	.29	0.050	<5.0
Cadmium	1.0	.02	.1		
Calcium	40	.24	9.6		
Chromium	1.0	.03	.07		
Cobalt	0.50	.05	.12		
Copper	1.0	.08	.48		
Iron	7.0	.15	.69		
Lead	5.0	.21	.6		
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		
Phosphorus	10	1.5	4.3		
Potassium	200	9.9	6		
Selenium	5.0	.71	1		
Silicon	5.0	.47	.91		
Silver	3.0	.03	.05		
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		

Associated samples MP17007: D75359-1, D75359-2

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

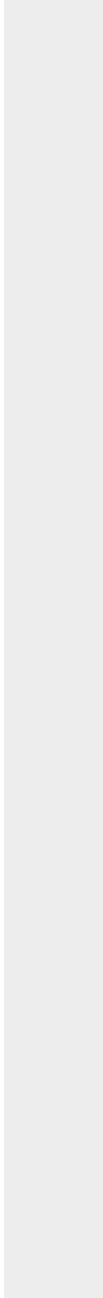
QC Batch ID: MP17007
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/24/15

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



8.3.1

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP17007
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/24/15

Metal	D75414-1 Original MS	Spikelot ICPAL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron	5.7	100	99.3	95.0
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Phosphorus				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP17007: D75359-1, D75359-2

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

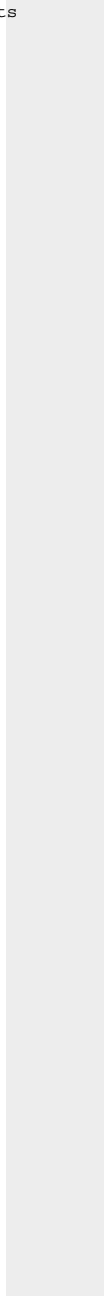
QC Batch ID: MP17007
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 09/24/15

Metal	D75414-1 Original MS	Spikelot ICPALL2	% Rec	QC Limits
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(N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested



8.3.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP17007
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/24/15

Metal	D75414-1 Original	MSD	Spikelot ICPAL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron	5.7	103	101	96.1	3.0	20
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Lithium						
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Phosphorus						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium	anr					
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	anr					

Associated samples MP17007: D75359-1, D75359-2

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

Login Number: D75359
Account: CPExPTPL - CP Exploration
Project: Tepee

Methods: SW846 6010C
Units: mg/kg

09/24/15

Metal	D75414-1 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: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP17007
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/24/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron	101	100	101.0	80-120
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Phosphorus				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP17007: D75359-1, D75359-2

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

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

Methods: SW846 6010C
Units: mg/kg

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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SERIAL DILUTION RESULTS SUMMARY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP17007
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 09/24/15

Metal		D75414-1 Original SDL 1:5		%DIF	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron	56.3	56.0	0.5	0-10	
Cadmium	anr				
Calcium	anr				
Chromium	anr				
Cobalt					
Copper	anr				
Iron	anr				
Lead	anr				
Lithium					
Magnesium	anr				
Manganese	anr				
Molybdenum					
Nickel	anr				
Phosphorus					
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium	anr				
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	anr				

Associated samples MP17007: D75359-1, D75359-2

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

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

Methods: SW846 6010C
Units: ug/l

	D75414-1	QC
Metal	Original SDL 1:5 %DIF	Limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP17019
Matrix Type: AQUEOUS

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

Prep Date: 09/25/15

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	-320	<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	5.0	<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	-140	<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 MP17019: D75359-1A, D75359-2A

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

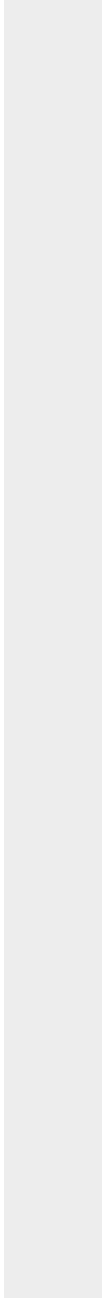
QC Batch ID: MP17019
Matrix Type: AQUEOUS

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

Prep Date: 09/25/15

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



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP17019
Matrix Type: AQUEOUS

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

Prep Date: 09/25/15

Metal	D75392-2A Original MS		Spikelot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	320000	447000	125000	101.6	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	44700	175000	125000	104.2	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	338000	457000	125000	95.2	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP17019: D75359-1A, D75359-2A

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

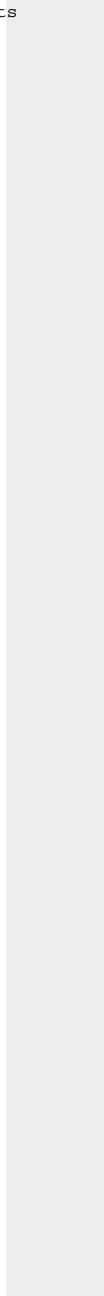
QC Batch ID: MP17019
 Matrix Type: AQUEOUS

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

Prep Date: 09/25/15

Metal	D75392-2A Original MS	Spikelot ICPALL2	% Rec	QC Limits
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(N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested



8.4.2

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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP17019
Matrix Type: AQUEOUS

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

Prep Date: 09/25/15

Metal	D75392-2A Original	MSD	Spikelot ICPAL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	320000	436000	125000	92.8	2.5	20
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium	44700	171000	125000	101.0	2.3	20
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silicon						
Silver						
Sodium	338000	447000	125000	87.2	2.2	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP17019: D75359-1A, D75359-2A

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

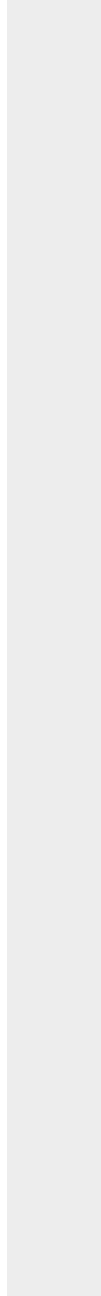
QC Batch ID: MP17019
 Matrix Type: AQUEOUS

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

Prep Date: 09/25/15

Metal	D75392-2A Original MSD	Spikelet ICPALL2 % Rec	MSD RPD	QC Limit
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(N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested



8.4.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP17019
Matrix Type: AQUEOUS

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

Prep Date: 09/25/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	129000	125000	103.2	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	130000	125000	104.0	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	124000	125000	99.2	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP17019: D75359-1A, D75359-2A

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

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

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

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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SERIAL DILUTION RESULTS SUMMARY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP17019
Matrix Type: AQUEOUS

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

Prep Date: 09/25/15

Metal	D75392-2A Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	64000	64300	0.3	0-10
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	8940	9150	2.4	0-10
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	67700	67300	0.6	0-10
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP17019: D75359-1A, D75359-2A

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

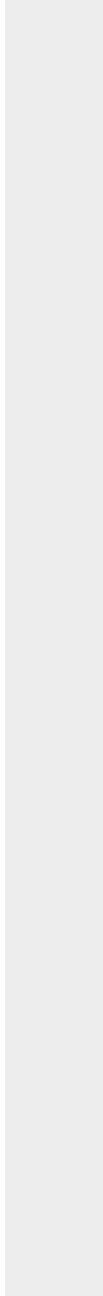
QC Batch ID: MP17019
Matrix Type: AQUEOUS

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

Prep Date: 09/25/15

	D75392-2A		QC
Metal	Original SDL 1:5	%DIF	Limits

(anr) Analyte not requested



BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

QC Batch ID: MP17020
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 09/25/15

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.083	.00088	.0067	-0.0018	<0.083

Associated samples MP17020: D75359-1, D75359-2

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: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

QC Batch ID: MP17020
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/25/15

Metal	D75411-1		Spikelot		QC
	Original	MS	HGWSR1	% Rec	Limits
Mercury	0.013	0.38	0.388	94.7	75-125

Associated samples MP17020: D75359-1, D75359-2

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: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

QC Batch ID: MP17020
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/25/15

Metal	D75411-1		Spikelot		MSD	QC
	Original	MSD	HGWSR1	% Rec		
Mercury	0.013	0.37	0.381	93.6	2.7	20

Associated samples MP17020: D75359-1, D75359-2

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

8.5.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D75359
 Account: CPEXPTPL - CP Exploration
 Project: Tepee

QC Batch ID: MP17020
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/25/15

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
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Mercury	0.34	0.333	102.0	80-120
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Associated samples MP17020: D75359-1, D75359-2

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

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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: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP16244/GN31624	0.050	0.0	mg/l	0.5	0.502	100.4	90-110%
Chloride	GP16244/GN31624	0.50	0.0	mg/l	5	5.13	102.6	90-110%
Chromium, Hexavalent	GP16259/GN31658	1.0	0.28	mg/kg	59.8	56.2	94.0	80-120%
Fluoride	GP16244/GN31624	0.10	0.0	mg/l	1	1.01	101.0	90-110%
Nitrogen, Nitrate	GP16244/GN31624	0.010	0.0	mg/l	0.1	0.102	102.0	90-110%
Nitrogen, Nitrite	GP16244/GN31624	0.0040	0.0	mg/l	0.05	0.0487	97.4	90-110%
Solids, Total Dissolved	GN31683	10	0.0	mg/l				
Solids, Total Dissolved	GN31683	10	0.0	mg/l	400	399	99.8	90-110%
Specific Conductivity	GP16287/GN31702			umhos/cm	9988	9870	98.8	90-110%
Sulfate	GP16244/GN31624	0.50	0.0	mg/l	5	4.95	99.0	90-110%
pH	GN31674			su	8.00	7.98	99.8	99.1-100.9%

Associated Samples:

Batch GN31674: D75359-1, D75359-2

Batch GN31683: D75359-3

Batch GP16244: D75359-3

Batch GP16259: D75359-1, D75359-2

Batch GP16287: D75359-1, D75359-2

(*) Outside of QC limits

9.1

6

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP16259/GN31658	D75334-1	mg/kg	0.0	0.0	42.7(a)	0-20%
Redox Potential Vs H2	GN31677	D75334-1	mv	350	353	0.9	0-20%
Solids, Total Dissolved	GN31683	D75374-1	mg/l	633	645	1.9	0-20%

Associated Samples:

Batch GN31677: D75359-1, D75359-2

Batch GN31683: D75359-3

Batch GP16259: D75359-1, D75359-2

(*) Outside of QC limits

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

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Tepee

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP16244/GN31624	D75359-3	mg/l	86.5	50	139	105.0	80-120%
Chloride	GP16244/GN31624	D75359-3	mg/l	9720	5000	14900	103.6	80-120%
Chromium, Hexavalent	GP16259/GN31658	D75334-1	mg/kg	0.0	40.0	32.5	81.2	75-125%
Fluoride	GP16244/GN31624	D75359-3	mg/l	0.0	1000	988	98.8	80-120%
Nitrogen, Nitrate	GP16244/GN31624	D75359-3	mg/l	0.0	10	10.2	102.0	80-120%
Nitrogen, Nitrite	GP16244/GN31624	D75359-3	mg/l	0.0	50	49.3	98.6	80-120%
Sulfate	GP16244/GN31624	D75359-3	mg/l	21.8	500	494	94.4	80-120%

Associated Samples:

Batch GP16244: D75359-3

Batch GP16259: D75359-1, D75359-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

9.3

6

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D75359
Account: CPEXPTPL - CP Exploration
Project: Teepee

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP16244/GN31624	D75359-3	mg/l	86.5	50	135	2.9	20%
Chloride	GP16244/GN31624	D75359-3	mg/l	9720	5000	15000	0.7	20%
Chromium, Hexavalent	GP16259/GN31658	D75334-1	mg/kg	0.0	40.0	32.7	32.7	20%
Fluoride	GP16244/GN31624	D75359-3	mg/l	0.0	1000	999	1.1	20%
Nitrogen, Nitrate	GP16244/GN31624	D75359-3	mg/l	0.0	10	10.0	2.0	20%
Nitrogen, Nitrite	GP16244/GN31624	D75359-3	mg/l	0.0	50	49.5	0.4	20%
Sulfate	GP16244/GN31624	D75359-3	mg/l	21.8	500	488	1.2	20%

Associated Samples:

Batch GP16244: D75359-3

Batch GP16259: D75359-1, D75359-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

9.4

9

Misc. Forms

Custody Documents and Other Forms

(Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D75359 **Client:** _____ **Project:** _____
Date / Time Received: 9/22/2015 9:35:00 AM **Delivery Method:** _____ **Airbill #s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (4.3);
 Cooler Temps (Corrected) °C: Cooler 1: (4.5);

Cooler Security
Y or N
Y or N

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

Cooler Temperature
Y or N

- | | |
|---|-----------|
| 1. Temp criteria achieved: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 2. Cooler temp verification: _____ | IR Gun |
| 3. Cooler media: _____ | Ice (Bag) |
| 4. No. Coolers: _____ | 1 |

Quality Control Preservation
Y or N
N/A

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

Sample Integrity - Documentation
Y or N

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

Sample Integrity - Condition
Y or N

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

Sample Integrity - Instructions
Y or N
N/A

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

Comments

GC/MS Volatiles

QC Data Summaries

(Accutest New Jersey)

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: D75359
Account: ALMS Accutest Mountain States
Project: CPEXPTPL: Tepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C5644-MB	3C123545.D	1	09/25/15	PS	n/a	n/a	V3C5644

The QC reported here applies to the following samples:

Method: SW846 8260C

D75359-1, D75359-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.13	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.16	ug/kg	
108-88-3	Toluene	ND	1.0	0.21	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.27	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	96% 70-122%
17060-07-0	1,2-Dichloroethane-D4	102% 68-124%
2037-26-5	Toluene-D8	97% 77-125%
460-00-4	4-Bromofluorobenzene	98% 72-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

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Job Number: D75359
Account: ALMS Accutest Mountain States
Project: CPEXPTPL: Tepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B6018-MB	2B135033.D	1	09/30/15	BK	n/a	n/a	V2B6018

The QC reported here applies to the following samples:

Method: SW846 8260C

D75359-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.24	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	107% 76-120%
17060-07-0	1,2-Dichloroethane-D4	114% 73-122%
2037-26-5	Toluene-D8	103% 84-119%
460-00-4	4-Bromofluorobenzene	106% 78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

11.1.2
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Blank Spike Summary

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Job Number: D75359

Account: ALMS Accutest Mountain States

Project: CPEXPTPL: Tepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C5644-BS	3C123546.D	1	09/25/15	PS	n/a	n/a	V3C5644

The QC reported here applies to the following samples:

Method: SW846 8260C

D75359-1, D75359-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	46.9	94	77-122
100-41-4	Ethylbenzene	50	51.4	103	75-121
108-88-3	Toluene	50	49.9	100	75-123
1330-20-7	Xylene (total)	150	158	105	76-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-122%
17060-07-0	1,2-Dichloroethane-D4	113%	68-124%
2037-26-5	Toluene-D8	105%	77-125%
460-00-4	4-Bromofluorobenzene	101%	72-130%

* = Outside of Control Limits.

Blank Spike Summary

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Job Number: D75359

Account: ALMS Accutest Mountain States

Project: CPEXPTPL: Tepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B6018-BS	2B135034.D	1	09/30/15	BK	n/a	n/a	V2B6018

The QC reported here applies to the following samples:

Method: SW846 8260C

D75359-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	47.8	96	81-119
100-41-4	Ethylbenzene	50	46.9	94	80-118
108-88-3	Toluene	50	44.4	89	80-122
1330-20-7	Xylene (total)	150	141	94	82-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	76-120%
17060-07-0	1,2-Dichloroethane-D4	112%	73-122%
2037-26-5	Toluene-D8	105%	84-119%
460-00-4	4-Bromofluorobenzene	105%	78-117%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: D75359
Account: ALMS Accutest Mountain States
Project: CPEXPTPL: Tepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D75414-1MS	3C123547.D	1	09/25/15	PS	n/a	n/a	V3C5644
D75414-1MSD	3C123548.D	1	09/25/15	PS	n/a	n/a	V3C5644
D75414-1	3C123550.D	1	09/25/15	PS	n/a	n/a	V3C5644

The QC reported here applies to the following samples:

Method: SW846 8260C

D75359-1, D75359-2

CAS No.	Compound	D75414-1 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		58.5	48.5	83	58.5	49.1	84	1	48-136/30
100-41-4	Ethylbenzene	ND		58.5	49.3	84	58.5	48.1	82	2	34-145/29
108-88-3	Toluene	ND		58.5	48.4	83	58.5	49.2	84	2	40-141/30
1330-20-7	Xylene (total)	ND		175	150	86	175	147	84	2	34-146/29

CAS No.	Surrogate Recoveries	MS	MSD	D75414-1	Limits
1868-53-7	Dibromofluoromethane	96%	96%	98%	70-122%
17060-07-0	1,2-Dichloroethane-D4	106%	101%	106%	68-124%
2037-26-5	Toluene-D8	100%	103%	103%	77-125%
460-00-4	4-Bromofluorobenzene	101%	100%	99%	72-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: D75359

Account: ALMS Accutest Mountain States

Project: CPEXPTPL: Tepee

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC4556-2MS	2B135043.D	1	09/30/15	BK	n/a	n/a	V2B6018
JC4556-2MSD	2B135044.D	1	09/30/15	BK	n/a	n/a	V2B6018
JC4556-2	2B135038.D	1	09/30/15	BK	n/a	n/a	V2B6018

The QC reported here applies to the following samples:

Method: SW846 8260C

D75359-3

CAS No.	Compound	JC4556-2 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	50	50.1	100	50	47.8	96	5	43-138/12
100-41-4	Ethylbenzene	ND	50	49.7	99	50	47.6	95	4	38-139/12
108-88-3	Toluene	ND	50	46.7	93	50	44.9	90	4	51-136/13
1330-20-7	Xylene (total)	ND	150	152	101	150	145	97	5	46-137/12

CAS No.	Surrogate Recoveries	MS	MSD	JC4556-2	Limits
1868-53-7	Dibromofluoromethane	105%	104%	110%	76-120%
17060-07-0	1,2-Dichloroethane-D4	111%	109%	117%	73-122%
2037-26-5	Toluene-D8	105%	104%	103%	84-119%
460-00-4	4-Bromofluorobenzene	104%	106%	108%	78-117%

* = Outside of Control Limits.